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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

STRICTLY CONFIDENTIAL (FR) June 28, 1991
CLASS I - FOMC

MONETARY POLICY ALTERNATIVES

Recent Developments

(1) The stance of monetary policy has remained unchanged since the May FOMC meeting: Federal funds have continued to trade around 5-3/4 percent--as they have since the cut in the discount rate at the end of April--and the formal allowance for adjustment plus seasonal borrowing was changed only for technical reasons. The borrowing allowance was raised in several steps, to its current level of $325 million, in line with the pickup in seasonal borrowing. Over the intermeeting period, borrowing consistently ran a bit above the allowance as adjustment credit showed increased strength; the buildup of seasonal credit, however, was somewhat below its usual early-summer gradient.[1]

(2) Growing evidence that the business-cycle trough had passed raised interest rates all along the yield curve through most of the intermeeting period. Against a backdrop of economic data releases supporting the notion that the economy was recovering and statements by Federal Reserve officials in the same vein, the structure of rates began to reflect a chance of a tightening before year-end. Most recently, investor skittishness has reemerged, especially with respect to bank paper in the wake of reports of increased problems with asset quality. In this environment, yields on Treasury securities have been bid down, leaving

1. The slower pickup in seasonal borrowing is probably related to ample liquidity at agricultural banks, which are seeing damped loan demand--owing in part to the recession and rain-delayed planting--and stronger retail deposit inflows.

them little changed to 20 basis points higher over the intermeeting period. Spreads on bank obligations have widened, as have those on lower-rated commercial paper in response to a default by Columbia Gas.

(3) With U.S. interest rates tending higher amid clearer signs of an emerging economic recovery here, the weighted average exchange value of the dollar rose about 5-1/4 percent over the intermeeting period. The dollar appreciated 7 percent against the mark, but was little changed against the yen, which itself was supported by stronger-than-expected economic data for Japan that fostered a sense that the anticipated easing of Japanese monetary policy would be postponed. Interest rates in Japan rose 10 to 20 basis points. Despite the Bundesbank's nudging up of RP rates, most market interest rates in Germany were down slightly until the end of the period, when bond yields jumped on fears of a reintroduction of the withholding tax on interest income. These fears, along with turmoil in Yugoslavia, contributed to downward movement of the mark late in the period.

the Desk sold $50 million in mid-May

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(4) M2 growth, now estimated at a 3-1/4 percent rate for the March-to-June period, fell short of the 4 percent pace specified by the Committee at the May meeting. Although the bounceback in May from the tax-related weakness in money in April turned out to be stronger than had

been expected, renewed weakness appeared in June, with M2 growth at just a 2 percent rate. The rebound in May was most evident in transaction deposits, lifting M1 to a 13-3/4 percent annual rate of growth for the month.[2] A slowdown in M1 in June showed through to M2, and its effect on the broader aggregate was reinforced by the ongoing deceleration of that aggregate's nontransaction component. Although inflows to liquid nontransaction deposits stayed very strong in June in response to the substantial narrowing in their opportunity costs in recent months, small time deposits ran off at an accelerating rate. Much of this runoff no doubt represented a redirection toward the liquid components of M2 as the rate advantage of retail CDs waned, but part of it likely was a net drag on the aggregate as, for example, investors moved into capital market instruments in an effort to maintain yields on funds released by maturing time deposits. Certainly, inflows to bond and stock mutual funds were very heavy in May and, for bond funds, are said to have continued strong in June as well. The attractiveness of these longer-term market investments also was reflected in money fund shares, which were about flat. While the unusual strength of portfolio shifts into longer-term instruments may explain some of the recent weakness in M2, the causes of much of this shortfall remain unclear.

(5) After two months over which it posted a slight net decline, bank credit is estimated to have risen a bit in June, buoyed by a pickup in acquisitions of securities and a cessation of the runoff in loans.

2. After increasing at a 16-1/2 percent pace in May, total reserves rose at a 8-3/4 percent rate in June. With currency growth subdued, the monetary base increased at about a 3-1/2 percent pace in both months.

Nevertheless, overall depository funding needs likely continued to decrease, with the decline in thrift assets apparently accelerating as the RTC stepped up its resolution activity. Largely as a result, M3 fell slightly in June and was about unchanged for the entire March-to-June period, compared with the 2 percent growth rate specified in the most recent directive.

(6) Preliminary data indicate that C&I loans continued to drop at a substantial rate in June, and commercial paper of nonfinancial firms again ran off, albeit at a slower pace than in May. In part, the weakness in these components reflected a redirection of credit demands toward the bond market, as issuers apparently considered bond yields to be near cyclical lows. However, overall debt growth of nonfinancial firms is estimated to have been quite sluggish in the second quarter, likely restrained by the runoff of business inventories and drop in associated funding needs. In addition, the rapid pace of gross equity issuance, combined with a slowdown in merger-related reductions in equity, probably damped firms' borrowing. Gross debt issuance by state and local governments increased markedly in June: The continued robust pace of long-term issuance was augmented by a slug of short-term funding, a portion of which was necessitated by revenue shortfalls in certain localities. In the household sector, borrowing appears to have increased a bit in recent months, owing primarily to a resumption in consumer credit expansion; in June, growth of consumer credit at banks (adjusted for securitization) was the highest in several months. The overall debt aggregate is estimated to

have accelerated to about a 5-3/4 percent rate in May, and there is little reason to think that June strayed far from that pace.

(7) From the fourth quarter of last year through June, M2 grew at a 4 percent annual rate, a bit below the midpoint of its annual target range. M3 growth also, at a 2-1/2 percent pace, was slightly below the midpoint of its range. The rate of increase for both these aggregates is about as had been expected by the staff at the time of the February FOMC meeting. While nominal income was weaker than projected in February, the effects on M2 were about offset by subsequent policy easings, which narrowed opportunity costs on money assets. M2 velocity declined in the first half at a 1-1/4 percent annual rate. However, the drop in V2 was less (and M2 growth weaker) than implied by the staff econometric model of money demand. The model overprediction, which had been built into the staff forecast, lessened from that in the second half of 1990, but its persistence indicated the presence of a continuing upward velocity shift, likely related to the ongoing redirection of credit flows away from depositories together with the appetite of asset holders for the higher yields of longer-term investments. The growth of M3 was boosted by a surge in issuance of large CDs by U.S. branches and agencies of foreign banks, after removal of the reserve requirement on these instruments. The branches and agencies have been using the funds to pay down other types of liabilities, funnel funds offshore, and re-book assets previously held offshore to the United States.[3] Instead of the earlier expectation for

3. Had it not been for the increase in these "Yankee CDs," M3 would have increased at a mere 1/4 percent pace over the first six months of 1991.

the debt of domestic nonfinancial sectors to be just below the middle of its 4-1/2 to 8-1/2 percent monitoring range at midyear, it is tracking the bottom edge of its annual cone. This miss may have reflected not only the slower pace of economic activity, but also a more cautious attitude by borrowers toward taking on debt. Certainly, net equity retirements are running well below projections, damping that source of credit demand. On the supply side, the marked narrowing of yield spreads in securities markets suggests credit availability for many borrowers improved over the first half; however, the prime rate has remained relatively high and banks restrictive in granting credit.

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

| | May | June | QIV'90 to June |
|---|---|---|---|
| Money and credit aggregates | | | |
| M1 | 13.7 | 8.3 | 7.2 |
| M2 | 4.6 | 2.1 | 3.9 |
| M3 | 0.8 | -0.4 | 2.6 |
| Domestic nonfinancial debt | 5.7 | -- | 4.5[1] |
| Bank credit | -0.7 | 3.3 | 2.5 |
| Reserve measures | | | |
| Nonborrowed reserves[2] | 14.7 | 6.8 | 7.2 |
| Total reserves | 16.4 | 8.7 | 7.1 |
| Monetary base | 3.4 | 3.8 | 8.5 |
| Memo: (Millions of dollars) | | | |
| Adjustment plus seasonal borrowing | 215 | 296 | -- |
| Excess reserves | 1030 | 1040 | -- |

1. Q4 to May.
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**

(8) Four alternative long-run strategies for monetary policy are presented below as background for consideration of the annual ranges for the aggregates. Strategy I, the baseline, assumes that policy seeks to make gradual progress toward price stability by promoting a moderate pace of output growth over the next several years, maintaining a small degree of slack in resource utilization. It adopts the greenbook forecast for 1991 and 1992 and extends that forecast through 1995 using the staff's macro-econometric model. The economic outcomes for strategies II, III, and IV are derived from the baseline using the econometric model.[4] Strategy II contemplates a tighter policy, indexed by M2 growth slower by 1 percentage point at an annual rate than in the baseline, designed to make more progress toward price stability. Strategy III is more stimulative than the baseline policy, with money growth faster by 1 percentage point at an annual rate, in order to assure a more robust economic expansion. Strategy IV has the same five-year money growth as the baseline to provide the same long-run restraint on inflation, but frontloads that growth to assure a stronger pace of output growth in the initial years of

4. The results of these exercises depend importantly on the model's "sacrifice ratio"--the number of years that unemployment must remain above the natural rate by 1 percentage point in order to reduce the inflation rate by 1 percentage point. The model's sacrifice ratio is about 2--perhaps a shade more than is implicit in the staff's judgmental forecast for 1991-92. The formation of price expectations is a key element in the determination of this ratio. The model assumes that expectations of inflation are formed in an "adaptive" fashion, that is, that they depend only on past inflation. If expectations were formed in a more forward-looking manner, and if, for example, a particular strategy led to the perception that monetary policy was committed to achieving a lower inflation rate, the actual costs of disinflation under that strategy would be smaller than implied by the results presented here.

the expansion. One consideration taken into account in constructing the money paths for each strategy was the ongoing downward shift in M2 demand, which has been assumed to continue through 1993, albeit at a diminishing rate.[5]

**Alternative Strategies**
(QIV to QIV percent change)

| | 1991 | 1992 | 1993 | 1994 | 1995 |
|---|---|---|---|---|---|
| M2 | | | | | |
| I (baseline) | 5 | 5-1/2 | 5-1/2 | 5-1/2 | 5-1/2 |
| II (tighter) | 4-1/2 | 4-1/2 | 4-1/2 | 4-1/2 | 4-1/2 |
| III (easier) | 5-1/2 | 6-1/2 | 6-1/2 | 6-1/2 | 6-1/2 |
| IV (easier/tighter) | 5-1/2 | 5-3/4 | 5 | 5-1/4 | 5-1/2 |
| Prices: GNP fixed-weight price index | | | | | |
| I | 4 | 3-1/2 | 3-1/4 | 3 | 2-3/4 |
| II | 4 | 3-1/4 | 2-3/4 | 2 | 1-1/4 |
| III | 4 | 3-3/4 | 3-3/4 | 4 | 4-1/4 |
| IV | 4 | 3-1/2 | 3-1/2 | 3-1/4 | 3 |
| Real GNP | | | | | |
| I | 1-1/2 | 2-3/4 | 2-1/2 | 2-1/2 | 2-1/2 |
| II | 1-1/2 | 2 | 1-1/2 | 1-3/4 | 2 |
| III | 1-3/4 | 3-1/2 | 3-1/2 | 3-1/2 | 2-3/4 |
| IV | 1-3/4 | 3-1/4 | 2-1/4 | 2 | 2 |
| Unemployment rate (QIV level) | | | | | |
| I | 6-1/2 | 6-1/4 | 6 | 6 | 6 |
| II | 6-3/4 | 6-1/2 | 6-3/4 | 7 | 7-1/4 |
| III | 6-1/2 | 6 | 5-1/4 | 5 | 4-3/4 |
| IV | 6-1/2 | 6 | 5-3/4 | 6 | 6-1/4 |

(9) Under the baseline strategy, M2 would expand at a 5-1/2 percent rate throughout the forecast period. The assumed growth of money

5. In particular, these simulations assume downward shifts in M2 demand, for given nominal incomes and opportunity costs, of 2 percent in 1990, 1 percent in 1991, 3/4 percent in 1992, and 1/2 percent in 1993.

is consistent with some monetary restraint. Indeed, over the next few years flat M2 growth implies increasing restraint as the money demand shift abates. Real interest rates move higher over the first few years and remain at those elevated levels in 1994 and 1995. Nominal interest rates decline over the last two years as inflation abates, boosting the demand for money relative to income. This strategy keeps the unemployment rate from falling below 6 percent and maintains downward pressure on inflation, which would fall to about a 2-3/4 percent rate by 1995.

(10) The tighter monetary policy of strategy II produces a sharper decline in inflation. Achieving the slower M2 growth of this strategy would require higher nominal short-term interest rates from now into 1993, averaging roughly 1/2 percentage point above the baseline. Nominal rates fall below the baseline later in the simulation period, but real interest rates are higher throughout. The higher real interest rates would have relatively little impact on economic developments this year, given the usual lags. Therefore, real GNP growth each year would be significantly below that of the baseline and below the expansion of the economy's capacity, pushing up the unemployment rate to over 7 percent by the end of the period. The higher real interest rates of this strategy would be expected to produce a modest appreciation of the dollar, reinforcing the restraining effects of slack aggregate demand on domestic prices; these combined forces pull inflation down to 1-1/4 percent by 1995.

(11) The easier policy of strategy III stimulates output and employment in the near term and makes some progress against inflation over

the next few years. However, that progress is largely a consequence of the slowing already in train, and inflation accelerates later in the period. Early on, nominal interest rates would have to drop about a half point to get the higher money growth, and would remain below the baseline through 1993. The implied lower real interest rates and more rapid money growth of this strategy result in a steep decline of the unemployment rate over the projection period, bringing it below the natural rate by late 1993. Inflation increases only moderately within the simulation period, but would be on an upward trend, boosted a little by a declining dollar.

(12) Strategy IV has the basic tenor of policy under the baseline, but it is more activist, with changes in money growth and interest rates intended to raise the odds on healthy output growth initially but to restore the downward tilt to inflation over time once the expansion is well underway. Money growth is 1 percentage point faster than the baseline for the next four quarters, but that excess is offset subsequently with slower growth for a time, leaving the level of money from mid-1994 the same as in the baseline. To achieve this path for money, the federal funds rate would have to be about 1/2 percentage point below baseline for the first four quarters of the period, but then would have to rise by a percentage point, and remain above the baseline for the much of the remainder of the period. Under this strategy, the unemployment rate drops sooner and farther than in the baseline, before edging up in response to later monetary restraint. Because the average degree of slack in resource use over the five-year period is smaller than in the baseline, the progress against inflation is a little less.

(13) The table below presents inflation rates derived from the P* model simulated under the four strategies.[6] Two variants of the model are employed. One variant uses the historical long-run average of velocity; results from these simulations are presented in the upper panel. This model, without adjustment for velocity shifts, in effect views the slow money growth of the past few years as implying more monetary stringency than under the staff forecast, placing current P* 3-1/2 percent below actual prices. As a result, it indicates a much sharper drop of inflation than in the staff forecast, to the 2 percent range under baseline money by 1992; however, 2 percent is below the long-run, steady-state inflation rate that would be associated with 5-1/2 percent M2 growth, and inflation begins to cycle higher in 1995. The simulations presented in the lower panel assume that equilibrium velocity shifts up by the same percentages as M2 demand was assumed to shift in the simulation with the large-scale model. The baseline simulation with adjustments for velocity shifts indicates that P* is currently about 1 percent below the actual price level, providing a moderate downward thrust to inflation in the near term. Inflation in this simulation initially declines a bit more quickly than in the staff forecast. By 1992, however, P* is equal to the price level, and with 5-1/2 percent money growth, P* rises above the price level subsequently, causing inflation to turn up in the later years of the simulation. To achieve continuing disinflation over the whole simulation

6. As in the February 1991 bluebook, the P* model used in the simulations has been augmented with a variable measuring the relative price of oil.

period in the adjusted P* model, the slower money growth of the tighter strategy II is required.

**P* Model Simulations of Inflation**
GNP fixed-weight price index
(QIV to QIV percent change)

| | 1991 | 1992 | 1993 | 1994 | 1995 |
|---|---|---|---|---|---|
| With no adjustment for velocity shifts | | | | | |
| I (baseline) | 3-1/2 | 2-1/2 | 2 | 2 | 2-1/4 |
| II (tighter) | 3-1/2 | 2-1/2 | 1-3/4 | 1-1/2 | 1-1/4 |
| III (easier) | 3-1/2 | 2-1/2 | 2-1/2 | 2-3/4 | 3-1/2 |
| IV (easier/tighter) | 3-1/2 | 2-1/2 | 2-1/4 | 2-1/4 | 2-1/2 |
| With adjustment for velocity shifts[1] | | | | | |
| I | 3-1/2 | 3-1/4 | 3-1/4 | 3-3/4 | 3-3/4 |
| II | 3-1/2 | 3-1/4 | 3 | 3 | 2-3/4 |
| III | 3-1/2 | 3-1/2 | 3-3/4 | 4-1/2 | 5 |
| IV | 3-1/2 | 3-1/2 | 3-1/2 | 3-3/4 | 4 |

1. Adds 2 percent to the level of equilibrium velocity in 1990, 1 percent in 1991, 3/4 percent in 1992, and 1/2 percent in 1993. No shifts are assumed for 1994 and 1995.

**Long-Run Ranges**

(14) The last two columns of the table below present projections of money and debt aggregates consistent with the outlook for the economy and interest rates contained in the greenbook. Also shown are the current ranges for 1991 and actual growth rates through June.

Money and Debt Growth
(Percent change, annual rate)

| | Current 1991 Range[1] | Actual QIV 1990 to June | Staff Projections 1991[1] | Staff Projections 1992[1] |
|---|---|---|---|---|
| M2 | 2-1/2 to 6-1/2 | 4 | 5 | 5-1/2 |
| M3 | 1 to 5 | 2-1/2 | 3 | 3 |
| Debt | 4-1/2 to 8-1/2 | 4-1/2[2] | 5-3/4 | 6-1/2 |
| M1 | | 7-1/4 | 7 | 5-3/4 |
| Memo: Nominal GNP | | 2-3/4[3] | 5-1/4 | 6 |

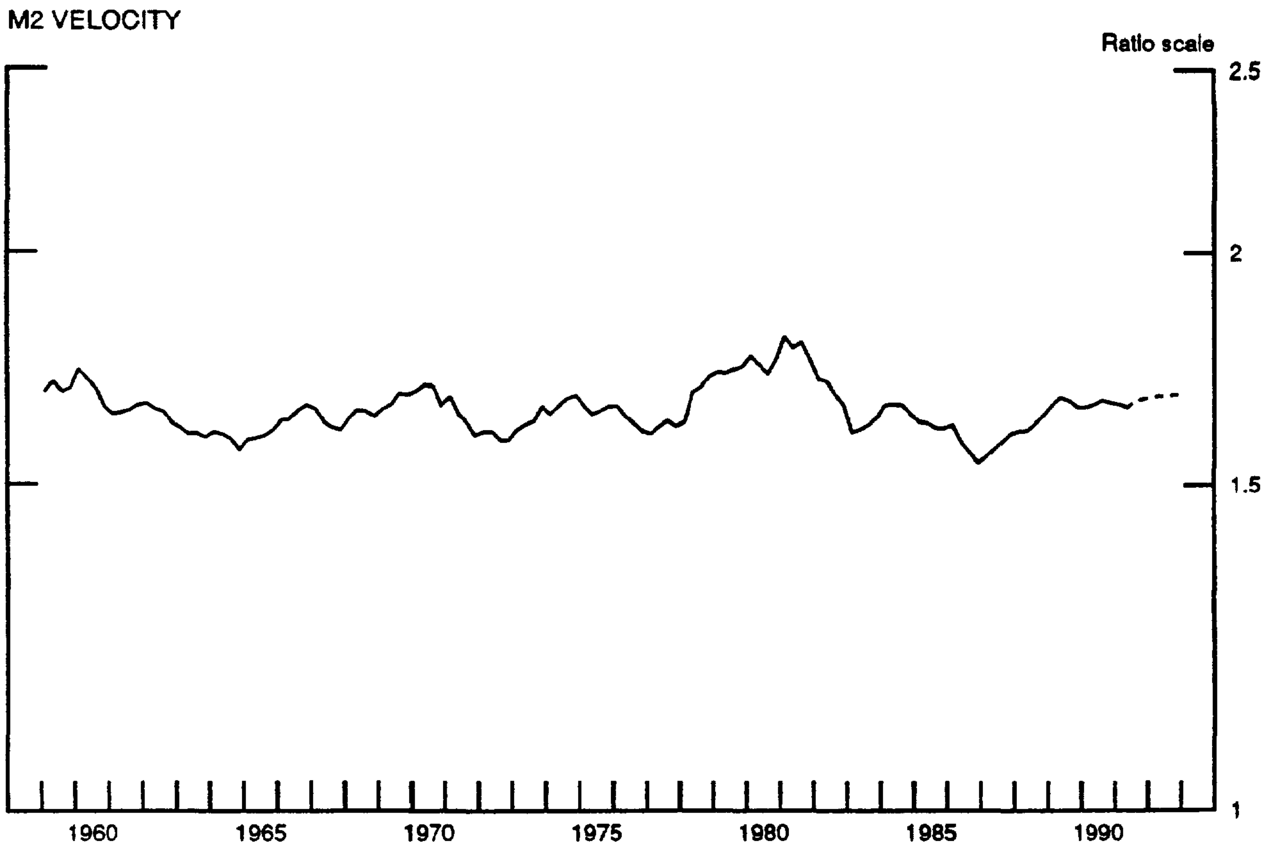
1. QIV to QIV.
2. QIV 1990 to May.
3. QIV 1990 to QII 1991.

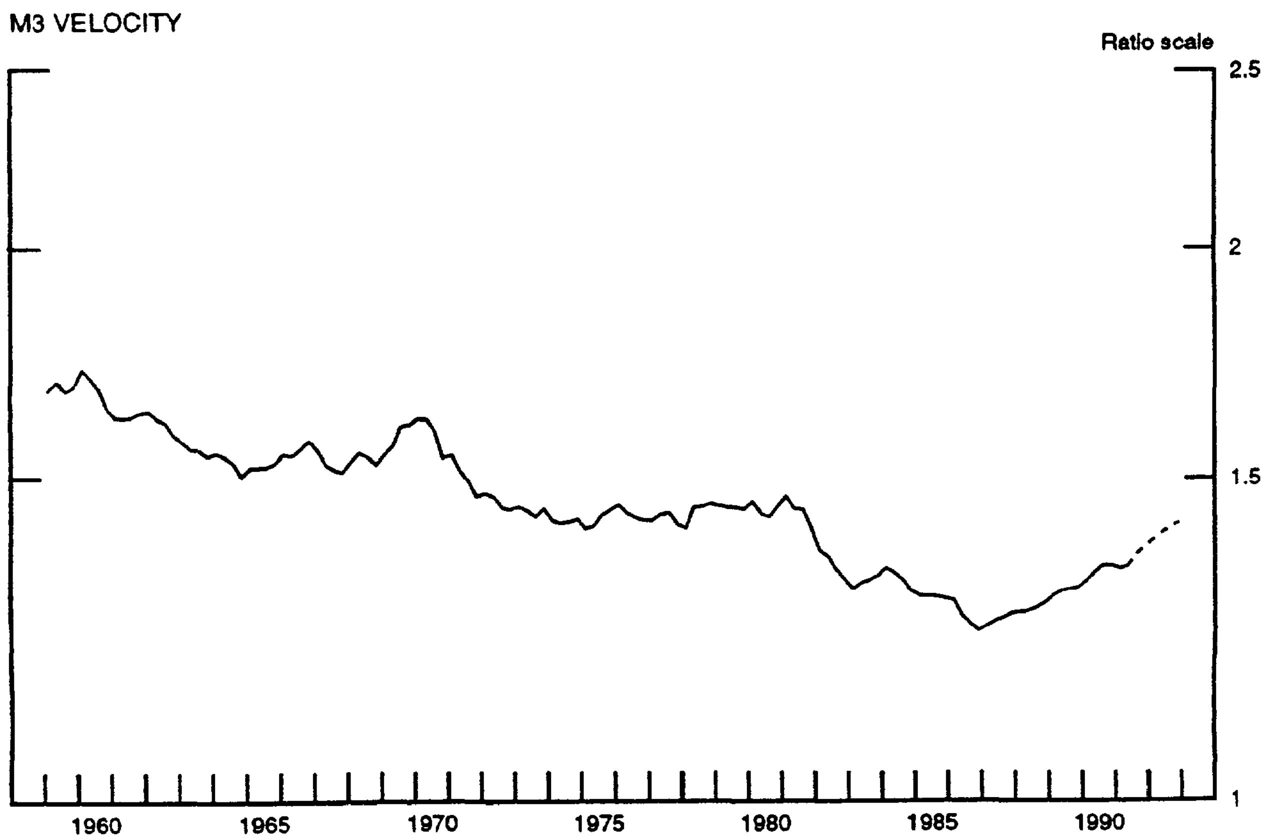
Projections for 1991 and 1992

(15) M2 is expected to accelerate to a 5-1/2 percent rate over the second half of 1991, bringing growth for the year to about 5 percent. Expansion of this aggregate should be stimulated by the anticipated pickup of nominal GNP growth to a 7-3/4 percent pace over the second half. With short-term market rates assumed steady, opportunity costs will widen as offering rates on liquid deposits fall further in lagged adjustment to earlier declines in market rates. The rise in opportunity costs will restrain the aggregate's growth, contributing to a rise in its velocity at more than a 2 percent annual rate over the rest of the year (see chart). In addition, the likely persistence of a steep yield curve also should

Chart 1

## ACTUAL AND PROJECTED VELOCITY OF M2 AND M3*



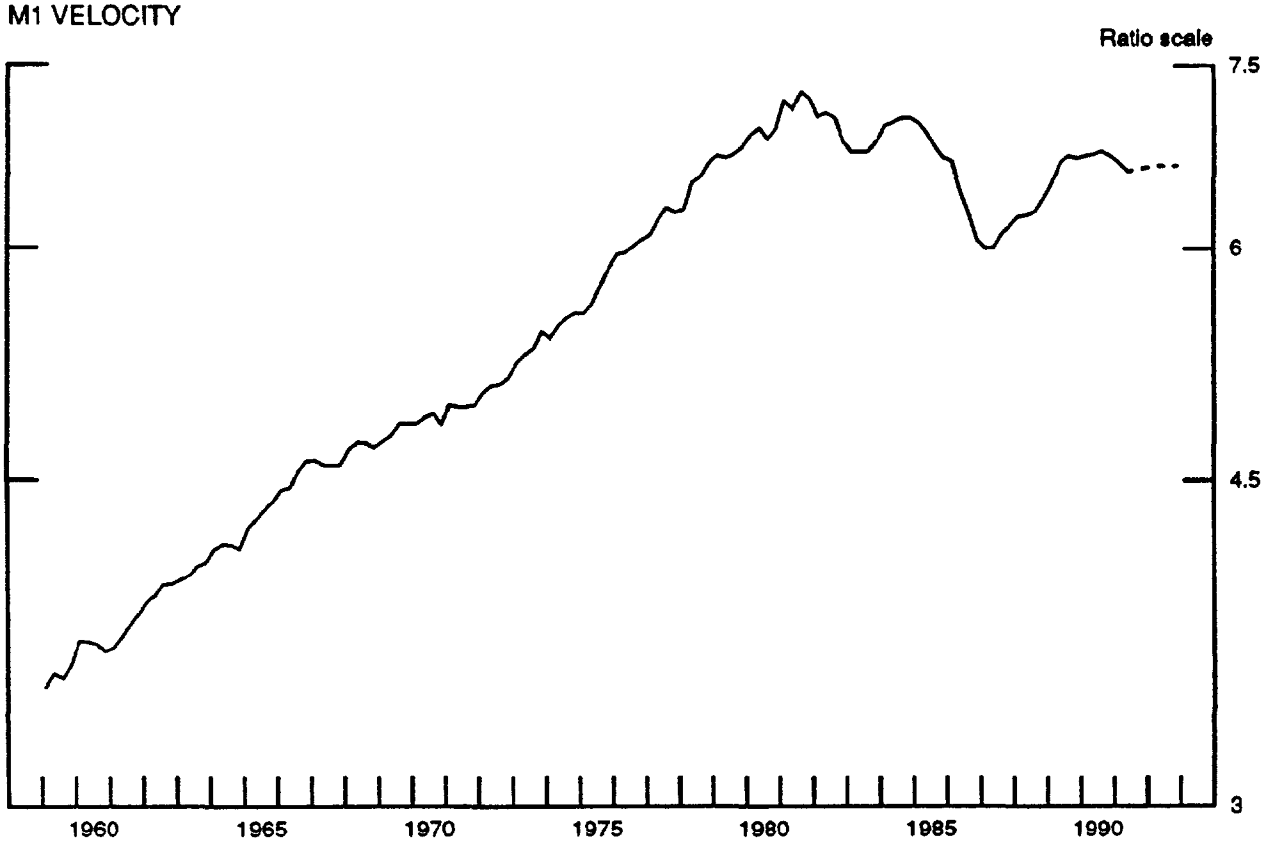




* Projections are based on staff forecasts of GNP and money.

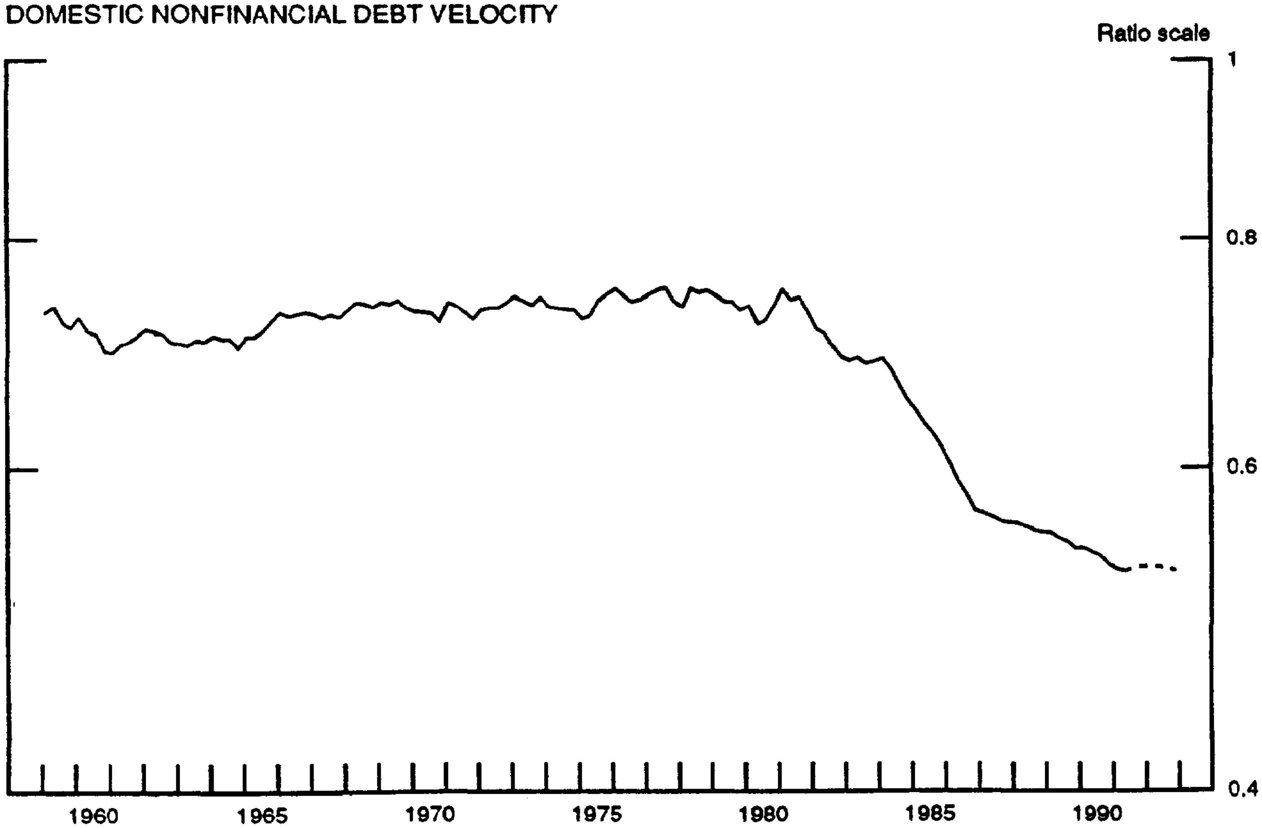
Chart 2

## ACTUAL AND PROJECTED VELOCITY OF M1 AND DEBT*

M1 VELOCITY




DOMESTIC NONFINANCIAL DEBT VELOCITY




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

keep long-term market instruments, such as bond funds, an attractive outlet for some maturing small time deposits that had much higher rates when originally issued. By early next year, opportunity costs cease rising and their depressing effects on M2 demands die out. As the rate of nominal income expansion scales back to 6 percent over 1992, M2 is seen as sustaining a 5-1/2 percent growth rate. This projection assumes that the shortfall in M2 growth relative to model projections, although continuing, tends to abate gradually, as restraint on credit supplies at depositories unwinds with the economic recovery.

(16) M3 is projected to grow at around a 3 percent rate through next year, influenced by offsetting forces. On the one hand, bank credit is anticipated to strengthen with the economic recovery, enlarging bank financing needs.[7] On the other hand, thrift credit is likely to decline more rapidly as RTC activity moves into higher gear. Moreover, issuance of large CDs by branches and agencies of foreign banks is expected to slow over the forecast horizon, as more of the adjustment to the change in relative borrowing costs caused by the reduction in reserve requirements is completed.

(17) The debt of domestic nonfinancial sectors is expected to accelerate over the second half of the year to a 6-1/2 percent rate,

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7. This forecast has made no special allowance for the effects of any new banking bill that might be passed this year. In particular, both bank credit and M3 might be affected if such a bill significantly limited the reach of the federal safety net, so that uninsured creditors felt their funds were at greater risk. These creditors would require higher yields on bank obligations. With many banks facing higher costs and greater potential for losing access to funding sources, restraints on bank lending may ease less rapidly in the economic expansion. Effects on M2 are likely to be muted and their direction ambiguous unless insurance coverage is cut back substantially.

spurred by a surge in federal borrowing. The federal deficit will widen over the remainder of the year, augmented in part by enlarged RTC resolution activity and reduced payments by foreign governments to the Defense Cooperation Account. Nonfederal debt growth rises only gradually in the staff projection, and the debt of these sectors is projected to expand less rapidly than their spending. Restraint on debt growth will continue to be imparted by some lingering reluctance of lenders to extend credit to less than top-quality borrowers. Given relatively wide spreads between rates charged and rates paid by intermediaries, borrowers should be more prone to finance additional spending out of assets than by taking on more debt. Consumer installment credit growth moves slightly higher, while expansion in household mortgage debt stays at about the estimated pace of this quarter. Nonfinancial business debt growth should strengthen a little over the second half, primarily because of renewed short-term borrowing associated in part with the anticipated turn to inventory accumulation over the second half. For 1992, overall debt growth remains at 6-1/2 percent. Nonfederal debt growth continues to firm, though to a pace still below that of nominal GNP. Business borrowing increases as greater capital spending further widens the financing gap and as merger activity reawakens; household debt acquisition also continues to pick up slightly. As an offset, federal debt growth ebbs with a slackening in RTC funding needs, but remains in double digits.

Ranges for 1991

(18) This bluebook does not present alternatives to the current 1991 ranges for money and debt. In the past, the FOMC has altered the

ranges for the current year at the midyear meeting only when the aggregates have shown signs of markedly diverging from the established annual ranges owing to special factors thought to be unrelated to economic performance. That is not the case this year. The monetary aggregates are projected to remain in the middle portions of their existing ranges over the balance of the year, and their growth is expected to be consistent with economic recovery continuing into next year accompanied by reduced inflation pressures. Those ranges also should be adequate to allow for needed reactions to unexpected economic or financial developments or to accommodate adjustments to the Committee's longer-term strategy, perhaps along the lines outlined above.

(19) So far this year, domestic nonfinancial debt is growing only at the lower bound of its range, but the staff anticipates a speed-up in growth over the rest of the year sufficient to bring this aggregate well up into the bottom half of its range. Moreover, the aggregate's position in its range reflects the unusual restraint on private credit formation, as well as slow growth in nominal spending. Indeed, this weakness relative to the announced range warrants careful monitoring for any implications about spending plans and the availability of credit. From that point of view, a downward revision to the range could be misinterpreted as signalling complacency about the credit slowdown.

Ranges for 1992

(20) The table below presents three alternative sets of ranges for growth of the monetary and debt aggregates over 1992. Alternative II

replicates the current 1991 ranges, while alternative I raises and alternative III lowers the current ranges by 1/2 percentage point.

Money and Debt Growth over 1992
(QIV to QIV percent change)

| | Alt. I | Alt. II (1991 Ranges) | Alt. III | Memo: Staff Projection |
|---|---|---|---|---|
| M2 | 3 to 7 | 2-1/2 to 6-1/2 | 2 to 6 | 5-1/2 |
| M3 | 1-1/2 to 5-1/2 | 1 to 5 | 1/2 to 4-1/2 | 3 |
| Debt | 5 to 9 | 4-1/2 to 8-1/2 | 4 to 8 | 6-1/2 |

(21) Alternative II is broadly consistent with staff forecasts for money, economic activity, and prices, and therefore with the baseline strategy of gradual reductions in inflation. M3 and debt are projected at the midpoint of their alternative II ranges, but M2 is projected to be well up in its range. In the case of M2, this range might imply that the Committee was less willing to tolerate surprisingly strong than surprisingly weak nominal income growth. This feature may be viewed as especially appropriate after the initial stages of economic expansion, when with higher levels of resource utilization, unanticipated strength in demand could undermine the disinflationary process. On the other hand, if economic activity proves weaker than the staff forecast, prompting a monetary policy easing, alternative II could constrain further easing somewhat; the resulting stimulus of lower opportunity costs could bring growth of M2 near the upper bound of its range rather quickly.

(22) If the risks to the outlook were viewed as weighted on the side of weaker-than-expected production, employment and inflation pressures, or if the staff's greenbook forecast were judged to embody an insufficient economic recovery, the higher growth rates of alternative I could be selected. Thus, this alternative would line up roughly with the easier strategy discussed above, with its emphasis on assuring expansion sufficient to reduce the margin of unutilized resources. Alternative I also could be preferred if, given an acceptable economic forecast, the bluebook projection for M2 growth were viewed as too low. This view could be buttressed by the notion that an economic recovery should improve the quality of bank assets, leading to a faster unwinding of restraint on bank lending and of the associated reluctance of banks to attract retail deposits. Accordingly, the previous shortfall of M2 growth relative to typical experience could be seen as more likely to reverse than to continue.

(23) Alternative III, on the other hand, could be justified if the odds were seen concentrated on the side of a more robust economic recovery than in the staff forecast, with the attendant risk that less progress would be made against inflation, or if the slowing of inflation over time in the baseline forecast were itself viewed as inadequate. The tighter long-term strategy discussed above is readily encompassed within the current alternative II range. But alternative III would seem more consistent with the spirit and intent of that strategy, since reducing the ranges another 1/2 percentage point would underscore the Committee's commitment to the attainment of price stability. The upper bound of the M2

range for 1992 would be brought within 1/2 percentage point of the staff projection, implying the need for a prompt tightening of policy should unexpected strength in nominal spending further raise M2. The reduced lower bound also could imply considerable tolerance for slower-than-expected M2 growth before a policy easing would be triggered, either because the Committee would tolerate slower expansion of income or because continued problems of banks and thrifts are reflected in further rechannelling of credit flows outside depositories and even greater strength in V2.

**Short-Run Policy Alternatives**

(24) Three near-term alternatives for monetary policy are presented below for Committee consideration. Under alternative B, federal funds would continue to trade around 5-3/4 percent. Initially, the allowance for adjustment and seasonal borrowing would remain at $325 million.[8] Under alternative A, the federal funds rate would decline to around 5-1/4 percent. This reduction could be accomplished either by providing nonborrowed reserves sufficient for adjustment and seasonal borrowing to decline to about $275 million or by cutting the discount rate by 1/2 percentage point from its current level of 5-1/2 percent.[9] Alternative C incorporates a funds rate of 6-1/4 percent and borrowing of about $375 million. Growth rates for the monetary aggregates projected to accompany the three alternatives are shown in the table below. More detailed data are presented in the tables and charts on the following pages.

(25) Under alternative B, market interest rates would probably remain near their current levels. Market rates appear generally to incorporate a consensus view of no change in the stance of monetary policy over the rest of the summer. Market participants, however, seem to expect the economic rebound over the next few months to be weaker than presented in the greenbook. If economic data turn out to be consistent with the greenbook, some upward pressure on interest rates could occur, though that

8. Although seasonal borrowing has been somewhat lower than usual this year, such borrowing is expected to rise over the summer, and additional upward adjustments to the borrowing allowance probably will be required in the next few months.

9. As discussed in recent bluebooks, the first approach has the disadvantage of limiting the ability of the discount window to absorb fluctuations in reserve supply and demand, thereby causing the funds rate to become a little more volatile.

| | Alt. A | Alt. B | Alt. C |
|---|---|---|---|
| Growth from June to September | | | |
| M2 | 6-1/2 | 5-1/2 | 4-1/2 |
| M3 | 3-1/2 | 3 | 2-1/2 |
| M1 | 7-1/2 | 6 | 4-1/2 |
| Growth from Q4'90 to September | | | |
| M2 | 4-3/4 | 4-1/2 | 4-1/4 |
| M3 | 3 | 2-3/4 | 2-1/2 |
| M1 | 7-1/2 | 7 | 6-1/2 |

pressure would be offset if data also continue to indicate good inflation performance. The foreign exchange value of the dollar also is not expected to show much change from its current level under this alternative.

(26) Alternative B embodies the staff projections for money and debt consistent with the nominal GNP and unchanged interest rates of the greenbook forecast. With the pickup in GNP, M2 would accelerate to a 5-1/2 percent annual rate from June to September, bringing this aggregate up to the middle of its long-run range in September. On a quarterly average basis, M2 would expand at a 4-1/2 percent rate during the third quarter which, given the staff projection of an 8 percent increase in nominal GNP, implies that velocity would rise at a 3-1/2 percent rate. This increase reflects, in part, the rise in opportunity costs as deposit rates decline, as well as lags in the adjustment of money holdings to a marked change in income growth. M3 is expected to increase at a 3 percent rate from June to September under alternative B, keeping this aggregate a

Alternative Levels and Growth Rates for Key Monetary Aggregates

| | M2 | | | M3 | | | M1 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Alt. A | Alt. B | Alt. C | Alt. A | Alt. B | Alt. C | Alt. A | Alt. B | Alt. C |
| Levels in billions | | | | | | | | | |
| 1991 April | 3382.9 | 3382.9 | 3382.9 | 4170.8 | 4170.8 | 4170.8 | 842.2 | 842.2 | 842.2 |
| May | 3395.8 | 3395.8 | 3395.8 | 4173.6 | 4173.6 | 4173.6 | 851.8 | 851.8 | 851.8 |
| June | 3401.7 | 3401.7 | 3401.7 | 4172.1 | 4172.1 | 4172.1 | 857.7 | 857.7 | 857.7 |
| July | 3417.0 | 3415.9 | 3414.7 | 4181.1 | 4180.8 | 4180.4 | 862.0 | 861.6 | 861.3 |
| August | 3435.9 | 3431.5 | 3427.0 | 4193.5 | 4191.2 | 4188.9 | 867.5 | 865.9 | 864.3 |
| September | 3457.3 | 3448.7 | 3439.9 | 4208.5 | 4203.5 | 4198.4 | 873.9 | 870.6 | 867.3 |
| Monthly Growth Rates | | | | | | | | | |
| 1991 April | 2.8 | 2.8 | 2.8 | 0.5 | 0.5 | 0.5 | -1.1 | -1.1 | -1.1 |
| May | 4.6 | 4.6 | 4.6 | 0.8 | 0.8 | 0.8 | 13.7 | 13.7 | 13.7 |
| June | 2.1 | 2.1 | 2.1 | -0.4 | -0.4 | -0.4 | 8.3 | 8.3 | 8.3 |
| July | 5.4 | 5.0 | 4.6 | 2.6 | 2.5 | 2.4 | 6.0 | 5.5 | 5.0 |
| August | 6.7 | 5.5 | 4.3 | 3.5 | 3.0 | 2.5 | 7.7 | 6.0 | 4.3 |
| September | 7.5 | 6.0 | 4.5 | 4.3 | 3.5 | 2.7 | 8.8 | 6.5 | 4.2 |
| Quarterly Ave. Growth Rates | | | | | | | | | |
| 1990 Q2 | 3.9 | 3.9 | 3.9 | 1.3 | 1.3 | 1.3 | 4.2 | 4.2 | 4.2 |
| Q3 | 3.0 | 3.0 | 3.0 | 1.6 | 1.6 | 1.6 | 3.7 | 3.7 | 3.7 |
| Q4 | 2.0 | 2.0 | 2.0 | 0.9 | 0.9 | 0.9 | 3.4 | 3.4 | 3.4 |
| 1991 Q1 | 3.4 | 3.4 | 3.4 | 4.0 | 4.0 | 4.0 | 5.9 | 5.9 | 5.9 |
| Q2 | 4.8 | 4.8 | 4.8 | 2.0 | 2.0 | 2.0 | 7.3 | 7.3 | 7.3 |
| Q3 | 5.1 | 4.5 | 4.0 | 2.1 | 1.9 | 1.6 | 8.1 | 7.3 | 6.5 |
| Mar. 91 to June 91 | 3.2 | 3.2 | 3.2 | 0.3 | 0.3 | 0.3 | 7.0 | 7.0 | 7.0 |
| June 91 to Sept 91 | 6.5 | 5.5 | 4.5 | 3.5 | 3.0 | 2.5 | 7.5 | 6.0 | 4.5 |
| Q4 90 to Q1 91 | 3.4 | 3.4 | 3.4 | 4.0 | 4.0 | 4.0 | 5.9 | 5.9 | 5.9 |
| Q4 90 to Q2 91 | 4.1 | 4.1 | 4.1 | 3.0 | 3.0 | 3.0 | 6.6 | 6.6 | 6.6 |
| Q4 90 to Q3 91 | 4.5 | 4.3 | 4.1 | 2.7 | 2.7 | 2.6 | 7.2 | 6.9 | 6.6 |
| Q4 90 to June 91 | 3.9 | 3.9 | 3.9 | 2.6 | 2.6 | 2.6 | 7.2 | 7.2 | 7.2 |
| Q4 90 to Sept 91 | 4.8 | 4.5 | 4.1 | 2.9 | 2.7 | 2.6 | 7.4 | 6.9 | 6.4 |
| 1991 Target Ranges: | | 2.5 to 6.5 | | | 1.0 to 5.0 | | | | |

Chart 3

# ACTUAL AND TARGETED M2

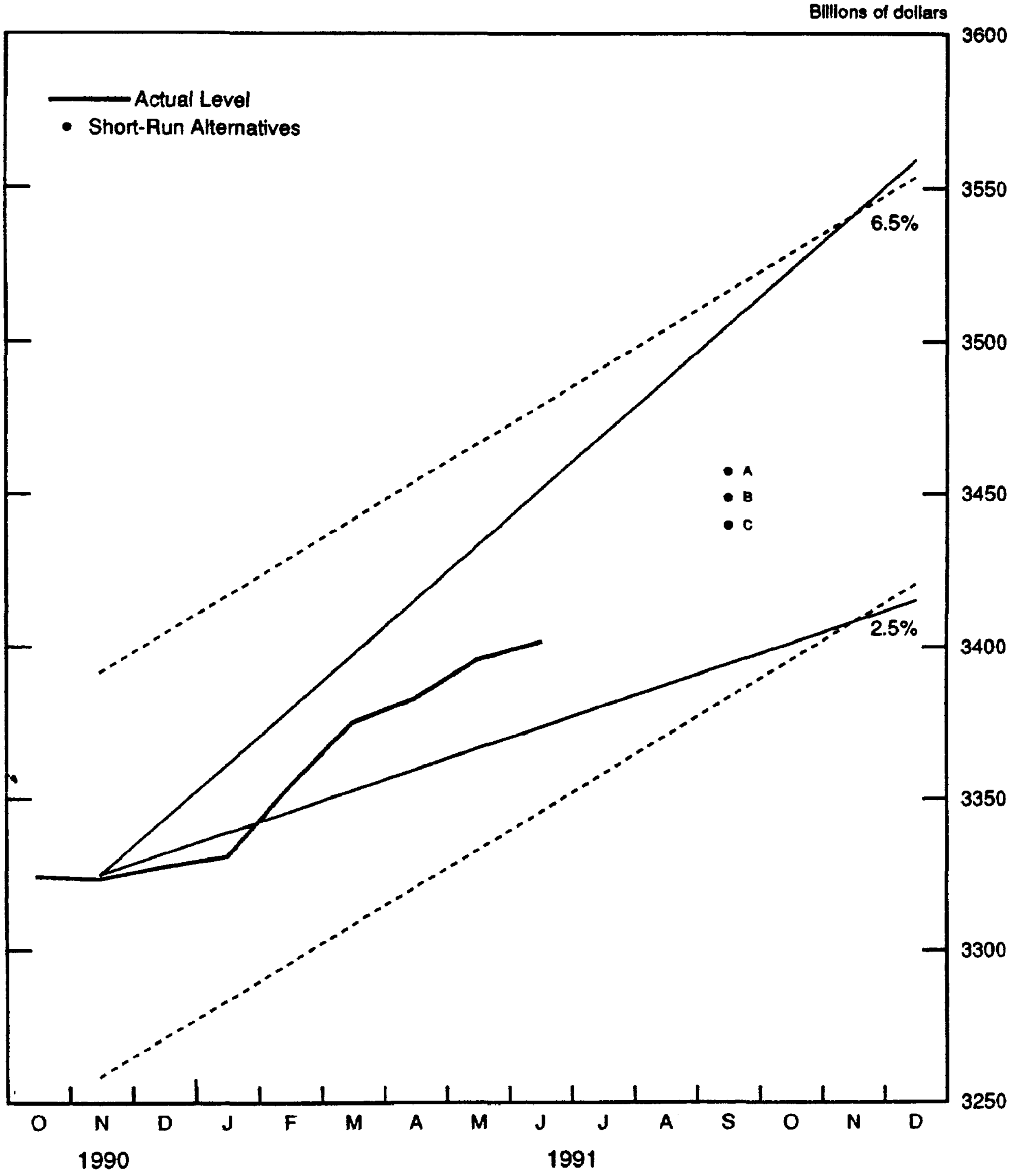


Chart 4

# ACTUAL AND TARGETED M3

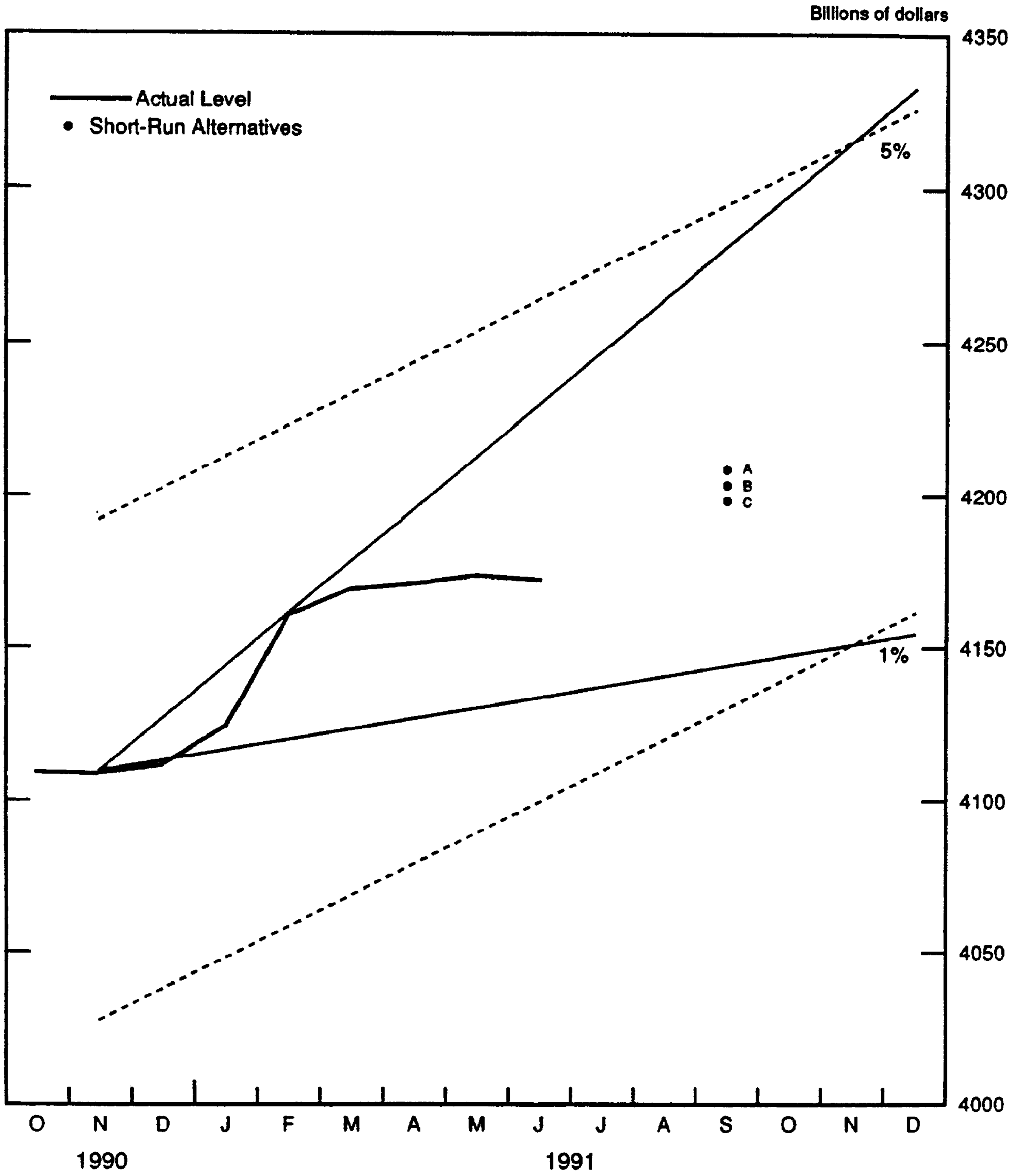
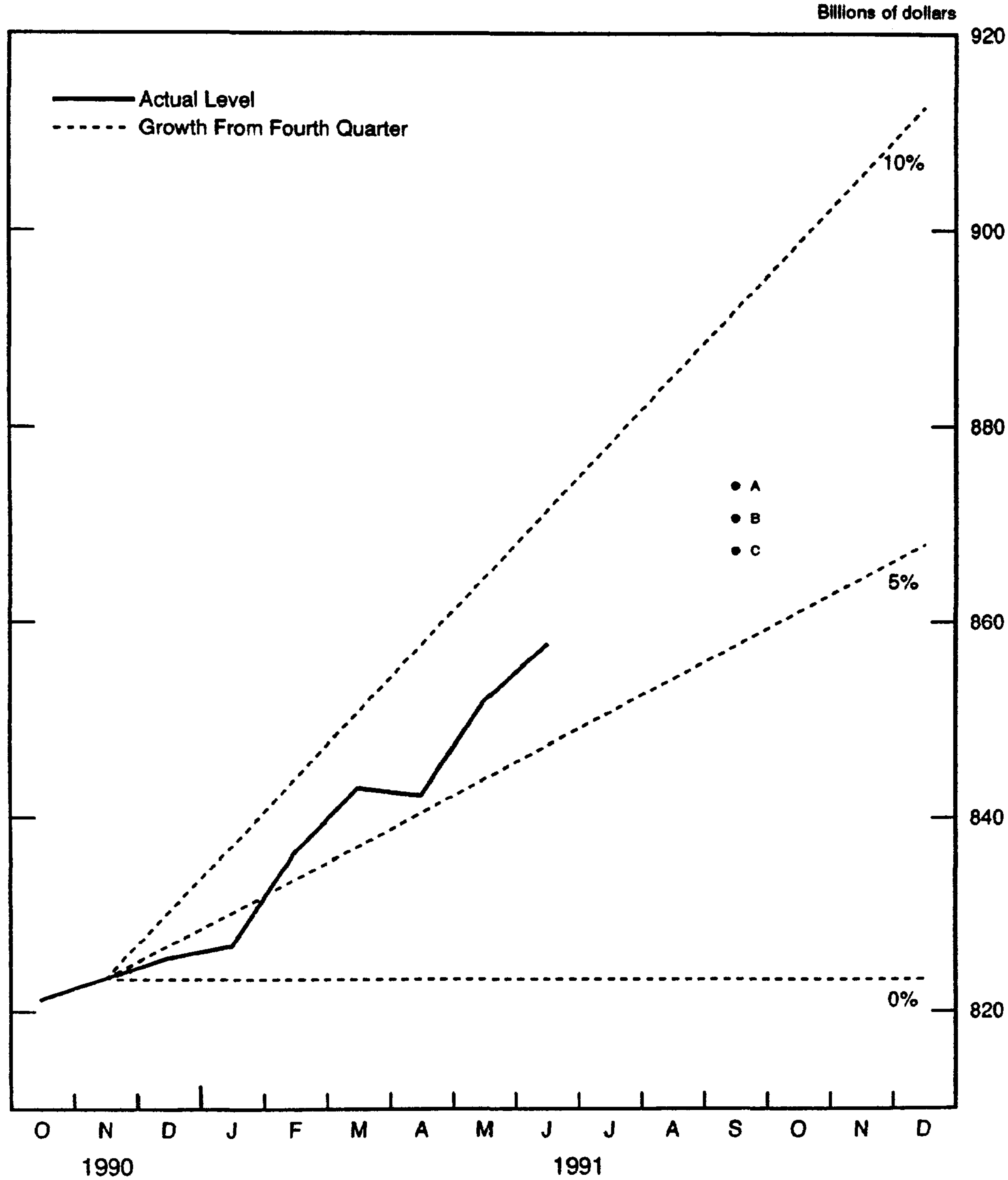


Chart 5

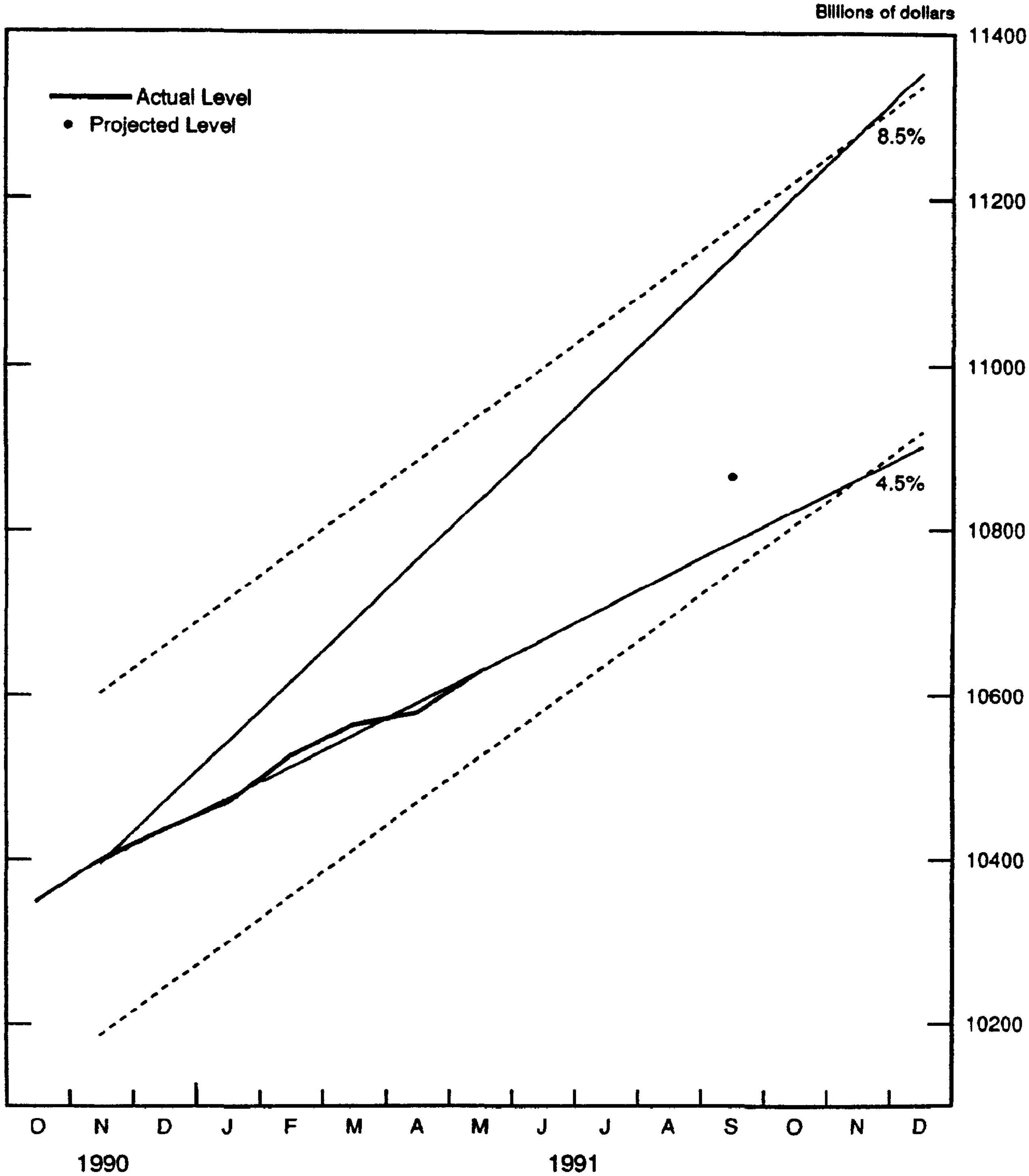
## M1



Billions of dollars
Actual Level
Growth From Fourth Quarter
10%
5%
0%
A
B
C
920
900
880
860
840
820
O
N
D
J
F
M
A
M
J
J
A
S
O
N
D
1990
1991

Chart 6

# DEBT


Billions of dollars
Actual Level
Projected Level
8.5%
4.5%
11400
11200
11000
10800
10600
10400
10200
O
N
D
J
F
M
A
M
J
J
A
S
O
N
D
1990
1991

little below the midpoint of its annual range. The pickup in M3 relative to the last three months reflects a rise in overall borrowing, including from banks, as the economy recovers. Total nonfinancial debt is projected to increase at a 6-3/4 percent annual rate over June to September, raising this aggregate well into the lower bound of its monitoring range by September.

(27) Alternative A would provide more assurance of a pickup in the growth of the monetary aggregates, and by implication in the growth of the economy as well later this year and in early 1992. The staff projects that M2 growth would be at a 6-1/2 percent rate from June to September under alternative A. By September, M2 would be a little above the midpoint of its annual range. The further easing of monetary policy contemplated under alternative A would catch market participants by surprise, and short-term market interest rates would drop considerably. Bond yields are unlikely to fall much, absent favorable inflation news. The value of the dollar on foreign exchange markets likely would decline substantially.

(28) Alternative C also would catch market participants unawares, and short-term interest rates likely would adjust upward rather sharply. Bond yields also would rise, but by considerably less than short-term rates if market participants came to the view that the Federal Reserve was taking the opportunity to make more decisive progress against inflation. The foreign exchange value of the dollar might well increase considerably further under this alternative. M2 would expand at only a 4-1/2 percent annual rate from June through September, with growth rates

falling off over the quarter. M2 would still be below the midpoint of its range in September and would be headed for a lower position in its range by year-end, with the effects of higher interest rates reinforced by some restraint on nominal spending. M3 probably would expand at a 2-1/2 percent rate over the June-to-September period, keeping this aggregate a little below the midpoint of its range.

**Directive Language**

(29) Presented below for Committee consideration is a draft of the directive paragraph relating to the ranges for 1991 and for 1992. With regard to the first sentence in the paragraph, which states the Committee's general policy objectives, the Committee may wish to delete the phrase "a resumption of." The deletion essentially would restore the previous language and would be consistent, of course, with a view that a recovery is underway.

(30) Draft wording for the operational paragraph, with the usual options and updating, is presented in the second paragraph below.

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability, promote [a resumption of] sustainable growth in output, and contribute to an improved pattern of international transactions. In furtherance of these objectives, the Committee REAFFIRMED at THIS ~~its~~ meeting THE RANGES IT HAD ESTABLISHED in February ~~established ranges~~ for growth of M2 and M3 of 2-1/2 to 6-1/2 percent and 1 to 5 percent, respectively, measured from the fourth quarter of 1990 to the fourth quarter of 1991. [IN FURTHERANCE OF THESE OBJECTIVES, THE COMMITTEE AT THIS MEETING RAISED/LOWERED THE RANGES IT HAD ESTABLISHED IN FEBRUARY FOR GROWTH OF M2 AND M3 TO RANGES OF __ TO __ AND __ TO __ PERCENT RESPECTIVELY, MEASURED FROM THE FOURTH QUARTER OF 1990 TO THE FOURTH QUARTER OF 1991.] The monitoring range for growth of total domestic nonfinancial debt ALSO was MAINTAINED ~~set~~ at 4-1/2 to 8-1/2 percent [(ALSO) WAS RAISED/LOWERED TO __ TO __ PERCENT] for the year. FOR 1992 THE COMMITTEE AGREED ON TENTATIVE RANGES FOR MONETARY GROWTH, MEASURED FROM THE FOURTH QUARTER OF 1991 TO THE FOURTH QUARTER OF 1992, OF __ TO __ PERCENT FOR M2 AND __ TO __ PERCENT FOR M3. THE COMMITTEE PROVISIONALLY SET THE ASSOCIATED MONITORING RANGE FOR GROWTH OF TOTAL DOMESTIC NONFINANCIAL DEBT AT __ TO __ PERCENT FOR 1992. With regard to M3, the Committee anticipated that the ongoing restructuring of thrift depository institutions would continue to depress THE ~~its~~ 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 SOMEWHAT/maintain/ INCREASE SOMEWHAT the existing degree of pressure on reserve positions. Depending upon progress toward price stability, trends in economic activity, the behavior of the monetary aggregates, and developments in foreign exchange and domestic financial markets, 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 ~~March through~~ June THROUGH SEPTEMBER at annual rates of about __ AND __ ~~4 and 2~~ percent, respectively.

**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 Non-financial Debt[1] | |
|---|---|---|---|---|---|---|---|---|
| QIV 1978 - QIV 1979[2] | 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)[3,4] | 6 - 9 | (9.8) | 6.5 - 9.5 | (9.9) | 6 - 9 | (7.9) |
| QIV 1980 - QIV 1981 | 3.5 - 6 | (2.3)[3,5] | 6 - 9 | (9.4) | 6.5 - 9.5 | (11.4) | 6 - 9 | (8.8)[6] |
| QIV 1981 - QIV 1982 | 2.5 - 5.5 | (8.5)[3] | 6 - 9 | (9.2) | 6.5 - 9.5 | (10.1) | 6 - 9[7] | (7.1)[6] |
| QIV 1982 - QIV 1983 | 5 - 9[8] | (7.2) | 7 - 10[9] | (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[10] | (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[11] | (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) |
| IV 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[12] | (1.8) | 5 - 9 | (6.9) |
| QIV 1990 - QIV 1991* | n.s | (7.2) | 2.5 - 6.5 | (3.9) | 1 - 5 | (2.6) | 4.5 - 8.5 | (4.5) |

n.s.--not specified.
*--Growth rates in parentheses are QIV'90 to June 1991, except QIV to May for debt.
1. Targets are for bank credit until 1983; from 1983 onward targets are for domestic nonfinancial sector debt.
2. At the February 1979 meeting the FOMC adopted a QIV'78 to QIV'79 range for M1 of 1-1/2 to 4-1/2 percent. This range anticipated that shifting to ATS and NOW accounts in New York State would slow M1 growth by 3 percentage points. At the October meeting it was noted that ATS/NOW shifts would reduce M1 by no more than 1-1/2 percentage points. Thus, the longer-run range for M1 was modified to 3-6 percent.
3. The figures shown reflect target and actual growth of M1-B in 1980 and shift-adjusted M1-B in 1981. M1-B was relabeled M1 in January 1982. The targeted growth for M1-A was 3-1/2 to 6 percent in 1980 (actual growth was 5.0 percent); in 1981 targeted growth for shift-adjusted M1-A was 3 to 5-1/2 percent (actual growth was 1.3 percent).
4. When these ranges were set, shifts into other checkable deposits in 1980 were expected to have only a limited effect on growth of M1-A and M1-B. As the year progressed, however, banks offered other checkable deposits more actively, and more funds than expected were directed to these accounts. Such shifts are estimated to have decreased M1-A growth and increased M1-B growth each by at least 1/2 percentage point more than had been anticipated.

(Footnotes are continued on next page)

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.

6/27/91 (MARP)

# SELECTED INTEREST RATES
(percent)

| | Short-Term | | | | | | | | Long-Term | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | federal funds | Treasury bills secondary market | | | CDs secondary market | comm paper | money market mutual fund | bank prime loan | U S government constant maturity yields | | | corporate A utility recently offered | municipal Bond Buyer | conventional home mortgages | | |
| | | 3-month | 6-month | 1-year | 3-month | 1-month | | | 3-year | 10-year | 30-year | | | secondary market fixed-rate | primary market fixed-rate | primary market ARM |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 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 | 7.44 | 8.32 | 8.51 | 9.96 | 7.40 | 9.97 | 9.75 | 7.78 |
| Low | 5.69 | 5.41 | 5.60 | 5.74 | 5.89 | 5.89 | 5.48 | 8.50 | 6.98 | 7.79 | 7.97 | 9.39 | 7.07 | 9.52 | 9.25 | 7.17 |
| **Monthly** | | | | | | | | | | | | | | | | |
| Jun 90 | 8.29 | 7.73 | 7.63 | 7.53 | 8.23 | 8.21 | 7.66 | 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 |
| Dec 90 | 7.31 | 6.74 | 6.70 | 6.61 | 7.82 | 8.28 | 7.20 | 10.00 | 7.47 | 8.07 | 8.24 | 9.95 | 7.34 | 9.95 | 9.67 | 7.93 |
| 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 |
| **Weekly** | | | | | | | | | | | | | | | | |
| Mar 6 91 | 6.47 | 6.06 | 6.06 | 6.09 | 6.73 | 6.78 | 6.19 | 9.00 | 7.36 | 8.09 | 8.26 | 9.62 | 7.30 | 9.81 | 9.49 | 7.51 |
| Mar 13 91 | 6.17 | 5.92 | 5.94 | 6.00 | 6.51 | 6.55 | 6.15 | 9.00 | 7.31 | 8.07 | 8.24 | 9.54 | 7.29 | 9.71 | 9.50 | 7.45 |
| Mar 20 91 | 6.10 | 5.83 | 5.86 | 5.98 | 6.32 | 6.33 | 6.05 | 9.00 | 7.35 | 8.14 | 8.33 | 9.60 | 7.33 | 9.84 | 9.59 | 7.44 |
| Mar 27 91 | 6.10 | 5.86 | 5.86 | 5.97 | 6.33 | 6.36 | 6.03 | 9.00 | 7.39 | 8.13 | 8.31 | 9.49 | 7.35 | 9.83 | 9.52 | 7.41 |
| Apr 3 91 | 6.00 | 5.76 | 5.78 | 5.88 | 6.23 | 6.31 | 6.03 | 9.00 | 7.28 | 8.05 | 8.24 | 9.41 | 7.29 | 9.67 | 9.49 | 7.39 |
| Apr 10 91 | 5.90 | 5.66 | 5.72 | 5.86 | 6.07 | 6.10 | 5.94 | 9.00 | 7.23 | 8.02 | 8.20 | 9.41 | 7.27 | 9.74 | 9.48 | 7.39 |
| Apr 17 91 | 5.69 | 5.57 | 5.66 | 5.83 | 5.95 | 5.96 | 5.82 | 9.00 | 7.19 | 7.99 | 8.16 | 9.49 | 7.19 | 9.79 | 9.47 | 7.37 |
| Apr 24 91 | 5.92 | 5.69 | 5.74 | 5.90 | 6.09 | 6.08 | 5.79 | 9.00 | 7.27 | 8.09 | 8.24 | 9.50 | 7.22 | 9.79 | 9.53 | 7.36 |
| May 1 91 | 5.92 | 5.57 | 5.65 | 5.77 | 5.98 | 6.00 | 5.73 | 8.93 | 7.19 | 8.05 | 8.21 | 9.42 | 7.14 | 9.73 | 9.47 | 7.23 |
| May 8 91 | 5.79 | 5.48 | 5.60 | 5.74 | 5.90 | 5.91 | 5.65 | 8.50 | 7.13 | 8.03 | 8.21 | 9.51 | 7.09 | 9.70 | 9.47 | 7.23 |
| May 15 91 | 5.78 | 5.47 | 5.61 | 5.75 | 5.92 | 5.92 | 5.58 | 8.50 | 7.13 | 8.10 | 8.30 | 9.43 | 7.14 | 9.80 | 9.50 | 7.23 |
| May 22 91 | 5.79 | 5.44 | 5.61 | 5.79 | 5.92 | 5.93 | 5.58 | 8.50 | 7.13 | 8.08 | 8.29 | 9.47 | 7.16 | 9.74 | 9.47 | 7.22 |
| May 29 91 | 5.72 | 5.41 | 5.62 | 5.74 | 5.89 | 5.89 | 5.52 | 8.50 | 7.08 | 8.09 | 8.30 | 9.39 | 7.13 | 9.69 | 9.45 | 7.17 |
| Jun 5 91 | 5.91 | 5.55 | 5.69 | 5.84 | 5.99 | 5.97 | 5.51 | 8.50 | 7.16 | 8.11 | 8.31 | 9.55 | 7.24 | 9.95 | 9.48 | 7.24 |
| Jun 12 91 | 5.75 | 5.57 | 5.76 | 5.99 | 6.11 | 6.07 | 5.48 | 8.50 | 7.41 | 8.29 | 8.48 | 9.52 | 7.36 | 9.96 | 9.66 | 7.22 |
| Jun 19 91 | 5.78 | 5.59 | 5.78 | 5.98 | 6.08 | 6.09 | 5.48 | 8.50 | 7.44 | 8.32 | 8.51 | 9.57 | 7.31 | 9.91 | 9.65 | 7.24 |
| Jun 26 91 | 5.79 | 5.57 | 5.75 | 5.97 | 6.02 | 6.05 | 5.48 | 8.50 | 7.43 | 8.32 | 8.50 | 9.51 | 7.30 | 9.91 | 9.67 | 7.25 |
| **Daily** | | | | | | | | | | | | | | | | |
| Jun 21 91 | 5.75 | 5.57 | 5.75 | 5.97 | 5.99 | 6.03 | .. | 8.50 | 7.41 | 8.32 | 8.51 | .. | .. | .. | .. | .. |
| Jun 27 91 | 5.91 | 5.55 | 5.73 | 5.94 | 6.08 | 6.08 | .. | 8.50 | 7.43 | 8.32 | 8.49 | .. | .. | .. | .. | .. |
| Jun 28 91 | 5.60 p | 5.54 | 5.68 | 5.94 | 6.06 | 6.11 | .. | 8.50 | 7.32 p | 8.24 p | 8.42 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

Strictly Confidential (FR)-
Class II FOMC

# Money and Credit Aggregate Measures

Seasonally adjusted

JUL. 1, 1991

| Period | Money stock measures and liquid assets | | | | | | Bank credit | Domestic nonfinancial debt[1] | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | M1 | M2 | nontransactions components in M2 | nontransactions components in M3 only | M3 | L | total loans and investments | U.S. government[1] | other[1] | total[1] |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| ANN. GROWTH RATES (%) : | | | | | | | | | | |
| ANNUALLY (Q4 TO Q4) | | | | | | | | | | |
| 1988 | 4.2 | 5.2 | 5.5 | 10.7 | 6.3 | 7.2 | 7.7 | 8.0 | 9.5 | 9.2 |
| 1989 | 0.6 | 4.7 | 6.1 | -0.6 | 3.6 | 4.8 | 7.5 | 7.5 | 7.8 | 7.7 |
| 1990 | 4.2 | 3.8 | 3.7 | -6.4 | 1.7 | 1.8 | 5.4 | 11.0 | 5.4 | 6.7 |
| QUARTERLY AVERAGE | | | | | | | | | | |
| 1990-3rd QTR. | 3.7 | 3.0 | 2.7 | -3.8 | 1.6 | 2.0 | 6.1 | 14.4 | 4.8 | 7.1 |
| 1990-4th QTR. | 3.4 | 2.0 | 1.5 | -3.5 | 0.9 | 1.4 | 2.9 | 11.6 | 3.7 | 5.5 |
| 1991-1st QTR. | 5.9 | 3.4 | 2.6 | 6.7 | 4.0 | 3.5 | 2.7 | 12.2 | 2.4 | 4.8 |
| 1991-2nd QTR. pe | 7½ | 4½ | 4 | -9½ | 2 | | | | | |
| MONTHLY | | | | | | | | | | |
| 1990-JUNE | 5.9 | 2.9 | 1.8 | -7.1 | 0.9 | 4.8 | 6.6 | 14.9 | 4.5 | 6.9 |
| JULY | -1.2 | 1.8 | 2.7 | -2.1 | 1.0 | 1.0 | 5.9 | 13.9 | 5.1 | 7.1 |
| AUG. | 8.6 | 5.1 | 4.0 | 0.2 | 4.1 | 2.1 | 9.7 | 18.9 | 4.7 | 8.1 |
| SEP. | 7.8 | 4.4 | 3.2 | -9.7 | 1.7 | 5.3 | 1.5 | 11.0 | 5.0 | 6.4 |
| OCT. | -0.9 | 1.0 | 1.6 | -3.8 | 0.1 | -0.4 | 2.6 | 5.8 | 3.8 | 4.3 |
| NOV. | 3.1 | -0.3 | -1.4 | 0.5 | -0.1 | 0.3 | 1.3 | 16.2 | 2.5 | 5.8 |
| DEC. | 3.1 | 1.5 | 1.0 | -1.8 | 0.8 | 0.5 | 3.1 | 12.9 | 1.5 | 4.2 |
| 1991-JAN. | 1.9 | 1.2 | 1.0 | 14.5 | 3.8 | 4.4 | -1.0 | 10.4 | 1.5 | 3.6 |
| FEB. | 14.1 | 8.4 | 6.5 | 18.8 | 10.4 | 7.9 | 6.3 | 15.2 | 3.9 | 6.7 |
| MAR. | 9.5 | 7.4 | 6.7 | -17.9 | 2.5 | 0.8 | 6.7 | 5.1 | 4.1 | 4.3 |
| APR. | -1.1 | 2.8 | 4.2 | -9.2 | 0.5 | -8.8 | 0.0 | -4.1 | 3.5 | 1.6 |
| MAY | 13.7 | 4.6 | 1.6 | -15.4 | 0.8 | | -0.7 | 10.3 | 4.2 | 5.7 |
| JUNE pe | 8 | 2 | 0 | -11 | 0 | | | | | |
| LEVELS ($BILLIONS) : | | | | | | | | | | |
| MONTHLY | | | | | | | | | | |
| 1991-JAN. | 826.7 | 3331.0 | 2504.3 | 793.6 | 4124.6 | 4977.1 | 2721.2 | 2556.3 | 7911.4 | 10467.8 |
| FEB. | 836.4 | 3354.3 | 2517.9 | 806.0 | 4160.4 | 5010.0 | 2735.1 | 2588.6 | 7937.4 | 10525.9 |
| MAR. | 843.0 | 3375.0 | 2531.9 | 794.0 | 4169.0 | 5013.5 | 2750.9 | 2599.7 | 7964.2 | 10563.9 |
| APR. | 842.2 | 3382.9 | 2540.7 | 787.9 | 4170.8 | 4976.7 | 2751.6 | 2590.8 | 7987.3 | 10578.2 |
| MAY | 851.8 | 3395.8 | 2544.0 | 777.8 | 4173.6 | | 2750.0 | 2613.1 | 8015.3 | 10628.4 |
| WEEKLY | | | | | | | | | | |
| 1991-MAY 6 | 849.9 | 3391.8 | 2541.8 | 778.5 | 4170.3 | | | | | |
| 13 | 851.7 | 3396.6 | 2544.9 | 779.1 | 4175.7 | | | | | |
| 20 | 853.0 | 3399.7 | 2546.8 | 777.4 | 4177.2 | | | | | |
| 27 | 851.7 | 3398.6 | 2546.8 | 778.2 | 4176.8 | | | | | |
| JUNE 3 | 850.6 | 3389.0 | 2538.4 | 773.4 | 4162.4 | | | | | |
| 10 p | 856.6 | 3402.0 | 2545.5 | 771.2 | 4173.2 | | | | | |
| 17 p | 860.7 | 3406.4 | 2545.7 | 769.8 | 4176.2 | | | | | |

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

# Components of Money Stock and Related Measures

seasonally adjusted unless otherwise noted

JUL. 1, 1991

| Period | Currency | Demand deposits | Other checkable deposits | Overnight RPs and Eurodollars NSA[2] | MMDAs | Savings deposits | Small denomination time deposits[3] | Money market mutual funds: general purpose and broker/dealer[1] | Money market mutual funds: institutions only | Large denomination time deposits[4] | Term RPs NSA[2] | Term Eurodollars NSA[1] | Savings bonds | Short-term Treasury securities | Commercial paper[1] | Bankers acceptances |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| LEVELS ($BILLIONS) : | | | | | | | | | | | | | | | | |
| ANNUALLY (4TH QTR.) | | | | | | | | | | | | | | | | |
| 1988 | 210.8 | 287.3 | 280.1 | 83.4 | 505.8 | 424.5 | 1022.4 | 237.5 | 86.7 | 538.8 | 123.2 | 102.8 | 108.8 | 266.8 | 326.6 | 40.5 |
| 1989 | 220.9 | 278.9 | 282.9 | 76.1 | 482.0 | 402.9 | 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 | 78.4 | 506.5 | 411.1 | 1162.5 | 343.0 | 121.9 | 511.6 | 93.8 | 70.5 | 125.2 | 329.1 | 359.1 | 33.8 |
| MONTHLY | | | | | | | | | | | | | | | | |
| 1990-MAY | 231.9 | 275.8 | 292.0 | 83.2 | 500.5 | 411.3 | 1153.5 | 325.3 | 107.6 | 540.5 | 99.3 | 67.1 | 120.7 | 315.4 | 349.1 | 35.4 |
| JUNE | 233.7 | 276.3 | 293.7 | 82.3 | 502.3 | 411.8 | 1154.6 | 327.5 | 108.1 | 538.0 | 102.2 | 64.4 | 121.4 | 331.7 | 349.1 | 34.7 |
| JULY | 235.7 | 275.6 | 291.7 | 84.0 | 503.4 | 412.7 | 1156.8 | 329.2 | 109.8 | 535.0 | 100.5 | 65.1 | 122.2 | 334.3 | 348.2 | 33.0 |
| AUG. | 238.4 | 278.0 | 292.1 | 82.7 | 505.9 | 412.7 | 1158.3 | 335.8 | 114.0 | 529.2 | 102.0 | 68.3 | 123.0 | 329.8 | 347.0 | 32.3 |
| SEP. | 241.5 | 279.1 | 293.0 | 81.5 | 507.4 | 412.3 | 1160.1 | 339.3 | 116.2 | 521.9 | 98.3 | 70.0 | 123.8 | 333.8 | 359.0 | 31.8 |
| OCT. | 243.9 | 277.1 | 291.8 | 83.5 | 506.7 | 411.5 | 1161.4 | 341.6 | 119.6 | 515.1 | 95.6 | 70.2 | 124.5 | 330.4 | 358.8 | 32.6 |
| NOV. | 245.0 | 277.2 | 292.8 | 77.6 | 506.8 | 411.1 | 1161.8 | 341.9 | 120.5 | 512.5 | 95.7 | 70.0 | 125.2 | 329.8 | 359.0 | 34.0 |
| DEC. | 246.4 | 276.9 | 293.8 | 74.0 | 505.9 | 410.8 | 1164.2 | 345.4 | 125.7 | 507.1 | 90.2 | 71.4 | 126.0 | 327.1 | 359.4 | 34.7 |
| 1991-JAN. | 251.6 | 272.9 | 293.9 | 71.2 | 505.2 | 412.0 | 1163.9 | 353.9 | 130.1 | 511.9 | 88.2 | 71.9 | 126.7 | 326.4 | 363.4 | 36.0 |
| FEB. | 255.1 | 276.2 | 296.9 | 70.1 | 511.5 | 415.4 | 1162.7 | 358.2 | 139.3 | 516.0 | 86.8 | 72.6 | 127.8 | 330.5 | 356.1 | 35.2 |
| MAR. | 256.7 | 277.1 | 301.0 | 69.1 | 519.2 | 420.5 | 1158.3 | 363.6 | 142.0 | 511.5 | 83.2 | 71.2 | 128.9 | 330.8 | 352.4 | 32.4 |
| APR. | 256.6 | 275.8 | 302.0 | 69.1 | 526.6 | 427.3 | 1150.3 | 364.2 | 145.6 | 506.7 | 82.1 | 68.6 | 130.1 | 307.5 | 337.6 | 30.7 |
| MAY | 256.8 | 278.7 | 308.3 | 67.6 | 536.1 | 433.2 | 1141.0 | 365.1 | 146.2 | 502.7 | 81.1 | 66.4 | | | | |

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

June 28, 1991

## NET CHANGES IN SYSTEM HOLDINGS OF SECURITES[1]
Millions of dollars, not seasonally adjusted

| Period | Treasury bills: Net purchases[2] | Treasury bills: Redemptions (-) | Treasury bills: Net change | Treasury coupons: Net purchases[3]: within 1 year | Treasury coupons: Net purchases[3]: 1-5 | Treasury coupons: Net purchases[3]: 5-10 | Treasury coupons: Net purchases[3]: over 10 | Treasury coupons: Redemptions (-) | Treasury coupons: Net Change | Federal agencies redemptions (-) | Net change outright holdings total[4] | Net RPs[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 1990 | 17,448 | 4,400 | 13,048 | 425 | 50 | -100 | — | — | 375 | 183 | 13,240 | 9,157 |
| 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 | 95 |
| --Q4 | 5,241 | 3,000 | 2,241 | 325 | -200 | -100 | — | — | 25 | 35 | 2,230 | 12,614 |
| 1991 --Q1 | 2,160 | 1,000 | 1,160 | 800 | 2,950 | 400 | — | — | 4,150 | — | 5,310 | -21,810 |
| --Q2 | 4,320 | — | 4,320 | 900 | 550 | — | — | — | 1,450 | 91 | 5,678 | 7,263 |
| 1990 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 | 6,658 | — | 6,658 | 325 | — | — | — | — | 325 | — | 6,983 | 509 |
| December | -2,350 | 3,000 | -5,350 | — | -200 | -100 | — | — | -300 | 1 | -5,651 | 13,329 |
| 1991 January | -120 | 1,000 | -1,120 | — | — | — | — | — | — | — | -1,120 | -5,890 |
| 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 |
| Weekly | | | | | | | | | | | | |
| April 3 | 435 | — | 435 | 400 | 200 | — | — | — | 600 | — | 1,035 | 3,585 |
| April 10 | 473 | — | 473 | 300 | 500 | — | — | — | 800 | — | 1,273 | -6,778 |
| April 17 | — | — | — | — | — | — | — | — | — | — | — | 5,569 |
| April 24 | — | — | — | — | — | — | — | — | — | 91 | -91 | -5,997 |
| May 1 | — | — | — | — | — | — | — | — | — | — | — | 5,180 |
| May 8 | — | — | — | — | — | — | — | — | — | — | — | -3,263 |
| May 15 | 290 | — | 290 | — | — | — | — | — | — | — | 290 | 6,461 |
| May 22 | 59 | — | 59 | — | — | — | — | — | — | — | 59 | -3,090 |
| May 29 | 536 | — | 536 | — | — | — | — | — | — | — | 536 | 1,836 |
| June 5 | 2,526 | — | 2,526 | 200 | — | — | — | — | 200 | — | 2,726 | -2,019 |
| June 12 | — | — | — | — | — | — | — | — | — | — | — | -252 |
| June 19 | — | — | — | — | — | — | — | — | — | — | — | 3 |
| June 26 | — | — | — | — | — | — | — | — | — | — | — | 3,311 |
| Memo: LEVEL (bil. $)[6] | | | | | | | | | | | | |
| June 26 | | | 125.2 | 28.4 | 62.5 | 12.6 | 24.7 | | 128.2 | | 259.6 | 1.0 |

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 |
|---|---|---|---|---|---|
| June 26 | 2.5 | 2.5 | 1.0 | 0.2 | 6.2 |