## Prefatory Note

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## MONETARY POLICY ALTERNATIVES

## Prepared for the Federal Open Market Committee

## MONETARY POLICY ALTERNATIVES

## Recent Developments

(1) Since the March 26 FOMC meeting, federal funds generally have traded close to their intended level of 5-1/4 percent. Although banks have continued to implement retail sweep programs, seasonal strength in transaction deposits and required reserve balances and a modest expansion of required clearing balances have kept total required balances from eroding further over the intermeeting period. Desk operations were complicated by unexpectedly strong flows of individual nonwithheld tax payments, which resulted in persistent overshoots relative to projections in the Treasury's balance at Federal Reserve Banks in late April.
(2) The Committee's decision at the March meeting to leave its intended level for the federal funds rate at 5-1/4 percent was anticipated by market participants and had little effect on other interest rates. Nonetheless, market rates subsequently climbed substantially over the intermeeting period, except at the shortest maturities (chart). Intermediate- and long-term Treasuries rose 25 to 40 basis points, on balance. As over the previous intermeeting period, the increases were especially sharp on several days when economic releases pointed to brisk growth in output and employment. A considerable portion of the rise probably represents an increase in real interest rates, apparently reflecting market views that monetary policy will need to be tighter than previously thought in order to keep the economy on a path of sustainable growth. Changed expectations about policy are reflected in quotes on federal funds futures

## Chart 1



Weekly. Daily atter Mar. 26.

$\begin{array}{llllllllll}1960 & 1964 & 1968 & 1972 & 1976 & 1980 & 1984 & 1988 & 1992 & 1996\end{array}$

* Long-term bond less three-month bill.



contracts, which have risen appreciably and now suggest that participants see some possibility of tightening by the end of the year. Survey measures of inflation expectations have ticked up, suggesting that the backup in nominal yields also owed in part to market concerns about price increases. The climb in grain and energy prices and stronger economic growth in the context of aggregate output around the economy's capacity seemed to heighten inflation fears, but more recently relatively low readings on core inflation and the retreat of oil prices appear to have damped those concerns. The rise in yields on coupon securities steepened the Treasury yield curve, but has not left it unusually steep by historic standards, reinforcing the impression that market participants anticipate that economic developments will dictate only minor interest rate adjustments. Most stock price indexes rose over the intermeeting period, as generally favorable first-quarter earnings reports and the stronger economic outlook evidently outweighed the effects of the backup in interest rates.
(3) The rise in U.S. interest rates contributed to an increase in the dollar's exchange value of $1-3 / 4$ percent on a weightedaverage basis since the March Committee meeting. The dollar was especially strong against the mark, and to a lesser extent against other European currencies, reflecting indications of continued weak economic activity in Europe. Three-month interest rates edged lower in Germany on expectations of further monetary easing; the Bundesbank cut its discount and Lombard rates by $1 / 2$ percentage point on April 18. but has not yet lowered its repo rates. German long-term bond yields were unchanged, on balance. The dollar rose by a lesser amount against the yen. Signs of continuing Japanese economic recovery heightened expectations of a move by the Bank of Japan to tighten monetary policy, though these concerns were largely allayed by statements from the Bank
of Japan in mid-May. On balance, short- and long-term rates in Japan showed little net change over the period.

The Desk did not intervene.
(4) The growth of overall debt has remained moderate on average in recent months, with the total debt of domestic nonfinancial sectors staying near the middle of its 3 to 7 percent annual range. Net federal borrowing was light in April, held down in part by strong tax receipts. Nonfederal credit flows appear to have maintained the slower growth pace of around 5 percent that was established around the middle of 1995. Household and business borrowing seems to have moderated a little, while the runoff of state and local debt has turned to a modest expansion owing to a slowdown in redemptions. In the business sector, a slowing in equity retirements has reduced credit needs. Bond issuance has been damped by the increase in long-term rates, with some borrowers shifting financing into the commercial paper market. In contrast, business loans at banks expanded sluggishly, on balance, over March and April. In the household sector, consumer credit decelerated sharply in March, and bank figures for April suggest that borrowing remained on a slower track. The number of mortgage refinancing applications has fallen off appreciably, but--while few data are yet available--net mortgage borrowing appears to have been restrained only slightly to date by the backup in longer-term interest rates. According to the May senior loan officers survey, banks continued to ease terms for $C \& I$ loans over the previous three months but tightened standards for consumer credit-card loans.
(5) The broad monetary aggregates slowed in April to annual growth rates of about 2 percent--a sharper deceleration than projected at the time of the March FOMC meeting-and both aggregates drew closer to the upper ends of their ranges on a monthly average basis. ${ }^{1}$

Data for the first half of May suggest continued weakness in broad money growth. Last month's fall-off owed partly to a contraction in demand deposits following surprisingly rapid growth in the first quarter. A failure of currency demand to pick up after the introduction of the new $\$ 100$ bill accounted for some of the shortfall of the aggregates as well. Movements in the opportunity costs of holding money also have contributed to the slowing of broad money growth, as the stimulative effects of previous decreases in market interest rates wore off and the impact of the more recent rise in intermediate- and long-term rates began to be felt. ${ }^{2}$ The consequences for money growth of the unexpected strength in individual nonwithheld tax payments around April 15 are difficult to sort out: Much of the weakness in money occurred late in the month when payments to the Treasury cleared, but in the past large tax payments have been associated with strength in the aggregates in April owing to the buildup of balances early in the month. The sluggishness in M2 showed through to M3, despite a rebound in bank credit.

[^1]MONEY, CREDIT, AND RESERVE AGGREGATES
(Seasonally adjusted annual rates of growth)

|  | Feb. | Mar. | Apr. | $\begin{gathered} \text { QIV } \\ \text { to } \\ \text { Apr. } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Money and credit aggregates |  |  |  |  |
| M1 | -2.0 | 10.0 | -3.1 | -1.0 |
| Adjusted for OCD sweeps | 5.2 | 15.8 | 4.8 | 7.7 |
| M2 | 5.0 | 11.2 | 1.9 | 5.6 |
| M3 | 9.8 | 10.6 | 2.2 | 6.8 |
| Domestic nonfinancial debt | 5.5 | 6.9 | 4.2 |  |
| Federal | 6.1 | 13.1 | 1.3 | 3.6 |
| Nonfederal | 5.3 | 4.7 | 5.3 | 5.2 |
| Bank credit | 3.3 | -2.9 | 6.1 | 3.9 |

## Reserve measures

|  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Nonborrowed reserves ${ }^{1}$ | -16.3 | 19.6 | -13.0 | -5.0 |
| Total reserves | -16.4 | 19.2 | -11.5 | -5.6 |
| $\quad$ Adjusted for OCD sweeps | -1.1 | 29.2 | 4.6 | 11.5 |
| Monetary base | -4.1 | 8.8 | -0.7 | 1.6 |
| $\quad$ Adjusted for OCD sweeps | -2.2 | 10.4 | 1.4 | 4.0 |

Memo: (Millions of dollars)
Adjustment plus seasonal borrowing 35
$21 \quad 91$
Excess reserves 851

1137
1130

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 incorporate adjustments for discontinuities associated with changes in reserve requirements.

## Policy Alternatives

(6) Incoming data suggest both stronger demand and slightly higher resource utilization rates than were anticipated by the staff at the time of the March FOMC meeting. In the Greenbook forecast, the recent rise in interest and exchange rates, which are expected to hold near current levels with an unchanged federal funds rate, exert some restraint on economic growth going forward, but the economy still produces around or a little beyond its potential. The high level of resource utilization, combined with the effects of rising food and energy prices, imparts a small upward tilt to inflation, with both core and total CPI projected to increase 3-1/4 percent in 1997. For 1996, the staff forecasts for total CPI inflation and real GDP growth are above the upper ends of the central tendencies of the projections of Board members and Presidents last February.
(7) In addition to the rise in food and energy prices, another potential supply shock is an increase in the minimum wage, which is discussed in a special section of the Greenbook but not incorporated in the basic forecast. These sorts of shocks in principle could show up as effects on the level of prices, and not on the ongoing rate of inflation. However, supply shocks could get built into inflation through attempts by businesses and workers to maintain real earnings--in the case of businesses by passing through higher costs into prices and for workers by linking wage demands to past inflation. In addition, observed price increases could lead to inflation by being extrapolated into the future and incorporated into inflation expectations. Both mechanisms produce a similar result, requiring a monetary policy response to avoid a ratcheting up of the inflation rate. Paragraph 8, describing the policy response, treats
the process as working through expectations, but its analysis would hold for the "catch-up" mechanism as well.
(8) Under circumstances in which price shocks were tending to boost expected inflation, policy would have to offset effects working through two channels. First, with unchanged nominal short-term interest rates, a rise in expected inflation over the near-term would lower real short-term rates, thereby tending to raise spending and economic activity relative to the economy's potential. Such an effect on resource use would begin to induce more rapid wage and price increases. Second, expected inflation is thought to have a direct, independent influence on wage and price setting. Thus, any rise in expected inflation could further add to the rate of inflation on a lasting basis. To counter these effects on ongoing inflation, were they to emerge, the Federal Reserve would need to raise the nominal funds rate. Such a tightening would have two components. To prevent any decline in the real funds rate and thereby avoid any additional pressures on resources, the nominal funds rate would have to be raised relative to the path it otherwise would follow by the same amount as the induced increase in inflation expectations. This forestalls any change in the output gap that, for example, would produce increasing inflation if the shock occurred with the economy already producing at its potential. Still, even at this higher nominal funds rate, the initial uptick in inflation expectations and inflation would persist. To lean additionally against the inflationary impact resulting from any initial increase in expected inflation itself, the Federal Reserve would need to raise the real funds rate, implying a further upward
adjustment to the nominal funds rate. ${ }^{3}$ That is, to bring inflation back down once higher expectations became embedded. some slack in resource utilization would need to be created.
(9) If real rates needed to be raised in response to a significant supply shock, the timing and magnitude of the policy actions would depend on the approach followed. Realistically, no monetary policy is going to be able to avoid at least some near-term uptick in measured inflation in these circumstances. A gradualist approach to bringing inflation back down might be favored if a string of small output gaps were thought to be preferable to a short, but sharp, correction, even though the total output loss in either case might be little different. On the other hand, more forceful policy actions, by clearly demonstrating the central bank's intention to rein in inflation, could have a "credibility" effect holding down price expectations. If such an effect occurred, it would substitute for some of the need to sacrifice output to bring inflation back to the desired path.
(10) Despite these potential problems on the inflation front, the minimum wage has not yet been raised, measures of industrial prices and of strains on production capacity remain quiescent, and recent information on core PPI/CPI inflation provides little evidence of an incipient acceleration. Moreover, the rise in intermediate- and long-term rates this year may have left these measures not far from levels consistent with the economy producing at its potential. In these circumstances, the Committee may prefer to adopt alternative $B$.

[^2]awaiting more concrete evidence that inflationary pressures are emerging before adopting a tightening action. Financial market participants are anticipating that the FOMC will leave its policy stance unchanged at this meeting, implying that selection of alternative $B$ would have little market impact. Although the Greenbook is forecasting a strong second quarter, many market economists have a similar view, and hence release of economic data in conformity with the Greenbook forecast should not elicit much response in security prices or dollar exchange rates.
(11) The case for a policy tightening at this FOMC meeting presumably would rest on the view that the risks of higher inflation had become substantial. Even without an assumed minimum wage increase, the Committee may see the gradual upcreep in core CPI inflation projected by the staff as a likely and undesirable outcome. If the higher rate of overall inflation so far this year were feeding through in some part to inflation expectations, a rise in the nominal funds rate would be needed at some point to forestall an effective easing of the policy stance. Alternative $C$ embodies a 50 basis point increase in the federal funds rate to 5-3/4 percent in order to counter the incipient increase in price pressures. The Federal Reserve is not expected by market participants to tighten for several months, and hence, investors would be caught off guard by the FOMC's choice of alternative. $C$ at this meeting. Short-term interest rates would rise by $1 / 2$ percentage point. A sense that the FOMC would be assuming a more aggressive anti-inflationary posture than previously anticipated, at least over the near term, might limit increases in nominal intermediate- and long-term rates, but would lead to an appreciable increase in real interest rates on instruments of these
maturities. The value of the dollar would probably ratchet higher on exchange markets.
(12) The interest rates of alternative $B$ and associated staff forecast for the economy are thought to be consistent with a slight moderation in the growth of money and credit over coming months relative to their pace of expansion so far in 1996. (Projected growth for April to September and from the fourth quarter to September are shown in the table below.) The staff anticipates that the terms and conditions of bank lending will remain on the accommodative side, though perhaps continuing to firm a little for consumer credit. Only partly as a consequence, growth of consumer credit is projected to continue its downtrend, accompanied by sustained moderate expansion of home mortgage debt. Business borrowing may edge off as the recent rise in long-term yields continues to restrain bond issuance, while subdued inventory investment keeps the lid on bank loans and commercial paper. Near-term borrowing by the federal government is now shaping up as rather weak in light of the buildrup in the Treasury's cash balance stemming from outsized individual tax payments in April. As a result of the downward-revised forecast for federal debt growth, the expansion of total domestic nonfinancial sector debt from April to Growth of Money and Debt (percent at annual rates)

| April <br> to <br> September | 1995-Q4 <br> to <br> September |  |
| :---: | :---: | :---: |
| $3-3 / 4$ |  | $4-3 / 4$ <br> 4 |
|  | $5-1 / 2$ |  |
| -3 | -2 |  |

Adjusted for sweeps

4-3/4
6-1/4
Debt
4-1/2
Nonfederal
Federal
4-1/2

5
4-3/4
5
4-1/4

September is now projected at only a $4-1 / 2$ percent pace, leaving its level in September somewhat below the 5 percent midpoint of its annual growth rate range.
(13) The weakish cast of the incoming monetary data, together with the recent further increases in the returns on intermediate- and long-term instruments that compete with monetary assets, has led to a downward revision in the staff's projections of growth in the monetary aggregates as well. Expansion of M2 and M3 from April to September has been scaled back to only 3-3/4 and 4 percent, respectively, which implies that the growth of the broad aggregates will be slower than that of nominal GDP in both the second and third quarters. Even so, both aggregates in September are not far below the upper bounds of their annual ranges of 5 and 6 percent, respectively. The volume of new sweep programs coming on line over the next few months is expected to remain substantial. Ml is projected to fall at a rate of 3 percent from April to September; adjusted for sweeps, M1 is projected to grow at a rate of 4-3/4 percent.

Alternative Levels and Growth Rates for Key Monetary Aggregates

|  | M2 |  | M3 |  | M1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Alt. B | Alt. C | Alt. B | 1t. C | Alt. B | Alt. C |  |
| Levels in Billions |  |  |  |  |  |  |  |
| Mar-96 | 3724.8 | 3724.8 | 4681.0 | 4681.0 | 1126.6 | 1126.6 |  |
| Apr-96 | 3730.6 | 3730.6 | 4689.6 | 4689.6 | 1123.7 | 1123.7 |  |
| May-96 | 3727.9 | 3727.2 | 4693.9 | 4693.5 | 1117.1 | 1116.9 |  |
| Jun-96 | 3741.2 | 3738.7 | 4709.1 | 4707.5 | 1113.9 | 1113.0 |  |
| Jul-96 | 3757.7 | 3752.7 | 4727.6 | 4724.4 | 1112.5 | 1110.4 |  |
| Aug-96 | 3774.0 | 3766.7 | 4746.9 | 4742.3 | 1111.3 | 1107.9 |  |
| Sep-96 | 3790.1 | 3780.8 | 4766.2 | 4760.7 | 1110.0 | 1105.3 |  |
| Monthly Growth Rates |  |  |  |  |  |  |  |
| Mar-96 | 11.2 | 11.2 | 10.6 | 10.6 | 10.0 | 10.0 |  |
| Apr-96 | 1.9 | 1.9 | 2.2 | 2.2 | -3.1 | -3.1 |  |
| May-96 | -0.9 | -1.1 | 1.1 | 1.0 | -7.0 | -7.3 |  |
| Jun-96 | 4.3 | 3.7 | 3.9 | 3.6 | -3.4 | -4.2 |  |
| Ju1-96 | 5.3 | 4.5 | 4.7 | 4.3 | -1.6 | -2.8 |  |
| Aug-96 | 5.2 | 4.5 | 4.9 | 4.6 | -1.3 | -2.7 | $\stackrel{1}{\square}$ |
| Sep-96 | 5.1 | 4.5 | 4.9 | 4.7 | -1.3 | -2.9 | N |
| Quarterly Averages |  |  |  |  |  |  |  |
| 96 Q1 | 5.6 | 5.6 | 7.0 | 7.0 | -2.7 | -2.7 |  |
| 96 Q2 | 3.9 | 3.8 | 4.9 | 4.8 | -1.0 | -1.1 |  |
| 96 Q3 | 4.4 | 3.7 | 4.2 | 3.9 | -2.5 | -3.5 |  |
| Growth Rate |  |  |  |  |  |  |  |
| From To |  |  |  |  |  |  |  |
| Dec-95 Apr-96 | 5.8 | 5.8 | 7.6 | 7.6 | -0.3 | -0.3 |  |
| Apr-96 Sep-96 | 3.8 | 3.2 | 3.9 | 3.6 | -2.9 | -3.9 |  |
| 95 Q4 Apr-96 | 5.6 | 5.6 | 6.8 | 6.8 | -1.0 | $-1.0$ |  |
| 95 Q4 Sep-96 | 4.8 | 4.5 | 5.4 | 5.3 | -2.0 | -2.5 |  |
| $\begin{array}{lllll}93 & \text { Q4 }\end{array}$ | 0.6 | 0.6 | 1.6 | 1.6 | 2.4 | 2.4 |  |
| 94 Q4 95 Q4 | 4.0 | 4.0 | 5.9 | 5.9 | -1.8 | -1.8 |  |
| 95 Q4 96 Q1 | 5.6 | 5.6 | 7.0 | 7.0 | -2.7 | -2.7 |  |
| 95 Q4 96 Q2 | 4.8 | 4.8 | 6.0 | 6.0 | -1.8 | -1.9 |  |
| 95 Q4 96 Q3 | 4.7 | 4.4 | 5.4 | 5.3 | -2.0 | -2.4 |  |
| 1996 Target Ranges: | 1.0 | to 5.0 | 2.0 | to 6.0 |  |  |  |

## Directive Language

(14) Presented below is draft wording for the operational paragraph that includes the usual options for Committee consideration.

## OPERATIONAL PARAGRAPH

In the implementation of policy for the immediate future, the Committee seeks to DECREASE (SOMEWHAT/SLIGHTLY)/maintain/ INCREASE (SOMEWHAT/SLIGHTLY) the existing degree of pressure on reserve positions. In the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, slightly (SOMEWHAT) greater reserve restraint (WOULD/MIGHT) or slightly (SOMEWHAT) lesser reserve restraint would (MIGHT) be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with moderate growth in M2 and M3 over coming months.
(percent)

|  |  |  | Short-Term |  |  |  |  |  |  |  | Long-Term |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | federal funds | Treasury bills secondary market |  |  | CDssecondarymarket3 -month | $\begin{gathered} \text { comm. } \\ \text { paper } \\ \hline \text { 1-month } \end{gathered}$ | money market mutual fund | bank <br> prime <br> loan | U.S. government constant maturity yiedds |  |  | $\left[\begin{array}{c} \text { corporale } \\ \text { A-utiility } \\ \text { recently } \\ \text { offered } \end{array}\right.$ | $\begin{array}{\|c\|} \hline \text { municipal } \\ \text { Bond } \\ \text { Buyer } \end{array}$ | conventional home morigages |  |  |
|  |  |  | secondary market |  |  |  | primary market |  |  |  |  |  |  |  |  |
|  |  |  | 3-month | 6-month | 1 -year | 3 -year |  |  |  |  | 10-year | 30-year | fixed-rale |  |  | fixed-rate | ARM |
|  |  |  | 1 | 2 | 3 | 4 |  | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 95 -- High <br> -- Low |  |  |  | $\begin{aligned} & 6.21 \\ & 5.40 \end{aligned}$ | $\begin{aligned} & 5.81 \\ & 4.89 \end{aligned}$ | $\begin{aligned} & 6.31 \\ & 5.05 \end{aligned}$ | $\begin{aligned} & 6.75 \\ & 4.98 \end{aligned}$ | $\begin{aligned} & 6.39 \\ & 5.55 \end{aligned}$ | $\begin{aligned} & 6.10 \\ & 5.73 \end{aligned}$ | $\begin{aligned} & 5.61 \\ & 5.16 \end{aligned}$ | $\begin{aligned} & 9.00 \\ & 8.50 \end{aligned}$ | $\begin{array}{r} 7.80 \\ 5.36 \end{array}$ | $\begin{array}{r} 7.85 \\ 5.68 \end{array}$ | $\begin{aligned} & 7.89 \\ & 6.06 \end{aligned}$ | $\begin{aligned} & 8.81 \\ & 6.98 \end{aligned}$ | $\begin{aligned} & 6.94 \\ & 5.65 \end{aligned}$ | $\begin{aligned} & 9.57 \\ & 7.40 \end{aligned}$ | $\begin{aligned} & 9.22 \\ & 7.11 \end{aligned}$ | $\begin{aligned} & 6.87 \\ & 5.53 \end{aligned}$ |
| 96 .- High <br> -- Low |  |  |  | $\begin{aligned} & 5.61 \\ & 5.08 \end{aligned}$ | 5.03 4.79 | $\begin{aligned} & 5.13 \\ & 4.71 \end{aligned}$ | $\begin{aligned} & 5.37 \\ & 4.57 \end{aligned}$ | $\begin{aligned} & 5.48 \\ & 5.13 \end{aligned}$ | $\begin{array}{r} 5.73 \\ 5.28 \end{array}$ | $\begin{aligned} & 5.15 \\ & 4.73 \end{aligned}$ | $\begin{aligned} & 8.50 \\ & 8.25 \end{aligned}$ | $\begin{aligned} & 6.36 \\ & 4.95 \end{aligned}$ | $\begin{aligned} & 6.85 \\ & 5.59 \end{aligned}$ | $\begin{array}{r} 7.06 \\ 5.97 \end{array}$ | $\begin{aligned} & 8.22 \\ & 7.00 \end{aligned}$ | $\begin{aligned} & 6.32 \\ & 5.63 \end{aligned}$ | $\begin{aligned} & 8.56 \\ & 7.35 \end{aligned}$ | $\begin{aligned} & 8.24 \\ & 6.94 \end{aligned}$ | $\begin{aligned} & 5.80 \\ & 5.19 \end{aligned}$ |
| Monthly |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| May | 95 |  | 6.01 | 5.67 | 5.67 | 5.65 | 6.02 | 6.05 | 5.51 | 9.00 | 6.27 | 6.63 | 6.95 | 7.89 | 6.16 | 8.32 | 7.96 | 6.14 |
| Jun | 95 |  | 6.00 | 5.47 | 5.42 | 5.33 | 5.90 | 6.05 | 5.46 | 9.00 | 5.80 | 6.17 | 6.57 | 7.60 | 6.07 | 7.96 | 7.57 | 5.87 |
| Jul | 95 |  | 5.85 | 5.42 | 5.37 | 5.28 | 5.77 | 5.87 | 5.39 | 8.80 | 5.89 | 6.28 | 6.72 | 7.72 | 6.21 | 8.03 | 7.61 | 5.83 |
| Aug | 95 |  | 5.74 | 5.40 | 5.41 | 5.43 | 5.77 | 5.85 | 5.27 | 8.75 | 6.10 | 6.49 | 6.86 | 7.84 | 6.37 | 8.24 | 7.86 | 5.93 |
| Sep | 95 |  | 5.80 | 5.28 | 5.30 | 5.31 | 5.73 | 5.82 | 5.24 | 8.75 | 5.89 | 6.20 | 6.55 | 7.55 | 6.18 | 8.01 | 7.64 | 5.81 |
| Oct | 95 |  | 5.76 | 5.28 | 5.32 | 5.28 | 5.79 | 5.81 | 5.20 | 8.75 | 5.77 | 6.04 | 6.37 | 7.36 | 6.05 | 7.88 | 7.48 | 5.74 |
| Nov | 95 |  | 5.80 | 5.36 | 5.27 | 5.14 | 5.74 | 5.80 | 5.26 | 8.75 | 5.57 | 5.93 | 6.26 | 7.30 | 5.89 | 7.79 | 7.38 | 5.64 |
| Dec | 95 |  | 5.60 | 5.14 | 5.13 | 5.03 | 5.62 | 5.84 | 5.20 | 8.65 | 5.39 | 5.71 | 6.06 | 7.10 | 5.74 | 7.53 | 7.20 | 5.57 |
| Jan | 96 |  | 5.56 | 5.00 | 4.92 | 4.82 | 5.39 | 5.56 | 5.05 | 8.50 | 5.20 | 5.65 | 6.05 | 7.09 | 5.72 | 7.45 | 7.03 | 5.44 |
| Feb | 96 |  | 5.22 | 4.83 | 4.77 | 4.69 | 5.15 | 5.29 | 4.85 | 8.25 | 5.14 | 5.81 | 6.24 | 7.31 | 5.73 | 7.51 | 7.08 | 5.31 |
| Mar | 96 |  | 5.31 | 4.96 | 4.96 | 5.06 | 5.29 | 5.39 | 4.76 | 8.25 | 5.79 | 6.27 | 6.60 | 7.75 | 6.07 | 8.07 | 7.62 | 5.51 |
| Apr | 96 |  | 5.22 | 4.95 | 5.06 | 5.23 | 5.36 | 5.40 | 4.75 | 8.25 | 6.11 | 6.51 | 6.79 | 7.90 | 6.20 | 8.32 | 7.93 | 5.73 |
| Weekly |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Jan | 31 | 96 | 5.53 | 4.97 | 4.87 | 4.75 | 5.30 | 5.50 | 5.01 | 8.50 | 5.16 | 5.65 | 6.06 | 7.22 | 5.69 | 7.35 | 7.02 | 5.37 |
| Feb | 7 | 96 | 5.21 | 4.85 | 4.77 | 4.62 | 5.16 | 5.29 | 4.91 | 8.25 | 5.05 | 5.67 | 6.13 | 7.18 | 5.67 | 7.41 | 7.02 | 5.33 |
| Feb | 14 | 96 | 5.09 | 4.79 | 4.71 | 4.57 | 5.13 | 5.28 | 4.84 | 8.25 | 4.95 | 5.63 | 6.07 | 7.28 | 5.67 | 7.49 | 6.94 | 5.19 |
| Feb | 21 | 96 | 5.17 | 4.80 | 4.78 | 4.71 | 5.14 | 5.29 | 4.81 | 8.25 | 5.14 | 5.86 | 6.29 | 7.47 | 5.76 | 7.78 | 7.32 | 5.34 |
| Feb | 28 | 96 | 5.31 | 4.85 | 4.81 | 4.81 | 5.14 | 5.28 | 4.78 | 8.25 | 5.35 | 6.01 | 6.44 | 7.45 | 5.86 | 7.82 | 7.41 | 5.38 |
| Mar | 6 | 96 | 5.57 | 4.89 | 4.82 | 4.85 | 5.17 | 5.31 | 4.79 | 8.25 | 5.43 | 6.01 | 6.41 | 7.80 | 5.88 | 8.09 | 7.38 | 5.40 |
| Mar | 13 | 96 | 5.24 | 4.93 | 4.97 | 5.06 | 5.28 | 5.34 | 4.73 | 8.25 | 5.81 | 6.30 | 6.63 | 7.87 | 6.13 | 8.16 | 7.83 | 5.55 |
| Mar | 20 | 96 | 5.36 | 5.02 | 5.02 | 5.16 | 5.33 | 5.41 | 4.79 | 8.25 | 5.94 | 6.40 | 6.70 | 7.76 | 6.10 | 8.06 | 7.81 | 5.60 |
| Mar | 27 | 96 | 5.22 | 4.97 | 5.00 | 5.11 | 5.33 | 5.46 | 4.74 | 8.25 | 5.85 | 6.29 | 6.62 | 7.77 | 6.15 | 8.20 | 7.69 | 5.62 |
| Apr | 3 | 96 | 5.30 | 5.02 | 5.03 | 5.14 | 5.35 | 5.45 | 4.79 | 8.25 | 5.91 | 6.32 | 6.66 | 7.94 | 6.11 | 8.37 | 7.78 | 5.62 |
| Apr | 10 | 96 | 5.08 | 4.99 | 5.12 | 5.30 | 5.39 | 5.42 | 4.76 | 8.25 | 6.18 | 6.54 | 6.82 | 7.91 | 6.32 | 8.35 | 8.05 | 5.80 |
| Apr | 17 | 96 | 5.24 | 4.88 | 5.05 | 5.23 | 5.38 | 5.41 | 4.76 | 8.25 | 6.14 | 6.53 | 6.83 | 7.89 | 6.19 | 8.30 | 7.95 | 5.75 |
| Apr | 24 | 96 | 5.24 | 4.92 | 5.04 | 5.20 | 5.35 | 5.38 | 4.73 | 8.25 | 6.11 | 6.54 | 6.80 | 7.90 | 6.16 | 8.26 | 7.92 | 5.74 |
| May | 1 | 96 | 5.30 | 4.99 | 5.06 | 5.28 | 5.35 | 5.39 | 4.75 | 8.25 | 6.15 | 6.61 | 6.85 | 8.22 | 6.32 | 8.56 | 7.99 | 5.76 |
| May | 8 | 96 | 5.22 | 5.00 | 5.13 | 5.37 | 5.38 | 5.40 | 4.73 | 8.25 | 6.36 | 6.85 | 7.06 | 8.01 | 6.32 | 8.43 | 8.24 | 5.80 |
| May | 15 | 96 | 5.26 | 5.00 | 5.10 | 5.30 | 5.36 | 5.39 | 4.74 | 8.25 | 6.24 | 6.72 | 6.91 | 7.92 | 6.17 | 8.37 | 8.08 | 5.78 |
| Daily |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| May | 10 | 96 | 5.20 | 4.99 | 5.10 | 5.31 | 5.36 | 5.39 | -- | 8.25 | 6.23 | 6.75 | 6.93 | -- | -- | .- | -- | -- |
| May | 16 | 96 | 5.24 | 5.01 | 5.12 | 5.29 | 5.36 | 5.38 | -- | 8.25 | 6.25 | 6.70 | 6.90 | -- | -- | -- | -- | -- |
| May | 17 | 96 | 5.15p | 5.01 | 5.12 | 5.27 | 5.36 | 5.37 | -- | 8.25 | 6.20 | 6.65 | 6.84 | -- | -- | -. | .- | -- |

 following the end of the statement week. Column 13 is the Bond Buyer revenue index. Column 14 is the FNMA purchase yield, plus loan servicing fee, on 30 -day mandatory delivery commitments. Column 15 is the average contract rate on new commitments for fixed-rate mortgages (FRMs) with 80 percent loan-to-value ratios at major institutional lend
p - preliminary data


1. Adiusted for breaks caused by reclassifications
p preliminary
p
preliminary estimate


Includes money market deposit accounts.
includes retail repurchase agreements. All IRA and Keogh accounts at commercial banks and thrift institutions are subtracted from small time deposits
Excludes IRA and Keogh accounts.
Net of large denomination time deposits held by money market mutual funds, depository institutions, U.S. government, and foreign banks and official institutions.
Net of money market mutual fund holdings of these items.
Includes both overnight and term.

| Period | Treasury bills |  |  | Treasurycoupons |  |  |  |  |  | Federal agencies redemptions (-) | Net change outright holdings total 4 | Net RPs ${ }^{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Net } \\ \text { purchases } \end{gathered}$ | Redemptions <br> (-) | Net change | Net purchases ${ }^{3}$ |  |  |  | Redemptions (-) | Net Change |  |  |  |
|  |  |  |  | within 1 year | 1-5 | 5-10 | over 10 |  |  |  |  |  |
| 1993 | 17,717 | .-- | 17,717 | 1,223 | 10,350 | 4,168 | 3,457 | 767 | 18,431 | 774 | 35,374 | 5,974 |
| 1994 | 17,484 | --- | 17,484 | 1,238 | 9,168 | 3,818 | 3,606 | 2,337 | 15,493 | 1,002 | 31,975 | -7,412 |
| 1995 | 10,932 | 900 | 10,032 | 390 | 4,966 | 1,239 | 3,122 | 1,476 | 8,241 | 1,303 | 16,970 | $-1,023$ |
| 1995 ---Q1 | --- | --- | -- | --- | --- | --- | --- | 621 | -621 | 229 | -850 | -4,083 |
| ---Q2 | 4,470 | .-. | 4,470 | --- | 2,549 | 839 | 1,138 | 370 | 4.156 | 312 | 8,314 | 10,395 |
| ---Q3 | 842 | --- | 842 | --- | 100 | --. | 100 | --- | 200 | 501 | 541 | -15,979 |
| $\cdots$--Q4 | 5,621 | 900 | 4,721 | 390 | 2,317 | 400 | 1,884 | 485 | 4,506 | 261 | 8,965 | 8,644 |
| 1996 --Q1 | --- | --- | --- | --- | $\cdots$ | --- | $\cdots$ | 1,228 | -1,228 | 108 | -1,336 | -8,879 |
| 1995 May | $\cdots$ | --- | --- | --- | --- | --- | -.- | --- | --- | 30 | -30 | 2,474 |
| June | 4,470 | ... | 4,470 | --- | --- | --- | -- | --- | --- | 262 | 4,208 | 10,678 |
| July | --- | --- | $\cdots$ | --- | --- | .-- | --- | --- | --- | 333 | -333 | -13,602 |
| August | 433 | --- | 433 | --- | $\cdots$ | --- | --- | --- | --- | 122 | 311 | -2,984 |
| September | 409 | --- | 409 | --- | 100 | --- | 100 | --- | 200 | 46 | 563 | 608 |
| October | 1,350 | 900 | 450 | --- | --- | --- | -- | 485 | -485 | 83 | -118 | -427 |
| November | 4,271 | $\cdots$ | 4,271 | --- | $\cdots$ | 400 | $\cdots$ | --- | 400 | 120 | 4,551 | 2,404 |
| December | -.-- | ..- | -- | 390 | 2,317 | .-. | 1,884 | -- | 4,591 | 58 | 4,533 | 6,666 |
| 1996 January | --- | --- | --- | --- | $\cdots$ | --- | --- | 1,228 | -1,228 | $\cdots$ | -1,228 | -12,623 |
| February | --* | --* | $\cdots$ | --- | --- | --- | --- | --- | --- | --. |  | -1,689 |
| March | --- | $\ldots$ | -- | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | -.- | 108 | -108 | 5,433 |
| April | 88 | --- | 88 | 35 | 1,899 | 479 | 1,065 | 787 | 2,691 | 82 | 2,697 | -505 |
| Weekly |  |  |  |  |  |  |  |  |  |  |  |  |
| January $\begin{aligned} & 24 \\ & 31\end{aligned}$ | --- | --- | $\cdots$ | --- | $\cdots$ | --- | --- | --- | --- | --- | --- | -9,687 |
|  | --- | --- | --- | --- | -- | $\cdots$ | --- | -- | --- | --- | --- | 5,695 |
| $\begin{array}{ll}\text { February } & 7 \\ & 14 \\ 21 \\ & 28\end{array}$ | --- | --. | --- | --- | --- | --- | --- | --- | --- | --- | --- | -6,148 |
|  | --- | --- | --- | --- | $\cdots$ | $\cdots$ | -- | --- | --- | --- | $\cdots$ | 2,020 |
|  | --- | -.- | --- | --- | $\cdots$ | -.. | -- | ... | $\cdots$ | --. | -.- | 1,625 |
|  | --- | --- | --- | --- | $\cdots$ | --- | -- | --- | -- | --- | --- | 8,217 |
| $\begin{array}{ll}\text { March } & 6 \\ 13 \\ 20 \\ 27\end{array}$ | --- | --- | --- | --- | -- | --- | --- | --- | --- | 45 | -45 | -6,519 |
|  | --- | --- | --- | --- | --- | --- | --- | --- | -.. | 50 | -50 | 11,648 |
|  | --- | --- | --- | --- | $\cdots$ | --- | -.. | --- | --- | --- | --- | -10,669 |
|  | --- | --- | --- | --- | --- | --- | --- | --- | -.- | 13 | -13 | 8,728 |
| $\begin{array}{ll}\text { April } & 3 \\ 10 \\ 10 \\ 17 \\ 24\end{array}$ | $\cdots$ | --- | $\cdots$ | --- | $\cdots$ | --- | --- | --- | $\cdots$ | --- | --- | -4,820 |
|  | 88 | --- | 88 | --- | -.. | -- | --- | --- | $\cdots$ | 35 | 53 | 3,357 |
|  | --- | --- | --- | 35 | 1,899 | 479 | 1,065 | 787 | 2,691 | $\cdots$ | 2,691 | 4,963 |
|  | --- | --- | $\cdots$ | .-- | --- | --- | .-- | ... | -- | $\cdots$ | --- | 6,289 |
| $\begin{array}{ll}\text { May } \\ & 1 \\ 8 \\ & 15\end{array}$ | --- | --- | --- | --- | --- | --- | --- | --- | --. | 47 | -47 | -15,158 |
|  | --- | --- | --- | $\cdots$ | $\cdots$ | --. | $\cdots$ | --- | --- | --- | --- | 7,561 |
|  | $\cdots$ | -- | -- | $\cdots$ | $\cdots$ | -- | -- | -- | --- | -- | -- | -1,895 |
| Memo: LEVEL (bil. \$ ${ }^{6}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| May 15 |  |  | 195.5 | 216.8 | 91.7 | 32.9 | 38.7 |  | 380.1 |  | 394.5 | -12.0 |

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

2. Outright transactions in market and with foreign accounts.
3. Outright transactions in market and with foreign accounts, and short-term notes acquired
4. Reflects net change in redemptions $(-)$ of Treasury and agency securities.
5. Includes change in RPs $(+)$, matched sale-purchase transactions $(-)$, and matched purchase sale transactions $(+)$. 6. The levels of agency issues were as follows:
in exchange for maturing bills. Excludes maturity shitts and rollovers of maturing issues.

| within <br> 1 year | $1-5$ | $5-10$ | over 10 | total |
| :---: | :---: | ---: | ---: | ---: |
| 1.4 | 0.5 | 0.5 | 0.0 | 2.4 |


[^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]:    1. M1 contracted at a 3 percent annual rate in April but expanded at a 4-3/4 percent rate after adjusting for the estimated effects of new retail sweep accounts. The monetary base contracted at a $3 / 4$ percent rate but rose at a $1-1 / 2$ percent rate after adjustment for sweep accounts.
    2. Flows into stock and bond mutual funds have remained brisk. At a 4-1/4 percent annual rate, M2+ is estimated to have expanded more quickly than $M 2$ in April.
[^2]:    3. Some supply shocks could also raise the NAIRU and reduce potential output by more than they would damp aggregate demand, increasing the equilibrium real interest rate. While a minimum wage hike probably falls into this category, an increase of the magnitude currently being debated would not have much impact on the equilibrium real rate.
