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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) Over the intermeeting period, reserve paths continued to allow for adjustment plus seasonal borrowing of $\$ 500 \mathrm{million}$, and federal funds were expected to trade at or a little above 9-3/4 percent. Reserve management was complicated in April and early May by federal tax revenues that proved stronger than anticipated, swelling Treasury balances at Federal Reserve Banks and draining more reserves from the banking system than projected. The rapid rise in Treasury balances contributed to slightly firmer conditions in reserve markets; adjustment plus seasonal borrowing averaged $\$ 565 \mathrm{million}$ in the three maintenance periods completed since the March meeting and the federal funds rate averaged 9.85 percent. Over the first eight days of the current period, borrowing has come in at $\$ 525$ million on average and the effective funds rate at 9.84 percent. Borrowing has been boosted by a particularly rapid upswing in seasonal credit usage this year to an average of $\$ 325$ million in the current maintenance period. Seasonal borrowing is running noticeably above the relatively high levels at this time last year, reflecting the wider gap that now exists between the funds rate and the discount rate. Some of the strength over the last two years may stem from the seasonal program liberalizations instituted in 1985, which have shown through to actual borrowing with the revival of agricultural loan demand.
(2) Most market interest rates declined over the intermeeting period, with substantial decreases in the short and intermediate portion
of the maturity spectrum. Data suggesting a more moderate pace of activity and prices appeared to eliminate the likelihood of a tightening of monetary policy and even to kindle some anticipation of an easing. Rates on short- and intermediate-term Treasury issues dropped about a percentage point and on private money market instruments a bit less. Treasury bond yields fell around 35 basis points. Gains in this market during the intermeeting period may have been tempered by prospects for upcoming supply. In addition to the regular mid-quarter auctions of 10and 30 -year issues, the Treasury announced that it would make nonmarketable zero-coupon securities available directly to Refcorp rather than forcing the agency to purchase them in the market. This announcement together with progress on the legislative package tended to focus attention on the large volume of long-term bonds this new agency would be issuing. The spread of rates in primary and secondary mortgage markets over Treasuries continued to widen, reflecting a number of influences, including an apparent increase in expected interest rate volatility and apprehensions that beleaguered thrift institutions might have to liquidate their holdings of mortgage-related securities. Nevertheless, these spreads remain well within the range of recent years. Spreads on junk bonds over investment-grade securities rose more sharply, by 30 to 40 basis points, perhaps also affected to a degree by the prospect of liquidations by thrifts. Also contributing was the impending issue by RJR-Nabisco, reports of sales related to the Drexel situation, and concerns about how issuers might fare in a softer economic environment.

Boosted by lower interest rates and expectations of more moderate, sustainable, economic expansion, major stock price indexes rose about 7 percent, reaching post-crash highs.
(3) The dollar appreciated about 1-1/4 percent on balance on a weighted average basis over the intermeeting period despite the easing of U.S. interest rates and a modest fiming of interest rates abroad. Concerns about the political prospects in Germany and Japan may have been a significant factor in the dollar's recent strength, though the degree of strength is somewhat puzzling.
(4) The monetary aggregates weakened in April, with substantial declines after mid-month extending into early May. The sharp drop in deposits was associated with outsized personal tax payments and a shortfall in refunds. More generally, the aggregates continued to be restrained by the earlier rise in market interest rates, which substantially increased the opportunity costs of most monetary assets. M2 grew at a $1 / 2$ percent annual rate last month, considerably below the 3 percent rate specified at the last FOMC meeting for the three months through June. M3 growth in April, at 2-3/4 percent, also fell well short of the 5 percent rate the Comittee foresaw for the March-to-June interval. Relative to their annual target cones in April, M2 was somewhat below, and M3 a little above, the lower bounds.
(5) The tax and opportunity cost factors had their impact on the liquid components of the aggregates: transactions deposits, MMDAs, and
savings deposits ran off at more rapid rates in April, while inflows to money market mutual funds eased. With currency growth also slowing, M1 dropped at a 5-1/4 percent rate. (The weakness in transactions accounts led to a 7-1/2 percent rate of decline in total reserves last month. In conjunction with the weakness in currency last month, this resulted in essentially no growth in the monetary base.) Small time deposits rose at nearly a 25 percent annual rate in April, roughly double their firstquarter pace; rates on these deposits had tracked more closely previous increases in market rates, and the drop in market rates left yields on shorter-time deposits above those available on Treasury securities. Although rates on retail deposits at thrift institutions rose last month relative to those at banks, thrifts continued to lose such deposits, albeit at a somewhat slower pace than earlier in the year. Overall M2 likely was little affected in April by continuing concerns about the thrift industry; the dropoff to more normal levels in noncompetitive tenders at Treasury auctions suggests that banks and money funds were in general the beneficiaries of the relative weakness of thrift deposits. The non-M2 portion of M3 continued to expand rapidly in April; large time deposit issuance again was robust-even though bank credit advanced only a small amount--as banks replaced borrowings from their foreign offices with large CDs. Thrift large time deposits were swelled in April by the proceeds of medium-term notes issued by several thrift holding companies and downstreamed to their $S \& I$ subsidiaries.
(6) The debt of domestic nonfinancial sectors appears to have grown at a somewhat slower pace in April, damped by strong tax revenues,
which reduced the Treasury's financing needs, and by earlier increases in interest rates, which brought to a virtual halt refundings by state and local borrowers. Business borrowing probably ran at about the same rate as in March and was down in both months from earlier in the year, when borrowing was inflated by large, merger-related financings. Available information on household debt suggests that consumer and home equity borrowing increased, perhaps related to the April tax date and higher automobile sales. Mortgage growth through March appears to have been well maintained; despite their problems, mortgage lending by thrifts strengthened over the quarter. Since the fourth quarter of 1988 , overall domestic nonfinancial debt has grown around the midpoint of its 6-1/2 to 10-1/2 percent monitoring range.

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

|  |  |  | QIV'88 <br> to <br> Apri1p |
| :--- | :--- | :--- | :--- |
| Money and credit aggregates |  |  |  |

p - preliminary.

1. Includes "other extended credit" from the Federal Reserve.

NOTE: Monthly reserve measures, including excess reserves and borrowing, are calculated by prorating averages for two-week reserve maintenance periods that overlap months. Reserve data have been revised to reflect annual revisions to seasonal factors and new procedures to adjust for discontinuties associated with the annual indexations of the reserve requirement exemption and low reserve tranche.

## Policy Alternatives

(7) Three policy alternatives are presented below for Committee consideration. Under alternative $B$, funds would continue to trade in the 9-3/4 to $9-7 / 8$ percent range; in light of recent experience, unchanged reserve market conditions are likely to involve borrowing of around $\$ 600$ million. This technical adjustment to the borrowing objective from the current $\$ 500$ million level seems to be called for by the surge in seasonal borrowing, which is expected to continue in the intermeeting period. In the circumstances of still-low adjustment borrowing, the rise in seasonal borrowing has reduced the overall borrowing shortfall that emerged last fall. Uncertainty about the extent and effect of the increase in seasonal borrowing as well as about the behavior of adjustment borrowing argues for some continued flexibility by the Desk in the approach to the borrowing objective. Under alternative $A$, the funds rate would decline to the $9-1 / 4$ to 9-3/8 percent area with borrowing around $\$ 400$ million, and under alternative $C$ federal funds would rise to $10-1 / 4$ to $10-3 / 8$ percent and borrowing to $\$ 800$ million.
(8) Growth in the monetary aggregates expected under the three alternatives is presented in the table below, along with implied growth through June from a fourth-quarter base. (Detailed data are presented on the table and charts on the following pages.) Under all three alternatives, growth of M2 and M3 would rebound from early May, when deposits were depressed by unusually large final tax payments and small refunds. The rate of growth will depend in part on the extent to which the public had anticipated its full tax liability and had adjusted liquid balances in
advance. If entirely anticipated, M1 and M2 ought to resume their underlying growth paths as determined by the course of income and interest rates. However, much of the drawdown of liquid balances appears to have

$$
\underline{\text { Alt. A }} \quad \underline{\text { Alt. B }}
$$

Growth from March to June

| M2 | $2-1 / 4$ | $1-1 / 2$ | $3 / 4$ |
| :--- | ---: | :---: | ---: |
| M3 | $4-1 / 4$ | 4 | $3-3 / 4$ |
| M1 | $-3-3 / 4$ | $-4-1 / 2$ | $-5-1 / 4$ |

Growth from Q4' 88 to June

M2
M3
M1

| $2-1 / 4$ | 2 |
| :--- | :--- |
| $4-1 / 4$ | $4-1 / 4$ |

1-1/2
4-1/4 $4-1 / 4$
4
$-1-3 / 4 \quad-2$
$-2-1 / 2$
Associated federal
funds rate range 7 to $11 \quad 8$ to $12 \quad 8$ to 12
been unanticipated, judging from the absence of an unusual buildup before the tax season, as well as the normal behavior of recent quarterly declarations. As a consequence, the rebound in money growth is expected to include some "catch-up", as M1 and M2 balances are brought back closer to desired levels. Such a catch-up is likely to be fairly gradual, accomplished largely by redirecting, and perhaps augmenting, savings flows, rather than by liquidating other financial assets. On this basis, we have assumed that the rebuilding of balances will add a percentage point to the underlying growth of M2 over coming months. The greater growth of core deposits feeds through to a degree to $M 3$, which also is bolstered as government deposits no longer serve as a source of new funds. Because the

## 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 |  |  |  |  |  |  |  |  |  |
| 1989 January | 3065.6 | 3065.6 | 3065.6 | 3920.5 | 3920.5 | 3920.5 | 786.3 | 786.3 | 786.3 |
| February | 3069.7 | 3069.7 | 3069.7 | 3929.9 | 3929.9 | 3929.9 | 787.4 | 787.4 | 787.4 |
| March | 3079.5 | 3079.5 | 3079.5 | 3952.2 | 3952.2 | 3952.2 | 786.3 | 786.3 | 786.3 |
| April | 3081.0 | 3081.0 | 3081.0 | 3961.4 | 3961.4 | 3961.4 | 782.9 | 782.9 | 782.9 |
| May | 3078.8 | 3078.0 | 3077.2 | 3968.8 | 3968.4 | 3968.0 | 777.7 | 777.4 | 777.1 |
| June | 3096.1 | 3090.6 | 3085.1 | 3994.0 | 3991.5 | 3989.0 | 779.1 | 777.6 | 776.1 |
| Monthly Growth Rates |  |  |  |  |  |  |  |  |  |
| 1989 January | -1.4 | -1.4 | -1.4 | 1.4 | 1.4 | 1.4 | -6.1 | -6.1 | -6.1 |
| February | 1.6 | 1.6 | 1.6 | 2.9 | 2.9 | 2.9 | 1.7 | 1.7 | 1.7 |
| March | 3.8 | 3.8 | 3.8 | 6.8 | 6.8 | 6.8 | -1.7 | -1.7 | -1.7 |
| April | 0.6 | 0.6 | 0.6 | 2.8 | 2.8 | 2.8 | $-5.2$ | $-5.2$ | -5.2 |
| May | -0.9 | -1.2 | -1.5 | 2.2 | 2.1 | 2.0 | -8.0 | -8.4 | -8.8 |
| June | 6.7 | 4.9 | 3.1 | 7.6 | 7.0 | 6.4 | 2.2 | 0.3 | $-1.5$ |
| Quarterly Ave. Growth Rates |  |  |  |  |  |  |  |  |  |
| $1988 \text { Q2 }$ | 6.9 | 6.9 | 6.9 | 7.2 | 7.2 | 7.2 | 6.4 | 6.4 | 6.4 |
| Q3 | 3.8 | 3.8 | 3.8 | 5.6 | 5.6 | 5.6 | 5.2 | 5.2 | 5.2 |
| Q4 | 3.6 | 3.6 | 3.6 | 4.9 | 4.9 | 4.9 | 2.3 | 2.3 | 2.3 |
| 1989 Q1 | 1.9 | 1.9 | 1.9 | 3.8 | 3.8 | 3.8 | -0.4 | -0.4 | -0.4 |
| Q2 | 1.8 | 1.5 | 1.2 | 4.1 | 4.0 | 3.9 | -3.5 | -3.8 | -4.1 |
| Dec. 88 to Mar. 89 | 1.3 | 1.3 | 1.3 | 3.7 | 3.7 | 3.7 | -2.0 | -2.0 | -2.0 |
| Mar. 89 to June 89 | 2.2 | 1.4 | 0.7 | 4.2 | 4.0 | 3.7 | -3.7 | -4.4 | -5.2 |
| Q4 87 to Q4 88 | 5.2 | 5.2 | 5.2 | 6.2 | 6.2 | 6.2 | 4.3 | 4.3 | 4.3 |
| Q4 88 to Q1 89 | 1.9 | 1.9 | 1.9 | 3.8 | 3.8 | 3.8 | -0.4 | -0.4 | -0.4 |
| Q4 88 to Q2 89 | 1.9 | 1.7 | 1.6 | 4.0 | 3.9 | 3.9 | -1.9 | -2.1 | -2.2 |
| Q4 88 to Apr. 89 | 1.9 | 1.9 | 1.9 | 4.0 | 4.0 | 4.0 | -1.4 | -1.4 | -1.4 |
| Q4 88 to June 89 | 2.2 | 1.9 | 1.6 | 4.3 | 4.2 | 4.1 | -1.8 | -2.1 | -2.5 |
| 1989 Target Ranges: |  | 0 to 7. |  |  | 5 to 7. |  |  |  |  |

## ACTUAL AND TARGETED M2



## ACTUAL AND TARGETED M3




Chart 4
DEBT

catch-up is presumed to be gradual, growth of M2 and M3 under all three alternatives would be below the Comittee's expectations for the March-toJune period at the last meeting.
(9) M2 under all the alternatives embodies some impetus from the decline in market rates over the intermeeting period, as well as a common catch-up factor. In addition, any effect that thrift deposit outflows might have had on M2 growth earlier in the year is likely to be even smaller, as such outflows continue to abate. Nevertheless, owing to the impact of tax payments in late April and early May, M2 is projected to decline in May, before growing in June. As a consequence, this aggregate through June should remain below the 3 percent lower bound of its target cone, even under the reduced interest rates of alternative $A$. However, if money market conditions of either alternative $A$ or $B$ were maintained through the sumner, the waning effects of earlier increases in market interest rates, reinforced by the delayed upward adjustment of liquid deposit rates, likely would bring $M 2$ within its annual range by the end of the third quarter, assuming spending and income growth close to the greenbook projections. M1 also is expected to strengthen, though given its adverse opportunity costs, this aggregate would only level out in June under $B$, and under all three alternatives would remain substantially below its March level. The velocity of M2 would be expected to increase between a 5 and 6 percent rate in the second quarter under the three alternatives; this is substantially faster than would be predicted from our models of money demand, given the interest rates of the three alternatives and
greenbook GNP, reflecting in part the depressing effect of the tax-related drawdown on quarterly average M2.
(10) Growth of M3 in May and June is projected to be supported by a strengthening of bank credit from its sluggish April pace and associated funding needs. However, in May this pickup is funded importantly by increases in government deposits, and M3 is projected to rise at only a 2 percent rate. Greater reliance on M3 sources of funds would be expected in June as government deposits retreat and core deposits rebound, resulting in M3 growth between $6-1 / 2$ and $7-1 / 2$ percent. Still, the net rise in government deposits from March to June restrains the 3 -month growth path of this aggregate to only $3-3 / 4$ to $4-1 / 4$ percent under the various alternatives, leaving M3 around 4-1/4 percent at an annual rate above the fourth-quarter base of its annual range. Aggregate credit demands of private domestic nonfinancial sectors over the remainder of the quarter are expected to be maintained around the reduced rates of March and April. But with the federal government's seasonally adjusted borrowing declining further in light of the Treasury's ample cash balance, expansion of total debt likely will slip to around a 7 percent average annual rate in May and June, edging this aggregate below the $8-1 / 2$ percent midpoint of its annual monitoring range.
(11) Since market yields now appear to have built in some nearterm easing of monetary policy, maintaining current conditions under alternative $B$ probably would be associated with some back-up in short-term rates. Especially if incoming information on activity and prices does not seem to confirm the extent of the weakness apparent in the most recent
data, that rise could be noticeable, on the order of $1 / 4$ percentage point or more. Under these circumstances, bond yields also might retrace some of their most recent decline, with the 30 -year Treasury bond returning to the 9 percent level. With U.S. interest rates possibly firming under this alternative, the exchange value of the dollar in the weeks ahead could be subject to further upward pressure, unless monetary authorities were to intervene in a much more aggressive manner.
(12) The easing of the federal funds rate under alternative $A$ would result in further declines in short-term rates of an additional $1 / 4$ percentage point. With a policy move of this dimension this soon still unexpected by market participants, it could reinforce the perception that market rates have peaked, fueling a further rally in fixed-income and stock markets. On the other hand, if the Federal Reserve were seen in light of subsequent developments to have moved prematurely, the easing could rekindle inflation concerns. In any case, some downward pressure on the exchange value of the dollar would be likely as interest differentials favoring dollar assets narrowed further.
(13) The tightening of policy under alternative $C$ would be a considerable surprise to financial markets, and would likely induce a substantial backup in rates. Increases in short-term interest rates could exceed the nearly $1 / 2$ percentage point rise in the federal funds rate, as the market reassessed the Federal Reserve's monetary policy strategy. If such a tightening were not followed by stronger economic data, risk premiums on private paper might widen further, as worries spread about a possible recession and its effect on credit quality. Long-term Treasury
rates likely would rise, at least initially, but by less than yields on corporate bonds and mortgage-backed securities; over time, any rate increase might be reversed if such a policy came to be seen as raising the odds on disinflation. Additional upward pressure on the dollar would emerge from the higher U.S. real interest rates, absent similar tightening actions abroad.
(14) Draft language for the operational paragraph, including the usual options, is shown below. Should the Committee decide to "maintain" current reserve conditions, the previous discussion of policy alternatives suggests interpreting such a decision as consistent with a technical increase in the borrowing assumption from $\$ 500$ million to $\$ 600$ million.

## 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. Taking account of indications of inflationary pressures, the strength of the business expansion, the behavior of the monetary aggregates, and developments in foreign exchange and domestic financial markets, somewhat (SLIGHTLY) greater reserve restraint would (MIGHT), or (SOMEWHAT) slightly lesser reserve restraint (WOULD) might, be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with growth of M2 and M3 over the period from March through June at annual rates of about _ 3 and _ 5 percent, respectively. The Chairman may call for Comittee consultation if it appears to the Manager for Domestic Operations that reserve conditions during the period before the next meeting are likely to be associated with a federal funds rate persistently outside a range of _ 8 to _ $\mathbf{~} \mathbf{z}$ percent.







MAY. 15, 1989

| Period | Oank reservas: |  |  | Monex slock meazuras and liguid agiete |  |  |  | Qank crudit | Domatic nontinancial debl |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | nonborrowed | corst | monatary | M 4 | M2 | M3 | L | total toan: and invastment | us. gavernment' | other ${ }^{\text {² }}$ | total |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 1 | 9 | 10 | 11 |
| LEVELS (SBILLIONS): <br> annually 14 TH QTR.) |  |  |  |  |  |  |  |  |  |  |  |
| 1986 | 55,725 | 56,532 | 238,801 | 709.4 | 2788.3 | 3470.2 | 4109.9 | 2068.9 | 1784.1 | 5706.7 | 7490.9 |
| 1987 | 58,393 | 59,175 | 256,914 | 754.7 | 2905.8 | 3667.7 | 4355.2 | 2235.5 | 1944.6 | 6277.7 | 8222.3 |
| 1988 | 58,514 | 60,807 | 274,513 | 787.4 | 3056.9 | 3896.9 | 4647.3 | 2400.4 | 2101.0 | 6832.7 | 8933.7 |
| $\begin{aligned} & \text { MONTHLY } \\ & 1988-A P R . \end{aligned}$ |  |  | 265,631 | 771.2 | 2990.3 | 3779.6 | 4475.3 | 2303.5 | 2018.2 | 6491.4 |  |
| 290 MAY | 57,845 | 60,422 | 266,761 | 771.1 | 2999.8 | 3794.6 | 4503.8 | 2325.5 | 2023.2 | 6544.4 | 8567.1 |
| JUVE | 57,493 | 60,576 | 268,205 | 776.5 | 3013.1 | 3815.6 | 4521.0 | 2343.5 | 2033.3 | 6591.3 | 8624.7 |
| JULY | 57,618 | 61,058 | 270,308 | 782.5 | 3023.9 | 3838.2 | 4565.3 | 2358.5 | 2042.7 | 6640.1 |  |
| AUG. | 57,663 | 60,903 | 270,979 | 782.4 | 3029.7 | 3851.3 | 4585.6 | 2371.4 | 2059.5 | 6687.7 | 8747.3 |
| SEP. | 57,985 | 60,824 | 272,420 | 783.7 | 3035.0 | 3860.7 | 4594.5 | 2373.5 | 2079.9 | 6731.3 | 8811.3 |
| OCT. | 58,562 | 60,862 | 273,659 | 785.4 | 3042.2 | 3876.9 | 4615.8 | 2392.6 | 2088.8 | 6780.3 | 8869.1 |
| NOV. | 57,991 | 60,853 | 274,380 | 786.6 | 3059.3 | 3898.0 | 4643.9 | 2400.6 | 2100.4 | 6836.2 |  |
| DEC. | 58,990 | 60,706 | 275,501 | 790.3 | 3069.3 | 3915.9 | 4682.1 | 2408.0 | 2113.8 | 6881.6 | $8995.5$ |
| 1989-JAN. | 58,708 | 60,370 | 276,784 | 786.3 | 3065.6 | 3920.5 | 4687.3 | 2422.8 | 2122.1 | 6930.2 | 9052.3 |
| FEB. | 58,773 | 60,260 | 277,553 | 787.4 | 3069.7 | 3929.9 | 4702.0 | 2441.8 | 2139.6 | 6986.4 | 9125.9 |
| MAR. | 58,041 | 59,854 | 278,615 | 786.3 | 3079.5 | 3952.2 | 4739.9 | 2454.9 | 2162.0 | 7032.7 | 9194.7 |
| APR. P | 57,194 | 59,483 | 278,703 | 782.9 | 3081.1 | 3961.3 |  | 2460.6 | 2171.4 | 7077.9 | 9249.3 |
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|  |  |  |  |  |  |  |  |  |  |  |  |

1. Reserves data are in millions of dollars, and have been adjusted for discontinuities p-preliminary


Net of money market mutual fund holdings of these items

3. Excludes IRA and Keogh accounts.

Net of large denomination time deposits held by monay market mutual funds and thrift institutions.
p-preliminary

Millions of dollars, not seamonally adjusted

| Period | Treasury bills |  |  | Treasury coupons |  |  |  |  |  | Feceral agencies redemptions (-) | Net change outright holdings total | Net RPs ${ }^{\text {S }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Net } \\ \text { purchases } \end{gathered}$ | Redemp-tions (-) | Net change | Net purchases ${ }^{3}$ |  |  |  | Redemp-$\text { tiona }(-)$ | Net change |  |  |  |
|  |  |  |  | $\begin{aligned} & \text { within } \\ & \text { 1-year } \\ & \hline \end{aligned}$ | 1-5 | 5-10 | over 10 |  |  |  |  |  |
| 1983 | 15,468 | 2,400 | 13,068 | 484 | 1,896 | 890 | 383 | 87 | 3,566 | 292 | 16,342 | -5,445 |
| 1984 | 11,479 | 7,700 | 3,779 | 826 | 1,938 | 236 | 441 | -- | 3,440 | 256 | 6,964 | 1,450 |
| 1985 | 18,096 | 3,500 | 14,596 | 1,349 | 2,185 | 358 | 293 | -- | 4,185 | 162 | 18,619 | 3,001 |
| 1986 | 20,099 | 1,000 | 19,099 | 190 | 893 | 236 | 158 | -- | 1,476 | 398 | 20,178 | 10,033 |
| 1987 | 12,933 | 9,029 | 3,905 | 3,358 | 9,779 | 2,441 | 1,858 | 70 | 17,366 | 276 | 20,994 | -11,033 |
| 1988 | 7,635 | 2,200 | 5,435 | 2,177 | 4,686 | 1,404 | 1,398 | -- | 15,099 | 587 | 14,513 | 1,557 |
| 1988--91 | 319 | 2,200 | -1,881 | 1.092 | -800 | -175 | -- | -- | -975 | 155 | -3,011 | -3,514 |
| Q2 | 423 | -- | 423 | 1,092 | 3,661 | 1,017 | 966 | -- | 6,737 | 130 | 7,030 | 5,220 |
| Q3 | 1,795 | -- | 1,795 | -- | -- | -- | -- | -- | -- | 77 | 1,717 | 1,393 |
| Q4 | 5,098 | 2,200 | 5,098 | 1,084 | 1,824 | 562 | 432 | -- | 3,903 | 224 | 8,776 | -1,541 |
| 1989--21 | -- | 3,842 | -6,042 | -- | -228 | -20 | -- | -- | -248 | 188 | -6,477 | -5,591 |
| 1988--October | 375 | -- | 375 | -- | -- | -- | -- | -- | -- | 75 | 300 | -6,150 |
| November | 3,599 | -- | 3,599 | -- | -- | -- | -- | -- | -- | 14 | 3,585 | 3,096 |
| December | 1,125 | -- | 1,125 | 1,084 | 1,824 | 562 | 432 | -- | 3,903 | 135 | 4,892 | 1,512 |
| 1989--January | -154 | 600 | -754 | -- | -3 | -20 | -- | -- | -23 | 148 | -925 | -6,813 |
| February | -3,688 | 1,600 | -5,288 | -- | -225 | -- | -- | -- | -225 | 40 | -5,553 | 2,079 |
| March | -- | -- | -- | -- | - | -- | -- | -- | - | - | -- | -856 |
| April | 3,077 | -- | 3,077 | 172 | 1,436 | 286 | 284 | -- | 2,179 | 125 | -5,131 | 14,448 |
| Feb. 1 | -30 | 600 | -630 | -- | -3 | -20 | -- | -- | -23 | -- | -653 | -3,729 |
| 8 | -3,272 | 600 | -3,872 | -- | -- | -- | -- | -- | - | -- | -3,872 | -9,969 |
| 15 | -210 | 600 | -810 | -- | -225 | -- | -- | -- | -225 | 40 | -1,075 | 8,276 |
| 22 | -118 | 400 | -518 | -- | -- | -- | -- | -- | -- | -- | -518 | -1,097 |
| Mar. 1 | -58 | -- | -58 | -- | -- | -- | -- | -- | -- | -- | -58 | 3,040 |
| 8 | -- | -- | - | - | -- | -- | -- | -- | -- | -- | -- | -375 |
| 15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,945 |
| 22 | -- | -- | -- | - | -- | -- | -- | -- | -- | -- | -- | -1,005 |
| 29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -283 |
| Apr. 5 | -- | -- | -- | - | -- | -- | -- | -- | -- | -- | -- | -3,608 |
| 12 | 20 | -- | 20 | 172 | 1,436 | 287 | 284 | -- | 2,179 | -- | 2,199 | 3,935 |
| 19 | 236 | -- | 236 | -- | -- | -- | -- | -- | -- | -- | 236 | 4,310 |
| 26 | 218 | -- | 218 | -- | -- | -- | -- | -- | -- | 125 | 94 | 2,846 |
| May 3 | 2,734 | -- | 2,734 | -- | -- | -- | -- | -- | -- | -- | 2,734 | 4,511 |
| 10 | 179 | -- | 179 | -- | -- | -- | -- | -- | -- | -- | 179 | -165 |
| $\text { Memo: } \begin{aligned} & \text { LEVEL (bil. } \$)^{6} \\ & \text { May } 10 \end{aligned}$ | -- | -- | 115.3 | 30.1 | 52.3 | 13.1 | 27.3 | -- | 122.8 | -- | 244.7 | 7.3 |

1. Change from end-of-period to end-of-period.
2. Outright transactions in market and with foreign accounts.
3. Outright transactions in market and with foreign accounts, and short-term notes acquired in exchange for maturing bills. Excludes maturity shifts and rollovers of maturing coupon issues.
4. Reflects net change and redemptions ( - ) of Treasury and agency securities
. Includes change in RPs ( + ), matched sale-purchase transactions (-), and matched purchase ale transactions ( + ).
5. The levels of agency isaues were as follows:

| within <br> 1-year | $1-5$ | $5-10$ | over 10 | total |
| :---: | :---: | :---: | :---: | :---: |
| 2.1 | 3.4 | 1.0 | .2 | 6.7 |


[^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.

