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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

## MONETARY POLICY ALTERNATIVES

## Recent developments

(1) M2 is estimated to have expanded at about a 30 percent annual rate in January, after having increased at a $7 \frac{1}{2}$ percent annual rate in December. Some of the December increase and much of the surge in January appear to have been associated with growth in the new money market deposit accounts (MMDAs). These accounts, which were first offered on December 14, had grown to $\$ 210$ billion by late January. Estimates of the sources of funds diverted to MMDAs are inevitably imprecise, but the great bulk of the inflows to MMDAs appears to have been from other components of $M 2$, with roughly one-fifth of the $M \mathbb{M D A}$ balances representing funds shifted from outside of M2. ${ }^{\text {I/ }}$ Such shifts likely boosted M2 growth in January by about 20 percentage points.
(2) Banks and thrifts have responded to the large net inflows into core deposits in part by running off large CDs. Thus, M3 growth-estimated at a $1 \frac{1}{4}$ percent annual rate in December and 13 percent in January--was much less affected by the advent of MMDAs, though the net effect of shifts into MMDAs could account for a small portion of M3 growth in January. Banks also reacted to the strong inflows into MMDAs by making large purchases of Treasury and other securities. Reflecting these large increases in Investments as well as a modest rebound in lending, bank credit grew at a $10 \frac{1}{2}$ percent annual rate in December and an estimated $12 \frac{3}{4}$ percent rate in January, a distinct pickup from recent months. In addition, banks advanced a large volume of funds to their overseas branches.

[^1]KEY MONETARY POLICY AGGREGATES
(Seasonally adjusted annual rates of growth)


Money and Credit Aggregates

| M1 | 10.6 | 9.0 | 8.5 | 6.5 | 5.1 | 7.2 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| M2 | 8.1 | 28.9 | 9.2 | 9.4 | 9.4 | 9.5 |
| M3 | 3.3 | 10.9 | 10.1 | 10.5 | 11.7 | 11.6 |
| Bank Credit | 10.5 | 12.7 | $7.8^{2}$ | 8.1 | 8.8 | 9.6 |
| Domestic Nonfinancial Debt | - | - | 9.4 | 10.1 | 9.9 | 10.0 |

Reserve Measures ${ }^{3}$

| Nonborrowed reserves ${ }^{4}$ | 12.5 | 3.8 | 7.7 | 6.2 | 7.8 | 6.4 |
| :--- | ---: | :---: | :---: | :---: | :---: | :---: |
| Total reserves | 12.8 | 1.6 | 7.1 | 5.0 | 4.3 | 6.5 |
| Monetary base | 9.7 | 11.8 | 7.6 | 6.4 | 4.9 | 6.8 |
| Memo: (Millions of dollars) <br> Adjustment borrowing5 | 448 | 374 | - | - | - | - |
| $\quad$ Excess reserves | 500 | 526 |  |  |  |  |

1. Projected from partial data.
2. Measured from December-January base.
3. Growth rates of reserve measures are adjusted to remove the effects of discontinuities resulting from phased changes in reserve ratios under the Monetary Control Act.
4. Includes special borrowing and other extended credit from the Federal Reserve. 5. Includes seasonal borrowing.
N.B. The data in this table reflect seasonal and benchmark revisions, as well as definitional changes. See Appendix II. Revised data are confidential until released officially on February 11.
(3) Ml is estimated to have grown at an $8 \frac{3}{4}$ percent annual rate in December and at a $12 \frac{1}{2}$ percent annual rate in January. Growth in January appears to have been little affected on balance by the new deposit accounts. Shifts out of M1 into MMDAs appear to have been minor, about offset by relatively small shifts into super-NOW accounts from outside this aggregate. Super-NOW accounts grew to only about \$17 billion by late January.
(4) The same pattern of growth as reported above is evident in the newly revised money stock data that incorporate definitional changes and the annual benchmark and seasonal factor review. ${ }^{\text {I/ }}$ On the revised basis, in January M1 grew at a 9 percent annual rate, M2 29 percent, and M3 11 percent. The definitional changes were to exclude balances in IRA and Keogh accounts from the aggregates and to include tax-exempt money market funds in M2 and M3. The net impact of these changes was to reduce the annual rate of growth of M2 and M3 for 1982 by about $\frac{1}{2}$ and $\frac{3}{4}$ point to 9.2 and 10.1 percent, respectively. (Subsequent references to the monetary aggregates in this bluebook and the data in the table on the next page are on a revised basis.)
(5) Total and nonborrowed reserves growth slowed from about a 13 percent annual rate in December and to a 3 to 4 percent annual rate in January. In part, the slower growth resulted from the more moderate increases in transaction balances near year end, but it also reflected a substantial reduction in required reserves owing to runoffs of CDs and shifts out of savings and time deposits at member banks into MMDAs. Growth of the monetary base, in contrast, accelerated in December and January,

[^2]mainly reflecting a rebound in currency growth. The level of adjustment (and seasonal) borrowing at the discount window implied by the reserve paths was maintained at $\$ 200$ million throughout the intermeeting period. ${ }^{1 /}$ However, with demands for excess reserves extraordinarily strong, borrowing ran above that level until the two statement weeks just past, when it averaged about $\$ 150$ million. ${ }^{2 /}$
(6) Over the intermeeting period, the funds rate generally has been fluctuating near the $8 \frac{1}{2}$ percent discount rate, except around year end when it was temporarily boosted by statement date pressures. The heavy calendar of Treasury auctions and the attention focused on future financing needs by recent discussion of federal budget policy have placed upward pressure on Treasury yields in particular. Private short-term rates have shown small mixed changes, but Treasury bill rates have risen 35 to 40 basis points on balance. In long-term markets, Treasury bond rates are up about 60 basis points, about twice as much as corporate rates. A small decline in tax-exempt yields appears to reflect the slackened pace of taxexempt offerings following the rush of new issues sold in the fourth quarter in anticipation of new registration requirements.
(7) The dollar has appreciated by about 2 percent on a weighted average basis and by about 5 percent against sterling since the last FOMC meeting. The dollar dropped by about 4 percent from the December meeting

1/ See Appendix III for intermeeting reserve path adjustments.
2/ The unusualily high level of excess reserves was concentrated at small member and nonmember banks, and may reflect uncertainties caused by the extraordinary volume of new deposit flows associated with MMDAs and the related reduction in required reserves, changing reserve requirements on the MMDA instrument in the wake of Congressional legislation, and the general reduction in reserve requirements that occurred in late December as a result of exempting the first $\$ 2.1$ million of reservable liabilities.
to early January, then rose sharply afterwards as market participants revised their expectations about the near-term course of U.S. interest rates. Under the circumstances, expected cuts in official lending rates in Germany and Japan did not materialize.

Longer-run targets for 1983
(8) Establishment of longer-run monetary and credit targets for 1983 is complicated by the need to take account of the redistribution of funds associated with introduction of MDAs and super-NOW accounts-in terms of both their transitional impact on growth rates and on the longer-run behavioral characteristics of the aggregates. Moreover, other developments also raise questions about the underlying trend of velocity. For example, should last year's sharp declines in income velocities of key monetary aggregates be interpreted as an indication that the public will over time want to hold more money relative to GNP than historical patterns would suggest? Should that be the case, velocity growth may not show its usual cyclical recovery this year and the trend increase in, for example, M1 velocity over longer periods may be reduced below the 3 percent annual rate of the post-World War II period. On the other hand, last year's unusual build-up in liquidity relative to income could be reversed this year, with a consequent substantial rise in velocity.
(9) These various issues, among others, are involved in assessing the tentative 1983 monetary targets set by the Committee last July and alternatives to them. The targets set in mid-1982 for the monetary aggregates this year were: M1, $2 \frac{3}{2}$ to $5 \frac{1}{2}$ percent; M2, 6 to 9 percent; M3, $6 \frac{1}{2}$ to $9 \frac{1}{2}$ percent. The associated range for bank credit was 6 to 9 percent. Each of these potential ranges, and possible alternatives, is considered in the paragraphs below, but with the credit discussion focused on total credit.
(10) The 6 to 9 percent range for M2 applicable to growth from QIV ' 82 to QIV ' 83 does not appear to be feasible, given the strength of M2 growth in the early weeks of the year related to the shifts to MMDAs.

Assuming that a little more than half of the growth in MMDAs for the year has already occurred, and that a smaller fraction will come from market instruments as the year progresses, we would estimate that shifts Into those accounts from sources outside M2 would raise growth for the year on the order of 3 to 4 percentage points. This would suggest for the year 1983 that an M2 growth range of 9 to 13 percent could be generally consistent with the lower tentative range set last year.
(11) Another possible approach to allowing for shifts into MDAs would be to base the M2 range for 1983 on the first quarter of the year, Instead of the fourth quarter of 1982, on the ground that the bulk, though not all, of the year's shift will have taken place by March. An M2 growth range based on the first quarter of $6 \frac{1}{2}$ to $9 \frac{1}{2}$ percent at an annual rate-just $\frac{1}{2}$ point higher than the present tentative range--would encompass a subsequent underlying growth of 8 percent (the assumption underlying the staff GNP projection) and leave scope for up to $1 \frac{1}{2}$ points of shift effect over the last three quarters of the year. The staff would anticipate a shift effect over this period of about that amount; a slightly higher range would leave more room for the possibilities that shifting may be greater than we have assumed or that the velocity of M2 will continue to show an unusual decline in contrast to its more normal stability (exhibited on average even in recovery periods).
(12) With regard to M 3 , it is even more problematical to abstract from shifts in an effort to assess what would otherwise have occurred, since banks have the option of permitting large CDs to run-off in adjustment to MMDA inflows. In general, it might be assumed that banks and thrifts may employ the new accounts to enhance their share of the credit market at least to some degree. However, even so, M3 would not necessarily
increase and could even be reduced to the extent money market funds drop. At the same time, we would expect a rather substantial moderation in demand for bank credit from businesses this year as they continue with strong efforts to restructure balance sheets. Thus, maintenance of the tentative M3 range or possibly a reduction by $\frac{3}{2}$ percentage point, even with QIV ' 82 as a base, may be consistent with emerging institutional developments.
(13) The introduction of MMDAs and super-NOWs thus far has induced greater distorting effects on the growth rate of M2 than of M1. This is not entirely unexpected, of course, since it was never clear whether the two new accounts might or might not be offsetting in terms of their effect on M1. Still, it remains uncertain how to interpret the newly emerging Ml as an increasing proportion of the aggregate comes to bear a market interest rate and is composed of savings-type deposits. I/ These uncertainties, as well as the potential for future distortions in Ml should banks begin marketing super-NOWs more aggressively, argue against specifying a long-run range for Ml at this point.
(14) On the other hand, the apparent modest size of shifts thus far into and out of M1 may suggest that some confidence could be placed in a long-run M1 range. However, if one were specified, a relatively wide range would seem advisable. We would suggest, as one alternative, a range of 3 to 7 percent from QIV'82 to QIV'83. Assuming there are no significant net shifts into or out of M1 as a result of the new accounts, actual growth may be around the upper end of this range, consistent with an 8

[^3]percent "underlying" M2 growth over the balance of the year. Such M1 growth implies that its income velocity would rise only slightly over the year, below its trend rate of the postwar period and well below its average during cyclical recoveries. A relatively slow velocity rise in 1983 for Ml is consistent with our quarterly model's demand for money equation, given the staff projection of GNP and relatively stable interest rates. This equation had overpredicted the demand for money for much of the period since the mid-1970's. However, conditions leading to the earlier sharp downward demand shifts for money--high and rising interest rates and market innovations that diverted transactions funds from M1 to other instruments-have faded. Thus, at this point we see a risk that the $2 \frac{1}{2}$ to $5 \frac{1}{2}$ percent M1 range--which at the upper end would entail a downward demand shift of a couple of percentage points according to our quarterly model--would be overshot unless income is weaker than projected or interest rates rise.
(15) We would anticipate total credit growth in 1983 to be in an 8 to 11 percent range, as measured by the expansion in domestic nonfinancial debt generated out of the flow of funds accounts consistent with the staff GNP forecast. $=$ /he mid-point of this range would involve about the same rate of expansion as last year, when nominal GNP growth was substantially less than is expected for this year. A continued expansion of credit in excess of GNP growth during a period of economic recovery, as is expected for this year, is somewhat unusual, but reflects growth in

[^4]borrowing by sectors generating the recovery--the Federal Government and households--while the drop-off in borrowing by the lagging sector--businesses--is less than usual for this stage of a cycle because of the constrained increase in their internal funds occasioned by a relatively modest recovery.
(16) Based on the preceding discussion, the table below summarizes what the staff believes to be a consistent set of relationships among the money and credit aggregates for 1983, measured from QIV '82 to QIV '83. Alternative II essentially adjusts the tentative July M2 range for the shifts in funds generated by the new deposit accounts, and suggests ranges for the other aggregates that the staff now believes consistent with that M2 range. We would still expect actual growth to be toward the upper end of all three ranges. Alternatives I and III embody somewhat easier and tighter specifications, respectively.

|  | Alt. I | Alt. II | Alt. III | Memo: <br> July ' 82 range |
| :---: | :---: | :---: | :---: | :---: |
| M1 | 4 to 8 | 3 to 7 | 2 to 6 | 23 ${ }^{\frac{1}{2}}$ to $5 \frac{1}{2}$ |
| $\mathrm{M} 2 \underline{1} /$ | 931 to 131 | 9 to 13 | 83 ${ }^{\frac{1}{2}}$ to 123 | 6 to 9 |
| M3 | $6 \frac{1}{2}$ to $9 \frac{1}{2}$ | 6 to 9 | $5 \frac{1}{2}$ to $8 \frac{1}{2}$ | 62 $\frac{1}{2}$ to 93 |
| Total credit | $8 \frac{1}{2}$ to $11 \frac{1}{2}$ | 8 to 11 | 73 ${ }^{\frac{1}{2}}$ to $10 \frac{1}{2}$ |  |

[^5](17) The table on the next page shows possible outcomes for alternative monetary strategies. Strategy 1 is consistent with the longrun targets of alternative II for 1983 and assumes an 8 percent underlying M2 growth in subsequent years. The results shown represent the staff's
judgmental GNP forecast found in the greenbook, but extended to 1985. The consequences of other monetary strategies are based essentially on differences derived from simulations of the quarterly econometric model. Strategy 2 assumes higher M2 growth than strategy 1 in 1983 and $1984-$ by 1 and $\frac{1}{2}$ percentage point, respectively. Strategy 3 slows underlying M2 growth to about 7 percent over the three-year period. Strategies 4 and 5 are designed to help evaluate the implications of a possible decrease in the structural budgetary deficit from currently projected levels.
(18) Results of the first three strategies embodying alternative monetary approaches indicate, as would be expected, that somewhat higher money growth leads to faster real economic expansion relative to our basic forecast but at the expense of a slight acceleration in prices over the three year horizon rather than a steady deceleration. A deceleration in prices would be even sharper under the slow money growth assumption, but accompanied by a noticeably slower economic recovery.
(19) The last two strategies assume various measures of fiscal restraint--about equally split between spending and tax initiatives-with effects beginning in 1983 that cumulate to a $\$ 60$ biliion cut in the structural deficit by 1985. If no change is made in the basic money supply assumption of strategy 1 , the quarterly model would indicate an improved price performance as time goes on and significantly lower short-term interest rates, but economic recovery would be slower. However, possible psychological benefits on longer-term interest rates, as anticipation of credit demands and inflation are reduced, and on confidence generally from a package of fiscal restraint would not be captured by the model. If the tighter fiscal policy is accompanied by the more rapid money growth in

## -12- <br> Estimated Impacts of AIternative Longer-run Policy Strategies

$1983 \quad \underline{1984}$

Real GNP (\% increase QIV/QIV)

| 1. Basic money/basic fiscal | 3.5 | 4.4 | 4.6 |
| :--- | :--- | :--- | :--- |
| 2. Higher money/basic fiscal | 4.1 | 4.9 | 4.8 |
| 3. Lower money/basic fiscal | 2.8 | 3.3 | 3.4 |
| 4. Basic money/tighter fiscal | 2.5 | 4.0 | 5.1 |
| 5. Higher money/tighter fiscal | 3.0 | 4.5 | 5.4 |

Implicit deflator (\% increase QIV/QIV)

| 1. | 3.9 | 3.7 | 3.5 |
| :--- | :--- | :--- | :--- |
| 2. | 4.0 | 4.0 | 4.2 |
| 3. | 3.9 | 3.5 | 2.7 |
| 4. | 3.9 | 3.6 | 2.8 |
| 5. | 4.0 | 3.7 | 3.4 |

Unemployment rate (QIV average)

| 1. | 10.6 | 9.5 | 8.4 |
| ---: | ---: | ---: | ---: |
| 2. | 10.5 | 9.2 | 7.9 |
| 3. | 10.8 | 10.1 | 9.4 |
| 4. | 10.9 | 10.0 | 8.9 |
| 5. | 10.7 | 9.7 | 8.4 |

Treasury bill rate (QIV average)

| 1. | 7.8 | 7.3 | 7.1 |
| :--- | :--- | :--- | :--- |
| 2. | 7.2 | 6.6 | 7.0 |
| 3. | 8.5 | 8.5 | 8.0 |
| 4. | 6.7 | 6.3 | 5.9 |
| 5. | 6.2 | 5.7 | 5.8 |

[^6]1983 and 1984 of strategy 2, the pace of economic recovery, according to the model, is slowed only a little in the first year of recovery relative to our basic assumption, and prices are not much affected, but short-term interest rates are substantially lower throughout the period. As a result growth of economic activity accelerates noticeably. The considerable declines in short-term rates under strategy 5 would help bring long rates down and encourage business spending on plant and equipment, unless the more rapid expansion of money assumed in this and the next year generates inflationary fears that work to hold up longer-term market rates-a potential reaction not incorporated in these model results.

## Near-term targets

(20) Alternative short-run specifications of the monetary aggregates for the last two months of the quarter are shown in the upper panel of the following table, with implied growth rates for the entire quarter shown in the second panel. These specifications are, of course, highly uncertain, as recent developments make clear. The M2 figures shown assume some continued shifts into that aggregate in response to the availability of the new accounts, but at a much slower pace than in late December and January. The figures for M3 are, we believe, likely to be much less distorted by shifts. Because Ml thus far seems to have been relatively little affected by the shifts, an Ml specification is also shown. (More detailed data for the alternatives are shown in the charts and tables on the following pages. The quarterly interest rate path consistent with the staff's GNP projection is contained in Appendix $V$.
Alt. A Alt. B Alt. C

Growth from Jan. to Mar.

| M2 | 15 | $14 \frac{1}{2}$ | 14 |
| :---: | :---: | :---: | :---: |
| M3 | $7 \frac{1}{2}$ | 7 | $6 \frac{1}{2}$ |
| M1 | 6 | 5 | 4 |

Implied growth from Dec. to Mar.

| M2 | 20 | $19 \frac{1}{2}$ | $19 \frac{1}{4}$ |
| :--- | :---: | :---: | :---: |
| M3 | $8 \frac{3}{4}$ | $8 \frac{1}{4}$ | 8 |
| M1 | 7 | $6 \frac{3}{2}$ | $5 \frac{3}{4}$ |
|  |  | 5 to 9 | 6 to 10 |

(21) Under all three alternatives, we expect a slowing in the growth rate of the various monetary aggregates from their unusually rapid January rates. M2 growth, however, is expected to remain quite sizable. Under alternative B, M2 is assumed to grow at an "underlying" annual rate

Alternative Levels and Growth Rates for Key Monetary Aggregates

| 1982-- | October |
| ---: | :--- |
| November |  |
| December |  | 1983--January | February |
| :--- |
| March |

Growth Rates
Monthly
1982- October
November
December

1983--January
February March

Dec. to March
Jan. to March

Growth Rates Quarterly Average
$1982-$ Q1
Q2
Q3
Q4

$1983-$ Q1

| 8.7 | 8.7 | 8.7 |
| ---: | ---: | ---: |
| 7.0 | 7.0 | 7.0 |
| 10.9 | 10.9 | 10.9 |
| 9.2 | 9.2 | 9.2 |
|  |  |  |
| 18.0 | 17.8 | 17.7 |

8.6
8.5
12.5
9.4

8.5
8.6
8.5
12.5
9.4
8.3

| 8.0 | 8.0 | 8.0 | 9.3 | 9.3 | 9.3 | 14.5 | 14.5 | 14.5 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 9.5 | 9.5 | 9.5 | 9.2 | 9.2 | 9.2 | 13.6 | 13.6 | 13.6 |
| 8.1 | 8.1 | 8.1 | 3.3 | 3.3 | 3.3 | 10.6 | 10.6 | 10.6 |
|  |  |  |  |  |  |  |  |  |
| 28.9 | 28.9 | 28.9 | 10.9 | 10.9 | 10.9 | 9.0 | 9.0 | 9.0 |
| 17.5 | 17.0 | 16.5 | 12.5 | 12.0 | 11.5 | 7.0 | 6.0 | 5.0 |
| 12.3 | 11.9 | 11.4 | 2.5 | 2.0 | 1.5 | 5.0 | 4.0 | 3.0 |
|  |  |  |  |  |  |  |  |  |
| 19.9 | 19.5 | 19.2 | 14.0 | 7.5 | 7.3 | 8.0 | 7.0 | 6.4 |
| 15.0 | 14.5 | 14.0 | 6.5 | 6.0 | 5.0 | 4.0 |  |  |


| 8.0 | 8.0 | 8.0 | 9.3 | 9.3 | 9.3 | 14.5 | 14.5 | 14.5 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 9.5 | 9.5 | 9.5 | 9.2 | 9.2 | 9.2 | 13.6 | 13.6 | 13.6 |
| 8.1 | 8.1 | 8.1 | 3.3 | 3.3 | 3.3 | 10.6 | 10.6 | 10.6 |
|  |  |  |  |  |  |  |  |  |
| 28.9 | 28.9 | 28.9 | 10.9 | 10.9 | 10.9 | 9.0 | 9.0 | 9.0 |
| 17.5 | 17.0 | 16.5 | 12.5 | 12.0 | 11.5 | 7.0 | 6.0 | 5.0 |
| 12.3 | 11.9 | 11.4 | 2.5 | 2.0 | 1.5 | 5.0 | 4.0 | 3.0 |
|  |  |  |  |  |  |  |  |  |
| 19.9 | 19.5 | 19.2 | 14.0 | 7.5 | 7.3 | 8.0 | 7.0 | 6.4 |
| 15.0 | 14.5 | 14.0 | 6.5 | 6.0 | 5.0 | 4.0 |  |  |


| 8.0 | 8.0 | 8.0 | 9.3 | 9.3 | 9.3 | 14.5 | 14.5 | 14.5 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 9.5 | 9.5 | 9.5 | 9.2 | 9.2 | 9.2 | 13.6 | 13.6 | 13.6 |
| 8.1 | 8.1 | 8.1 | 3.3 | 3.3 | 3.3 | 10.6 | 10.6 | 10.6 |
|  |  |  |  |  |  |  |  |  |
| 28.9 | 28.9 | 28.9 | 10.9 | 10.9 | 10.9 | 9.0 | 9.0 | 9.0 |
| 17.5 | 17.0 | 16.5 | 12.5 | 12.0 | 11.5 | 7.0 | 6.0 | 5.0 |
| 12.3 | 11.9 | 11.4 | 2.5 | 2.0 | 1.5 | 5.0 | 4.0 | 3.0 |
|  |  |  |  |  |  |  |  |  |
| 19.9 | 19.5 | 19.2 | 14.0 | 7.5 | 7.3 | 8.0 | 7.0 | 6.4 |
| 15.0 | 14.5 | 14.0 | 6.5 | 6.0 | 5.0 | 4.0 |  |  |


| M2 |  |  | M3 |  |  | M1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A1t. A | A1t. B | Alt. C | A1t. A | A1t. B | A1t. C | A1t. A | Alt. B | Alt. C |
| 1929.7 | 1929.7 | 1929.7 | 2352.0 | 2352.0 | 2352.0 | 468.8 | 468.8 | 468.8 |
| 1944.9 | 1944.9 | 1944.9 | 2370.0 | 2370.0 | 2370.0 | 474.1 | 474.1 | 474.1 |
| 1958.1 | 1958.1 | 1958.1 | 2376.6 | 2376.6 | 2376.6 | 478.3 | 478.3 | 478.3 |
| 2005.3 | 2005.3 | 2005.3 | 2398.1 | 2398.1 | 2398.1 | 481.9 | 481.9 | 481.9 |
| 2034.6 | 2033.7 | 2032.8 | 2423.0 | 2422.0 | 2421.0 | 484.7 | 484.3 | 483.9 |
| 2055.5 | 2053.8 | 2052.1 | 2428.1 | 2426.1 | 2424.1 | 486.7 | 485.9 | 485.1 |

8.5
8.3
8.6
8.5
12.5
9.4
8.1
10.5
3.2
6.1
13.2

9.0
10.5
3.2
6.1
13.2
8.7
10.5
3.2
6.1
13.2
8.7
8.4

Actual and Targeted M2


## Actual and Targeted M3



Actual and Targeted M1

of 8 percent from the end of January. Actual growth is higher because of continued, though diminishing, shifts into MDAs. ${ }^{1 /}$ M1 growth, which has been quite substantial for several months now, is profected to decelerate markedly, partly as the lagged upward effects on growth of this aggregate of earlier interest rate declines wear off. ${ }^{-/}$Even so, Ml growth on a quarterly average basis would be around $8 \frac{3}{4}$ percent, implying a slight further drop in velocity in the first quarter of the year. M3 growth over the February-March period is expected to expand about in line with its December-January average.
(22) Alternative $B$, which might be considered as most consistent with long-run alternative II, assumes that federal funds generally trade somewhat below the current $8 \frac{1}{2}$ percent discount rate. Other market rates are likely to change little between now and the next Committee meeting under those circumstances, with the 3 -month bill rate generally in an 8 to $8 \frac{1}{2}$ percent range. Borrowing at the discount window would remain around $\$ 200$ million, with total reserves probably falling on the order of 10 percent, and nonborrowed reserves by about $7 \frac{1}{2}$ percent, as required reserves contract mainly reflecting continued run-offs in large CDs.

[^7](23) Somewhat easier market conditions are implied by alternative A, which involves a drop in the funds rate to the $7 \frac{1}{2}$ to 8 percent area. Such a decline would probably entail a further $\frac{1}{2}$ percentage point reduction In the discount rate. Assuming a cut in the discount rate, the money market specifications of alternative A would generally be consistent with borrowing in the $\$ 150$ million to $\$ 200$ million range. Both short- and long-term market rates would be expected to adjust downward. However, whether the decline in long-term rates would be sustainable will depend in part on whether incoming economic news and the budgetary outlook tend to raise market concerns about the sustainability of easier money market conditions. The dollar likely would resume its decline on foreign exchange markets.
(24) Alternative C, which appears most consistent with the tightest of the longer-run alternatives presented, involves a rise in the federal funds rate to the 9 percent area. Interest rates would adjust sharply upward, particularly so over the short run in the Treasury note and bond area where the market is in process of digesting a substantial refunding. Private rates would also rise, and a portion of the recent improvement in quality spreads may be reversed, as concerns about the viability of major borrowers tend to re-emerge. Borrowing at the discount window, given the present discount rate, would probably rise to around $\$ 500$ million, and nonborrowed reserves would contract by about 13 percent at an annual rate. The dollar would probably rise on foreign exchange markets over the short run.
(25) The debt of domestic nonfinancial sectors in the first quarter is projected to grow at an annual rate of a little over 9 percent, little different from its rate of expansion in the fourth quarter, and about in line with expected growth for the current year. With its need
to finance a massive deficit, the federal govermment will continue to be the predominant borrower in credit markets, accounting for almost half of total funds raised by nonfinancial sectors. Borrowing by state and local governments is expected to drop off from the advanced fourth-quarter pace, when it was boosted by approaching regulatory deadines as well as lower interest rates. Even so, fund usage by this sector should remain fairly strong by historical standards, reflecting in part refunding and advance refunding of securities issued earlier at higher rates. Home mortgage takedowns are likely to increase further in lagged response to earlier rate declines, but installment borrowing by households may ease a bit, having been shifted to an extent•to the fourth quarter by interest rate concessions on auto financing. Even though corporations' net need for external funds is expected to change little in the first quarter, business borrowing may pick up somewhat from its slow fourth-quarter pace and be accompanied by a more rapid build-up in liquid assets, which had slowed considerably in the fourth quarter so far as can be told on the basis of limited information. As compared with the fourth quarter, relatively more credit expansion in the first quarter is expected to be financed by banks and other depository institutions as they benefit from MMDA inflows. Bank credit growth over the quarter may be in the 9 to 10 percent annual rate area.

Directive language is in the process of preparation, and a draft will be circulated to the Committee prior to the meeting on Tuesday. The proposed directive will attempt to take account of recent Committee discussions of longer-run targeting issues and of related questions of policy implementation--including problems raised by the new money market deposit accounts, the uncertain prospects for velocity behavior, and the weight to be given to broader aggregates, and possibly also M1, as guides to operations.

## APPENDIX I

IMPACT OF MONEY MARKET DEPOSIT ACCOUNTS AND SUPER NOW ACCOUNTS ON THE MONETARY AGGREGATES

The introduction of the money market deposit account (MDA), and to a much smaller extent the super-NOW account, had a significant influence on the behavior of the monetary aggregates in the last two months, but efforts to determine their impact with any degree of precision are necessarily handicapped by the nature of the evidence available. One approach used by the staff was to evaluate incoming data on the various money stock components in an effort to determine sources of MMDA and super-NOW increases. Estimates obtained were cross-checked against survey data and results of econometric models. The staff's estimates are shown on Table I-1, which shows that around 20 percent of $M P D$ are estimated to have come from sources outside M2, and 3 percent from M1. These estimates are about in line with the survey and other data summarized in Table I-2.

As can be seen from the last line of Table $I-2$, the staff's estimate that on the order of 20 percent of funds placed in MMDAs came from instruments not included in $M 2$ is roughly consistent with the survey information, especially given the inclusion of some large $C D$ funds in the time deposit category in the table. On the other hand, this evidence suggests that a somewhat higher proportion of MMDAs came from Ml than the staff's estimate of 3 percent. However, the survey and econometric results likely are biased upwards since they probably include funds in the M1 category that were placed in transaction accounts only temporarily in the process of being transferred to an MMDA.

As yet, there are no usable survey data for super-NOW sources. However, responses from the Reserve Bank Contact Group on this issue indicated that the bulk of the funds were shifted from other transaction accounts, with most of the rest from savings, small time deposits and possibly sweep arrangements involving retail RPs . These responses are consistent with our estimate, based on observing differences in the growth of super-NOWs and total $O C D$, that shifts to new transaction accounts from outside M1 amounted to about \$3-1/2 billion in January, approximately one fourth of the average level of super-NOWs last month.

Estimating the impact of the introduction of the MMDA on M3 is more problematical because it involves assumptions about the responses of depository institutions to the MMDA inflow as well as the sources of the deposits. Direct shifts of large CDs and shares in institution-only money mutual funds into MMDAs are estimated to account for about half of the 20 percent of MMDAs shifted from outside $M 2$; these flows would have no direct impact on $M 3$ growth. Shifts from outside M3 would tend to boost growth in this aggregate, but unless depository institutions wanted to increase their total assets or reduce other managed liabilities, they would reduce CDs, thereby about offsetting any potential impact on M3. In fact, the decline in large CDs has been much greater than could be accounted for by direct shifts into MMAs from these instruments, suggesting that such an adjustment is in train. On balance, the staff estimates that MMDAs likely have increased M3 growth by a relatively small amount.

Table I-1
Staff Estimates of
Sources of MMDAs*

|  | December <br> 1982 | January <br> 1983 | Total <br> (Dec.-Jan.) |
| :--- | :---: | :---: | :---: |
| Change in monthly <br> average leve1 <br> ( $\$$ billions) | 42.8 | 140.8 | 183.6 |
| MMDAs | 4 |  |  |
| Percent of MMDAs <br> shifting from | 63 | 2 |  |
| 1. M1 | 61 | 3 |  |
| 2. Savings \& small time | 23 | 13 | 62 |
| 3. MMMF (general purpose |  |  |  |
| and broker/dealer) | 90 | 76 | 16 |
| 4. Total within M2 (l+2+3) | 10 | 24 | 80 |
| 5. Total outside M2 |  | 20 |  |

Impact of MMDAs and Super-NOWs on the Growth
of the Monetary Aggregates*

|  | $\$$ billions |  |  | percentage points <br> (annualized) |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M1 | M2 | M3 |  | M1 | M2 | M3 |
| 1982-Dec. | $-1-1 / 2$ | 4 | 0 | -4 | $2-1 / 2$ | 0 |  |
| 1983-Jan. | 0 | 33 | 8 | 0 | 20 | 4 |  |
| Dec.-Jan. | $-1-1 / 2$ | 37 | 8 | -2 | 11 | 2 |  |

*Based on monetary aggregates data before benchmark and seasonal update, or changes in definition.

Table I-2
Evidence on the Sources of Money Market Deposit Accounts (percent)

| Percent of MMDAs identified as shifting from | $\begin{gathered} \text { Market } \\ \text { Facts } \\ \text { (Jan. 9) } \\ \hline \end{gathered}$ | ```Survey Research Center (Jan.)``` | $\begin{gathered} \text { Econometric } \\ \text { estimates } \\ \text { (Jan. 5) } \end{gathered}$ | FR 2071c <br> (Dec. 29) |
| :---: | :---: | :---: | :---: | :---: |
| Transaction deposits | 6 | 6 | 5 | 19 |
| Savings and time deposits ${ }^{1}$ | 61 | 67 | 53 | 44 |
| Savings | 14 | 40 | 15 | n.a. |
| Time deposits ${ }^{1}$ | 47 | 27 | $38^{3}$ | n.a. |
| Money market mutual funds | 21 | 7 | $\} 42^{4}$ | 12 |
| Other unspecified sources | $13^{2}$ | $20^{2}$ |  | $24^{5}$ |

1. Includes large time deposits.
2. Includes deposits made from cash and income earned since the account became available.
3. Includes 15 percentage points associated with shifts from large CDs. 4. Includes shifts from money market mutual funds and retail RPs (which are part of time deposits in the survey results) along with market instruments. 5. Includes some flows into individual institutions coming from other depository institutions.
n.a.-not available.

## APPENDIX II

## MONEY STOCK REVISIONS


#### Abstract

Measures of the money stock have been revised to incorporate annual seasonal adjustment and benchmark revisions, as well as certain definitional changes. These revisions are still preliminary and are to be regarded as confidential until published on February 11. This appendix briefly describes these changes, and compares growth rates of the new series with the old series. Growth rates are shown in Tables II-1 to II-3.


## Definitional Changes

Two changes in the composition of the broader money stock measures have been made. One, tax-exempt money market funds which previously had been excluded from the aggregates are now included on the same basis as taxable money funds; that is, balances in general purpose and broker/dealer funds enter at the M2 level and balances in institution-only funds enter at the M3 level. This change boosted both $M 2$ and $M 3$ growth in 1982 by 0.4 percentage points. Two, all IRA/Keogh balances at depository institutions and money market mutual funds are now removed at the M2 level. This change reduced M2 growth last year by about 1.2 percentage points and M3 by about 1 percentage point.

## Benchmark Revisions

Deposits of commercial banks, savings and loan associations and credit unions have been benchmarked to recent call reports. The impact of this benchmark is minimal--raising the level of $M 1$ and lowering the levels of the broader measures slightly, but leaving growth rates largely unaffected.

In addition, RPs and overnight Eurodollar deposits have been revised. The overnight and term RP series have been revised using a special survey of RPs at depository institutions and additional information on money market mutual fund holdings of RPs. The net effect of these changes was to reduce the level of net overnight RPs and raise the level of term RPs; growth rates in 1982 were affected only marginally by these revisions. The revision to the overnight Eurodollar component of M2 resulted from broadening the panel of branches of U.S. banks (previously consisting of selected Caribbean offices) to include additional Caribbean offices as well as offices in other locations, principally London; the net impact of this change on both levels and growth rates was minor after allowing for holdings of such deposits by money market mutual funds.

## Seasonal Revisions

Seasonal factors were revised using an X -11-ARIMA procedure adopted
last year. Revisions to seasonal factors tended to be greater than in recent years, as additional data for 1982 tend to confirm evolving patterns that had been obscured by unusual circumstances associated with the credit control period of 1980. With the exception of July, growth in Ml in first months-of-quarters was lowered, especially in April and October. In general, revised seasonal factors for Ml are more similar to those derived from the experimental model-based procedure built from weekly seasonal factors; revisions to the experimental series were relatively small.

II-3

Table II-1
COMPARISON OF REVISED AND OLD M1 GROWTH RATES (percent changes at annual rates)


Monthly

| 1981--Oct. | -0.6 | 4.7 | -5.3 | -0.6 | -4.7 | -0.8 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Nov. | 7.2 | 9.7 | -2.5 | -0.1 | -2.4 | 10.0 |
| Dec. | 12.9 | 12.4 | 0.5 | 0.5 | 0.0 | 16.0 |
| 1982--Jan. | 19.6 | 21.0 | -1.4 | -0.1 | -1.3 | 10.0 |
| Feb. | 0.6 | -3.5 | 4.1 | 0.1 | 4.0 | 3.2 |
| Mar. | 1.6 | 2.7 | -1.1 | 0.0 | -1.1 | 7.2 |
| Apr. | 1.9 | 11.0 | -9.1 | -0.4 | -8.7 | 4.0 |
| May | 8.3 | -2.4 | 10.7 | -0.2 | 10.9 | 2.7 |
| June | 2.7 | 0.3 | 3.0 | -1.1 | 4.1 | 2.9 |
| July | 2.7 | 0.3 | 3.0 | 0.0 | 3.0 | -3.4 |
| Aug. | 10.3 | 10.4 | -0.1 | 0.0 | -0.1 | 12.7 |
| Sept. | 12.8 | 14.0 | -1.2 | 0.5 | -1.7 | 15.8 |
| Oct. | 14.5 | 20.6 | -6.1 | -0.3 | -5.8 | 13.5 |
| Nov. | 13.6 | 16.9 | -3.3 | 0.5 | -3.8 | 17.4 |
| Dec. | 10.6 | 8.8 | 1.8 | 0.0 | 1.8 | 9.1 |

Quarterly

| $1981-$ QIV | 3.2 | 5.7 | -2.5 | 0.2 | -2.7 | 4.5 |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $1982-$ QI | 10.6 | 10.4 | 0.2 | 0.2 | 0.0 | 9.6 |
| QII | 3.2 | 3.3 | -0.1 | -0.3 | 0.2 | 4.2 |
| QIII | 6.1 | 3.5 | 2.6 | -0.3 | 2.9 | 4.4 |
| QIV | 13.2 | 16.1 | -2.9 | 0.3 | -3.2 | 14.4 |

Annual


1. Seasonally adjusted using the experimental model-based procedure built from weekly seasonal factors.

Table II-2

COMPARISON OF REVISED AND OLD M2 GROWTH RATES
(percent changes at annual rates)

|  |  |  |  | Difference <br> due to |
| :---: | :---: | :---: | :---: | :---: |
|  | $\frac{\text { Revised M2 }}{(1)}$ | $\frac{\text { 01d M2 }}{(2)}$ | $\frac{\text { Difference }}{(1-2)}$ | Benchmark |
|  | $\frac{\text { Seasonals }}{(3)}$ | $\frac{(4)}{(5)}$ |  |  |

Monthly

| 1981--Oct. | 8.2 | 7.6 | 0.6 | 0.6 | 0.0 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| Nov. | 11.4 | 13.7 | -2.3 | 0.3 | -2.6 |
| Dec. | 9.6 | 8.5 | 1.1 | 0.5 | 0.6 |
|  |  |  |  |  | -1.1 |
| 1982--Jan. | 10.2 | 12.2 | -2.0 | -0.9 | 1.8 |
| Feb. | 3.8 | 4.4 | -0.6 | -2.4 | -2.0 |
| Mar. | 8.7 | 11.2 | -2.5 | -0.5 | -4.0 |
| Apr. | 4.1 | 10.0 | -5.9 | -1.9 | -0.1 |
| May | 10.1 | 10.7 | -0.6 | -0.5 | 2.8 |
| June | 9.1 | 6.6 | 2.5 | -0.3 | 1.1 |
| July | 10.5 | 9.8 | 0.7 | -0.4 | 0.5 |
| Aug. | 14.5 | 14.3 | 0.2 | -0.3 | 3.1 |
| Sept. | 8.5 | 5.1 | 0.3 | 0.3 |  |
| Oct. | 8.0 | 8.0 | 0.4 | -0.3 | -2.4 |
| Nov. | 9.5 | 11.6 | -2.1 | 0.3 | 1.1 |

Quarterly

| 1981--QIV | 9.6 | 8.9 | 0.7 | .5 | .2 |
| :---: | ---: | ---: | ---: | ---: | ---: |
| $1982-$ QI | 8.7 | 9.8 | -1.1 | -.8 | -.3 |
| QII | 7.0 | 9.5 | -2.5 | -1.1 | -1.4 |
| QIII | 10.9 | 9.8 | 1.1 | -.3 | 1.4 |
| QIV | 9.2 | 8.9 | 0.3 | .3 | 0 |

Annual
1982--QIV ' 82
over
QIV '81
9.2
9.8
$-0.6$
$-0.6$
0.0

1. Includes impact of tax-exempt money funds and IRA/Keogh compositional changes. These changes accounted for virtually all of the revision to M2 growth in 1982.

Table II-3

## COMPARISON OF REVISED AND OLD M3 GROWTH RATES (percent changes at annual rates)

| 1 | $\frac{\text { Revised }}{\text { (1) }}$ | O1d M3 | $\begin{aligned} & \text { Difference } \\ & (1-2) \end{aligned}$ | Difference |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Due to |
|  |  |  |  | Benchmarkl Seasonals |
|  |  | (2) | (3) | (4) (5) |

Honthly

| 1981--Oct. | 8.1 | 7.3 | 0.8 | 0.7 | 0.1 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| Nov. | 12.2 | 13.2 | -1.0 | 0.1 | -1.1 |
| Dec. | 10.0 | 7.4 | 2.6 | 1.3 | 1.3 |
|  |  |  |  |  | -1.5 |
| 1982--Jan. | 7.7 | 8.9 | -1.2 | 0.3 | 1.3 |
| Feb. | 5.4 | 5.9 | -0.5 | -1.8 | -1.1 |
| Mar. | 10.6 | 11.3 | -0.7 | 0.4 | -2.6 |
| Apr. | 7.2 | 12.0 | -4.8 | -2.2 | -1.8 |
| May | 8.9 | 11.3 | -2.4 | -0.6 | 2.0 |
| June | 10.5 | 8.8 | 1.7 | -0.3 | -0.4 |
| July | 12.3 | 12.8 | -0.5 | -0.1 | -0.3 |
| Aug. | 18.1 | 18.5 | -0.4 | -0.1 | 3.2 |
| Sept. | 8.3 | 4.0 | 4.3 | 1.1 | 0.2 |
| Oct. | 9.3 | 9.1 | 0.2 | 0.0 | -0.5 |
| Nov. | 9.2 | 9.6 | -0.4 | 0.1 | 1.9 |
| Dec. | 3.3 | 1.6 | 1.7 | -0.2 |  |

Quarterly

| 1981--QIV | 10.6 | 9.3 | 1.3 | 0.7 | 0.6 |
| :---: | ---: | ---: | ---: | ---: | ---: |
| 1982--QI | 8.6 | 8.7 | -0.1 | 0.0 | -0.1 |
| QII | 8.5 | 10.7 | -2.2 | -1.0 | -1.2 |
| QIII | 12.5 | 12.1 | 0.4 | -0.1 | 0.5 |
| QIV | 9.4 | 8.3 | 1.1 | 0.2 | 0.9 |

Annual
1982--QIV '82
QIV '81
10.1
10.3
$-0.2$
-0.2
0.0

1. Includes impact of tax-exempt money funds and IRA/Keogh compositional changes. These changes lowered M3 growth in 1982 by 0.6 percentage points.

## reserves targets and related measures INTERMETING PERIOD

(Millions of dollars; not seasonally adjusted)

|  | Reserves Targets for Intermeeting Sub-Period (average for subperiod) |  | Projection of Reserves Demanded (average for sub-period) |  |  | Implied <br> Adjustment Borrowing |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date Reserves Path Constructed |  |  |  |  |  |  | For Remaining |
|  |  | Non- |  |  |  | Average | Statement Weeks |
|  | Total | borrowed | Total | Required | Excess | for | of Interneeting |
|  | Reserves | Reserves | Reserves | Reserves | Reserves | Sub-Period | Period! |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |

4-Week Sub-Period: December 29 to January 19

| December 21 | 41,947 | 41,747 | 41,947 | 41,547 | 400 | 200 | 200 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| January 3 | \| 42,254 I ${ }^{\prime}$ | 41,885 ${ }^{\text {/ } / 3 /}$ | 42,254 | 41,735 | 520 | 369 | 200 |
| 7 | 142,2604/ | 41,7704/5/ | 42,260 | 41,561 | 699 | 490 | 200 |
| 14 | \| 42,2146 / | 41,7016/7/ | 42,214 | 41,504 | 710 | 513 | 200 |
| Actual 4-week |  |  |  |  |  |  |  |
| Average | 42,204 | 41,654 | 42,204 | 41,524 | 680 | 550 | -- |

3-Week Sub-Period: January 26 to February 9


1/ Represents borrowing in remaining statement weeks (as intermeeting sub-period progresses) implied
by each weekly updating of the sub-period average nonhorrowed reserves path. The movement in implied borrowing represents deviations in total reserves from target as well as any compensation for misses in nonborrowed reserves from target in earlier weeks of the intermeeting sub-period.
2/ The total and nonborrowed reserves paths were revised upward by $\$ 307$ million to reflect adjustments for changes affecting the reserves multiplier and to accomodate shifts of funds associated with the introduction of the new deposit instruments.
3/ The nonborrowed reserves path was adjusted downard by $\$ 169$ willion to reflect the unusually atrong borrowing that had already occurred in the sub-period.
4/ The total and nonborrowed reserves paths were revised upward by $\$ 6$ willion to reflect adjustments for changes affecting the reserves multiplier and to accommode shifts of funds associated with the introduction of the new deposit instruments.
5/ The nonborrowed reserves pach was adjusted downard by $\$ 121$ willion to reflect the unusually strong borrowing that had already occurred in the sub-period.
6/ The total and nonborrowed reserves paths were revised downard by $\$ 46$ million to reflect adjustments $\bar{f}$ or changes affecting the reserves multiplier and to accommodate shifts of funds associated with the introduction of the new deposit ingtruments.
7/ The nonborrowed reserves path was adjusted downard by $\$ 23$ million to reflect the unusually strong borrowing that had already occurred in the sub-period.
8/ The total and nonborrowed reserves paths were revised downard by $\$ 997$ million to reflect adjustments for changes affecting the reserves multiplier and to accomodare shifts of funds associated with the introduction of the new deposit instruments.
9/The total and nonborrowed reserves paths were revised upward by $\$ 50$ million to reflect adjustments for Changes affecting the reserves multiplier and to accomodate shifts of funds associated with the introduction of the new deposit instruments.
10/ The nonborrowed reserves path was revised upward by $\$ 23$ million to reflect the weak borrowing that had already occurred in the sub-period.
11/ The total and nonborrowed reserves paths were revised downard by $\$ 63$ million to reflect adjustments for changes affecting the reserves multiplier and to accommodate shifts of funds associated with the introduction of the new deposit instruments.
12/ The nonborrowed reserves path was revised upward by $\$ 9$ million to reflect the weak borrowing that had already occurred in the sub-period.

Selected Data on Major Credit Aggregates, 1960 to 1983

|  | Percent Growthl/ |  |  | Velocity-\% Change Q4/Q4 |  |  | Annual Flows-\$ Billions |  |  | Flow/GNP-\% |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TNFD | DNFD | DNFD+EQ | TNFD | DNFD | DNFD+EQ | TNFD | DNFD | DNFD+EQ | TNFD | DNFD | DNFD+EQ |
| 1960 | 5.1 | 5.0 | 5.2 | -2.9 | -2.9 | -3.0 | 36.2 | 34.5 | 35.9 | 7.1 | 6.8 | 7.1 |
| 1961 | 6.1 | 6.0 | 6.3 | 1.3 | 1.4 | 1.1 | 45.6 | 43.8 | 45.9 | 8.7 | 8.3 | 8.7 |
| 1962 | 6.9 | 6.8 | 6.9 | -1.1 | -0.9 | -1.0 | 55.0 | 52.8 | 53.1 | 9.7 | 9.3 | 9.4 |
| 1963 | 7.0 | 6.9 | 6.8 | -0.3 | -0.2 | -0.2 | 59.7 | 56.7 | 56.3 | 10.0 | 9.5 | 9.4 |
| 1964 | 7.4 | 7.3 | 7.4 | -1.4 | -1.2 | -1.4 | 67.6 | 63.9 | 65.1 | 10.6 | 10.0 | 10.2 |
| 1965 | 7.3 | 7.3 | 7.3 | 3.0 | 3.0 | 3.0 | 71.7 | 68.8 | 68.8 | 10.4 | 10.0 | 10.0 |
| 1966 | 6.5 | 6.5 | 6.7 | 1.5 | 1.4 | 1.3 | 68.2 | 66.2 | 67.5 | 9.0 | 8.8 | 8.9 |
| 1967 | 7.3 | 7.3 | 7.5 | -1.0 | -0.9 | -1.1 | 81.7 | 78.3 | 80.7 | 10.2 | 9.8 | 10.1 |
| 1968 | 8.2 | 8.3 | 8.3 | 1.1 | 1.0 | 1.0 | 98.8 | 95.8 | 95.6 | 11.3 | 11.0 | 10.9 |
| 1969 | 7.0 | 6.9 | 7.2 | -0.1 | -0.1 | -0.3 | 90.2 | 86.9 | 90.3 | 9.6 | 9.2 | 9.6 |
| 1970 | 6.9 | 6.9 | 7.4 | -1.8 | -1.9 | -2.3 | 95.3 | 92.9 | 98.6 | 9.6 | 9.4 | 9.9 |
| 1971 | 9.6 | 9.6 | 10.4 | 0.0 | -0.0 | -0.8 | 142.5 | 137.8 | 149.2 | 13.2 | 12.8 | 13.8 |
| 1972 | 10.2 | 10.3 | 11.0 | 1.2 | 1.2 | 0.5 | 166.3 | 161.2 | 172.1 | 14.0 | 13.6 | 14.5 |
| 1973 | 10.8 | 10.8 | 11.3 | 0.7 | 0.7 | 0.3 | 194.0 | 187.6 | 195.5 | 14.6 | 14.1 | 14.7 |
| 1974 | 9.6 | 9.1 | 9.3 | -2.2 | -1.9 | -2.1 | 190.1 | 175.1 | 179.1 | 13.3 | 12.2 | 12.5 |
| 1975 | 9.4 | 9.2 | 9.7 | 0.5 | 0.7 | 0.3 | 204.3 | 193.0 | 202.9 | 13.2 | 12.5 | 13.1 |
| 1976 | 11.0 | 10.6 | 11.1 | -1.6 | -1.2 | -1.6 | 262.7 | 243.4 | 253.9 | 15.3 | 14.2 | 14.8 |
| 1977 | 12.5 | 12.5 | 12.7 | -0.3 | -0.4 | -0.4 | 331.2 | 317.7 | 320.4 | 17.3 | 16.6 | 16.7 |
| 1978 | 13.5 | 12.9 | 12.9 | 1.1 | 1.8 | 1.6 | 402.3 | 368.6 | 368.5 | 18.6 | 17.0 | 17.0 |
| 1979 | 12.1 | 12.1 | 11.9 | -2.2 | -2.1 | -1.9 | 409.1 | 388.8 | 381.0 | 16.9 | 16.1 | 15.8 |
| 1980 | 10.1 | 9.9 | 10.2 | -0.6 | -0.4 | -0.7 | 382.2 | 355.0 | 367.9 | 14.5 | 13.5 | 14.0 |
| 1981 | 10.0 | 9.9 | 9.6 | -0.3 | -0.2 | 0.0 | 418.4 | 391.1 | 379.7 | 14.2 | 13.3 | 12.9 |
| 1982p | 9.3 | 9.5 | 9.6 | -4.7 | -5.4 | -5.8 | 426.9 | 413.3 | 416.9 | 14.0 | 13.5 | 13.6 |
| 1983p | 9.4 | 9.5 | 9.8 | -1.7 | -1.9 | -2.1 | 464.6 | 452.3 | 465.7 | 14.3 | 13.9 | 14.4 |

[^8]p - Flow of Funds projections, 2/4/83
1/ For DNFD+EQ the annual flow of debt-plus-equity is in relation to debt-only outscanding at end of previous year. Credit growth is measured on a year-end to year-end basis.

## Appendix V

## Interest Rates Consistent With the Greenbook GNP Projection (Quarterly average, in percent)

|  | Federal <br> Funds | 3-Month <br> Treasury <br> Bill | Recently <br> Offered <br> Corporate Bond | Fixed-rate <br> Mortgage <br> Commitment) |
| ---: | :--- | :--- | :---: | :---: |
| 1983-QI | $8-1 / 2$ | 8 | 12 | $13-1 / 4$ |
| Q2 | 8 | $7-1 / 2$ | $11-1 / 2$ | 13 |
| Q3 | 8 | $7-1 / 2$ | $11-1 / 4$ | $12-3 / 4$ |
| Q4 | $8-1 / 4$ | $7-3 / 4$ | 11 | $12-1 / 2$ |
| 1984-Q1 | $8-1 / 4$ | $7-3 / 4$ | 11 | $12-1 / 4$ |
| Q2 | 8 | $7-1 / 2$ | $10-3 / 4$ | 12 |
| Q3 | $7-3 / 4$ | $7-1 / 4$ | $10-1 / 2$ | $11-3 / 4$ |
| Q4 | $7-3 / 4$ | $7-1 / 4$ | $10-1 / 4$ | $11-1 / 2$ |

Table 1
Selected Interest Rates


NOTE Weakly data for columns $1,2,3$, and 5 through 11 are statement week averages Weekly data in col-
umn 4 are average rales set in the auction of 6 monith bills that will be issued on the Thursday following the umn 4 are average rales set in the auction of 6 monith hills that will be issued on the Thursday following the
ond ot the statement week Data in column 7 are laken Irom Donoghues Money Fund Report Columns 12 and 13 are 1 .day quotes for Friday and Thursday, respectively, following the end of the slatement woek
Column 14 is an average of coniract interest rates on commilments for conventional first mortgages with Bo percent loan-to-value ralios made by a sample of insured savings and loan associations on the Friday

[^9] gages carrying the coupon rate 50 basis points below the current FHANA ceilling

Nat Changes in System Holdings of Securities ${ }^{1}$
Millions of dollars, not seasonally adjusted

| Perlod | Treasury bills net change ${ }^{2}$ | Treasury coupons net purchases ${ }^{3}$ |  |  |  |  | Federal agencles net purchases ${ }^{4}$ |  |  |  |  | Nel change outright holdingstotal $^{5}$ | Net RPs ${ }^{6}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | within 1 -year | 1.5 | 5-10 | over 10 | total | within 1-year | 1-5 | 5-10 | over 10 | total |  |  |
| 1978 | 870 | 1,184 | 4,188 | 1,526 | 1,063 | 7,962 | -47 | 45 | 104 | 24 | 127 | 8,724 | -1,774 |
| 1979 | 6,243 | 603 | 3,456 | 523 | 454 | 5,035 | 131 | 317 | 5 | - | 454 | 10,290 | -2,597 |
| 1980 | -3,052 | 912 | 2,138 | 703 | 811 | 4,564 | 217 | 398 | 29 | 24 | 668 | 2,035 | 2,462 |
| 1981 | 5,337 | 294 | 1,702 | 393 | 379 | 2,768 | 133 | 360 | -- | - | 494 | 8,491 | 684 |
| 1982 | 5,698 | 312 | 1,797 | 388 | 307 | 2,803 | -- | -- | -- | -- | -- | 8,312 | 1,461 |
| 1981--Qtr. IV | 2,803 | 80 | 626 | 165 | 108 | 979 | 133 | 360 | -- | -- | 494 | 4.247 | 3,305 |
| 1982--Qtr. $\begin{aligned} & \text { I } \\ & \text { II }\end{aligned}$ | $\begin{array}{r} -4,329 \\ 5,585 \end{array}$ | 20 -68 | 50 570 | -- | 52 | 70 635 | -- | -- | -- | -- | -- | $-4,371$ 6,208 | -999 $-5,375$ |
| III | 150 | 71 | $891{ }^{7}$ | 113 | 123 | 1,198 ${ }^{7}$ | -- | -_ | -- | -- | -- | 1,295 | 7,855 |
| IV | 4,292 | 88 | 485 | 194 | 132 | 900 | -- | -- | -- | -- | -- | 5,179 | -20 |
| 1982--Aug. | $\begin{array}{r} 470 \\ -649 \end{array}$ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 424 -654 | $\begin{array}{r} 542 \\ 3,205 \end{array}$ |
| Oct. | 774 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 768 | -4,902 |
| Nov. | 2.552 | 88 | 485 | 194 | 132 | 900 | -- | -- | -- | -- | -- | 3,451 | 2,145 |
| Dec. | 966 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 960 | 2,737 |
| 1983--Jan. | -2,883 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -2,892 | -6,127 |
| 1982--Nov. 3 | -- | -- | -- | -- | -- | -- | -- | - | -- | -- | -- | -- | -499 |
| 10 | 114 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 839 |
| 17 | 1.649 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,649 | -845 |
| 24 | 86 | 88 | 485 | 194 | 132 | 900 | -- | -- | -- | -- | -- | 985 | -217 |
| Dec. 1 | 704 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 704 | 607 |
| 8 | 99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 99 | -2,354 |
| 15 | 1,797 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,791 | 3,151 |
| 22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -383 | $-2,878$ 4,017 |
| 29 | -383 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -383 | 4,017 |
| 1983--Jan. 5 | -1,080 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -1,080 | -669 |
| 12 | -324 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -324 | 1,590 |
| 19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 77 | -956 |
| 26 | -1,268 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -1,277 | -1.201 |
| Feb. 2 | -1,008 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -1,013 | 55 |
| LEVEL-Feb. 2 | 54.9 | 17.4 | 35.1 | 12.1 | 16.6 | 81.2 | 2.7 | 4.7 | . 9 | . 5 | 8.9 | 145.0 | -1.5 |

1 Change from end of period to end of period.
2 Outright transactions in market and with foretgn accounts, and redemptions ( - ) in bill auctions.
3 Outright transactions in market and with foreign accounts, and short-term notes acquired in exchange for maturing bills Excludes redemptions, maturity shifts, rollovers of maturing coupon issues, and direct Treasury borrowing from the System
Outright transactions in market and with foreign accounts only Excludes redemptions and maturity shifts.

5 In addition to the net purchases of securities, also refiects changes in System holdings of bankers' acceptances, direct Treasury borrowing from the System and redemptions (-) of agency and Trea sury coupon issues.
6 Includes changes in RPs ( + ), matched sale-purchase transactions ( - ) and matched purchase-sale transactions ( + ).
7 Maturing 4 -year notes were exchanged on June 30 for special 6-day bills. At their maturity, the bills were exchanged for new 4 -year notes.

| Perlod | Net ${ }^{1}$ <br> Total | Cash Positions |  |  |  |  | Forward and Futures Posilions |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Treasury bills | Treasury coupons |  | federal agency | privale short-term | Treasury bllis | Treasury coupons |  | federal agency | private shori-term |
|  |  |  | under 1 year | $\begin{aligned} & \text { over } \\ & 1 \text { year } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { under } \\ & 1 \text { year } \end{aligned}$ | $\begin{aligned} & \text { over } \\ & 1 \text { year } \\ & \hline \end{aligned}$ |  |  |
| 1981--High | 31,908 | 15.669 | 485 | 8,265 | 3.934 | 10.861 | -4,506 | 21 | -2,526 | -480 | 185 |
| Low | -15,795 | 540 | -4,350 | 1,654 | 1.178 | 5,508 | -12,842 | -23 | -4,702 | -1,750 | -1,008 |
| 1982--High | 49,437 | 11,156 | 772 | 9,456 | 6,275 | 16,658 | 8,032 | 36 | -687 | -526 | 703 |
| Low | -18,698 | -2,699 | -747 | 1,005 | 1,955 | 6,758 | -11,077 | -77* | -4,699 | -2,715 | -7,196* |
| 1982--Jan. | 9.304 | 3.704 | 301 | 4.743 | 2,990 | 8,584 | -6,344 | -8 | -3,264 | -1,325 | -77 |
| Feb. | 12,501 | 4,557 | 83 | 5,245 | 2,311 | 7,903 | -7,594 | -6 | -3,167 | -691 | 509 |
| Mar. | 11,735 | 6,588 | -118 | 5,774 | 2,504 | 9,312 | -6,696 | -3 | -2,907 | -1,168 | -1,551 |
| Apr. | 13,149 | 7,721 | -99 | 4,945 | 2,916 | 10,225 | -5,552 | -7 | -3,392 | -1,467 | -2,141 |
| May | 9,324 | 7,390 | -295 | 7,008 | 3.117 | 11,123 | -10,129 | -2 | -4,350 | -1,654 | -2,884 |
| June | 12,317 | 7,286 | -462 | 4,253 | 2.976 | 11,749 | -6,194 | 3 | -2.679 | -1,405 | -3,210 |
| July | 18,722 | 5,768 | -583 | 4,029 | 2,872 | 14,530 | -1,403 | 16 | -3,452 | -1,195 | -1,860 |
| Aug. | 23,611 | 1,330 | -632 | 4,258 | 3,556 | 14,698 | 6.240 | -29 | -2,794 | -1,508 | -1,508 |
| Sept. | 16,497 | 275 | -534 | 2,366 | 4,416 | 12.787 | 3.158 | -21 | -1,286 | -2,405 | -2,259 |
| Oct. | 18,136 | 1,044 | 109 | 2,643 | 5.251 | 13,360 | 5,285 | -14 | -1,644 | -2,405 | -5,493 |
| Nov. | 17,310 | 3.653 | 593 | 4,170 | 5,680 | 11,821 | 1,461 | -9 | -3.219 | -2,372 | -4,468 |
| Dec. | 19,007 | 8,734 | 428 | 5,652 | 5,952 | 14,044 | -5,520 | -29 | -2,878 | -2,443 | -4,931 |
| 1983--Jan. |  |  |  |  |  |  |  |  |  |  |  |
| 1982--Dec. 1 | 22,256 | 6,618 | 610 | 4,961 | 6,095 | 13.061 | 14 | -19 | -3,003 | -2,303 | -3,778 |
| 8 | 18,920 | 7.761 | 484 | 3,843 | 6,275 | 12,727 | -1,849 | -36 | -2,997 | -2,242 | -5,046 |
| 15 | 15,364 | 6,694 | 432 | 3,308 | 6,162 | 12,779 | -3,800 | -43 | -3,049 | -2,531 | -4,588 |
| 22 | 19,662 | 9,252 | 383 | 7,359 | 5,722 | 14,668 | -7.743 | -29 | -2,723 | -2.238 | -4,989 |
| 29 | 26,396 | 11,156 | 364 | 8,066 | 5,513 | 15,677 | -9,095 | -16 | 2.681 | -2,497 | -5,453 |
| 1983--Jan. ${ }^{5}$ | $\begin{aligned} & 18,406 \\ & 10,702 \star \end{aligned}$ | 10,390 $9,036 *$ | 473 $-35 *$ | 7,081 $6,451 *$ | 5,948 5,452* | $\begin{aligned} & 16,658 \\ & 13,212^{\star} \end{aligned}$ | $\begin{gathered} -9,582 \\ -10,328^{*} \end{gathered}$ | $\begin{gathered} -2 \\ -11^{*} \end{gathered}$ | $\begin{aligned} & -3,022 \\ & -3,122^{\star} \end{aligned}$ | $\begin{aligned} & -3,376 \\ & -3,092^{\star} \end{aligned}$ | $\begin{aligned} & -5,160 \\ & -6,862^{\star} \end{aligned}$ |
| 19 | 9,920* | 9,526* | -325* | 4,587* | 5,573* | 12,879* | -9,096* | -75* | -2,976* |  |  |
| 26 | 14,537* | 11,004* | 482* | 4,038* | 4,513* | 12,533* | -5,742* | -77* | -2,307* | -2,107* | -6:837* |
| $\text { Feb. } \begin{array}{r} 2 \\ 9 \\ 16 \\ 23 \end{array}$ | 15,485* | 9,728* | -616* | 2,571* | 4,204* | 12,366* | -3,377* | -79* | -2,038* | -1,538* | -5,737* |

NOTE Government securities dealer cash positions consist of securities already defivered, com-

## Erratum in Blue Book Table

The figure for bank credit growth in 1982 (page 2, third column) should read 7.1 percent rather than 7.8 percent. (The corrected figure is measured from a December-January base, and is not adjusted for shifts of assets from domestic banking offices to International Banking Facilities.)


[^0]:    ${ }^{1}$ In some cases, original copies needed to be photocopied before being scanned into electronic format. All scanned images were deskewed (to remove the effects of printer- and scanner-introduced tilting) and lightly cleaned (to remove dark spots caused by staple holes, hole punches, and other blemishes caused after initial printing).
    ${ }^{2}$ A two-step process was used. An advanced optimal character recognition computer program (OCR) first created electronic text from the document image. Where the OCR results were inconclusive, staff checked and corrected the text as necessary. Please note that the numbers and text in charts and tables were not reliably recognized by the OCR process and were not checked or corrected by staff.

[^1]:    I/ Appendix I discusses sources of funds shifted into MMDAs and the estimated impact on the growth rates of various aggregates.

[^2]:    1/ Appendix II presents detailed comparisons of the revised monetary aggregates with the data as previously formulated. The benchmark revisions had no significant impact on the annual growth rates of any of the aggregates. The revised aggregates are confidential until officially released on February 11.

[^3]:    1/ NOW accounts (including super-NOWs) were 31 percent of the deposit component of M1 in January ' 83 , up from 25 percent a year ago, and 9 percent in December ' 80 just prior to authorization of nationwide NOW accounts.

[^4]:    1/ Past behavior in this measure of total credit, compared with other measures of a credit total, is shown in Appendix IV in terms of amounts, growth rates and relations to GNP. A staff memorandum accompanying this bluebook employs a number of statistical tests to attempt to assess the "best" measure of total credit for targeting purposes. Use of domestic nonfinancial debt seems to be generally reasonable, though most measures are closely grouped in their statistical properties.

[^5]:    1/ If QI ' 83 were taken as a base for this aggregate, consistent growth ranges would be $6 \frac{1}{2}$ to $9 \frac{1}{2}$ percent through $7 \frac{1}{2}$ to $10 \frac{1}{2}$ percent.

[^6]:    Strategy 1: Reflects greenbook fiscal assumptions. M2 grows at 8 percent rate after 1983 QI.
    Strategy 2: Same fiscal policy assumptions, as in greenbook projection, but M2 grows at 9 percent rate over the remainder of $1983,8 \frac{1}{2}$ percent in 1984, 8 percent in 1985.
    Strategy 3: Same fiscal policy as in greenbook, but M2 grows at 7 percent throughout remainder of forecast period.
    Strategy 4: Same M2 as in Strategy 1, but with deficit-reducing package over 1983-85 amounting to $\$ 60$ billion of tax increases and spencing cuts.
    Strategy 5: Deficit-reducing package with higher M2 growth of Strategy 2.

[^7]:    I/ Specifically, the staff is assuming that MMDA growth slows to about $\$ 12$ billion per week on average in February and \$8 billion per week on average in March from the $\$ 40$ billion per week pace in the last half of December and some $\$ 30$ billion per week in January. This would carry the level of MMDAs from $\$ 200$ billion the week of January 26 to about $\$ 300$ billion at the end of March. The staff estimates that shifts of non-M2 assets to MMDAs cumulated to $\$ 42$ billion by January 26; we are assuming that only a further $\$ 15$ billion of such shifts occur by the end of the quarter. Under these assumptions, and with an 8 percent "underlying" growth, M2 would expand at about a 12 percent annual rate from the last week in January to the last week in March. The more rapid two-month growth shown in the table in paragraph (20) reflects the difference between working with monthly average figures and month-end data in a period of rapid change.
    2/ We have assumed that the DIDC will not introduce any further new deposit instrument--such as super-NOWs for businesses--during the short-run target period. Corporate super-NOWs, as well as some other deregulation proposals, will be considered by the DIDC at its meeting on March 1; even if the DIDC were to authorize the former account, implementation would likely be delayed until April.

[^8]:    Note: TNFD $=$ total nonfinancial-sector debt; DNFD = domestic nonfinancial-sector debt;
    DNFD+EQ = domestic nonfinancial-sector debt plus net stock issues

[^9]:    following the end of the statement week The FNMA auction yield is the average yield in a bl weakly guc.
    tion lor short term lorward commitments for government underwritien morigagas, figures exclude tion for short erm lorward commitments for goverament underwriten morgages, mortgage-backed ecurities for immediate delivery, assuming prepayment in 12 years on poots of 30-year FHAVA mort

