## Prefatory Note

The attached document represents the most complete and accurate version available based on original copies culled from the files of the FOMC Secretariat at the Board of Governors of the Federal Reserve System. This electronic document was created through a comprehensive digitization process which included identifying the bestpreserved paper copies, scanning those copies, ${ }^{1}$ and then making the scanned versions text-searchable. ${ }^{2}$ Though a stringent quality assurance process was employed, some imperfections may remain.

Please note that this document may contain occasional gaps in the text. These gaps are the result of a redaction process that removed information obtained on a confidential basis. All redacted passages are exempt from disclosure under applicable provisions of the Freedom of Information Act.

[^0]
## 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) Immediately following the November 1 FOMC meeting, reserve paths continued to incorporate adjustment plus seasonal borrowing of $\$ 600$ million. As the month progressed, however, it became increasingly evident that the shortfall in demands on the discount window that had first surfaced in mid-October was widening. In these circumstances, the Desk allowed a lower level of borrowing than the target while federal funds were trading at a slightly higher rate than had been anticipated at the time of the meeting. Specifically, in the first full maintenance period of November, adjustment plus seasonal borrowing averaged $\$ 396$ million, while the average funds rate remained just above $8-1 / 4$ percent. ${ }^{1}$ To take formal account of the apparent change in borrowing behavior, but also in light of incoming information suggesting considerable strength in the economic expansion with the potential for price pressures, the Manager for Domestic Operations on November 22 reduced the borrowing assumption to $\$ 400$ million, with the expectation that federal funds would trade in a range around $8-3 / 8$ percent. In the most recent complete maintenance period, the funds rate averaged at this level; borrowing increased to $\$ 699$ million, but almost half of this amount was due to a computer problem at a large commercial bank. Similarly, a funds transfer failure at a Reserve

[^1]Bank led to a spike in borrowing in the current maintenance period, accounting for $\$ 265$ million of the average adjustment plus seasonal borrowing of $\$ 516$ million for the first eight days of the period.
(2) Over the last week, federal funds have firmed a bit further to trade around $8-1 / 2$ percent, nearly $1 / 4$ percentage point above the level at the time of the last meeting. Other short-term rates have registered substantially larger increases on balance, as expectations of Federal Reserve tightening have been encouraged by release of strong economic data, higher world oil prices, and weakness in the dollar over much of the period. The prime rate was raised 50 basis points and most short-term market interest rates have risen roughly $1 / 2$ to $3 / 4$ percentage point since the beginning of November, with anticipation of some year-end pressures apparent in the still-largex increases at the one-month maturity. Longterm rates rose along with short-term rates, though by appreciably less, as market participants apparently did not view economic developments as presaging a sustained intensification of inflation, perhaps in part because of the anticipated response of the Federal Reserve. More recently, some of the initial increases in bond rates have been trimmed amid hopes for significant federal deficit reductions--sparked mainly by reports that the Soviet Union would announce sharp defense cuts. On balance, the 30year rate is only about 20 basis points above its early-November level. These movements have left yields on Treasury securities with maturities of one year or longer all about 9 percent, while the yield curve on shorter maturities has retained a moderate upward slope. Stock prices fell during
the first half of the intermeeting period, but most indexes have since recovered to nearly their values at the time of the November meeting.
(3) Immediately after the U.S. elections on November 8, the dollar resumed its steep decline in foreign exchange markets. By early December, the dollar had dropped by about $3-1 / 4$ percent on a weightedaverage basis since the last Committee meeting, bringing the total depreciation from its late-September peak to nearly $9-1 / 2$ percent. Exchange market participants appeared to be concerned that the international adjustment process was slowing and that U.S. macroeconomic policies were not doing enough to restrain U.S. domestic demand. In recent days, as prospects for budget deficit reduction seemed somewhat brighter, the dollar has recovered a little. Over the intermeeting period, rising interest differentials have helped to support the dollar. Short-term market interest rates increased only slightly in most major foreign countries (except in the United Kingdom where they rose markedly) and long-term rates abroad were about unchanged.
with the Desk accounting for
$\$ 1.9$ billion, primarily against yen, but also against marks.
(4) The broader monetary aggregates accelerated last month from the unusually sluggish pace of September and October, with surprising strength in the liquid retail components of M 2 . This aggregate rose at a 6-1/2 percent annual rate in November, bringing its two-month growth rate to nearly 4 percent, compared with the $2-1 / 2$ percent September-to-December pace specified by the FOMC at its last meeting. The pickup in M2 occurred despite continued weakness in M1, which remained about flat last month, as

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

|  | September | October | November | September to November | $\begin{aligned} & \text { QIV } 187 \\ & \text { to } \\ & \text { November } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Money and credit aggregates |  |  |  |  |  |
| M1 | $-.3$ | 1.8 | 0.3 | 1.1 | 4.0 |
| M2 | 1.0 | 1.2 | 6.4 | 3.8 | 5.4 |
| M3 | 1.7 | 4.7 | 6.3 | 5.5 | 6.4 |
| Domestic nonfinancial debt | 8.8 | 7.8 | -- | -- | $8-3 / 4^{2}$ |
| Bank credit | -0.7 | 7.1 | 5.8 | 6.5 | 7.4 |
| Reserve measures |  |  |  |  |  |
| Nonborrowed reserves ${ }^{1}$ | -5.7 | 4.4 | 1.9 | 3.2 | 3.0 |
| Total reserves | -1.9 | -0.8 | 2.3 | 0.7 | 3.4 |
| Monetary base | 5.5 | 5.7 | 3.0 | 4.3 | 6.9 |
| Memo: (Millions of dollars) |  |  |  |  |  |
| Adjustment plus seasonal borrowing | 1781 | 518 | 539 | -- | -- |
| Excess reserves | 972 | 1062 | 1116 | -- | -- |

1. Includes "other extended credit" from the Federal Reserve.
2. QIV' 87 to October.

NOTES: 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.
it has been since midsummer. The runoff in demand deposits resumed in November and currency demand moderated; as a result, growth of the monetary base slowed somewhat. M3 growth rose to 6-1/4 percent last month, implying a 5-1/2 percent rate of increase over the September-to-November period--consistent with the Committee's 6 percent specification for the final three months of this year given the expected further pickup in December.
(5) Balances in OCDs, savings deposits, and money market mutual funds rose substantially last month. This may have reflected the uncertain outlook for interest rates, as well as some parking of funds received from stock sales in corporate restructurings. For example, the surge in savings deposits primarily reflected the deposit of proceeds of a particular change in corporate ownership. Small time deposit growth, while softening somewhat, remained in double digits, leaving growth of total retail-type balances in M2 at a rapid $8-1 / 4$ percent rate last month. The inflow of retail deposits was concentrated at commercial banks and, combined with some slowing in bank credit growth, trimmed bank needs for additional managed liabilities; as a result their net new issuance of large CDs in M3 virtually ceased. At thrifts, growth of large CDs also slowed substantially, despite weak growth of core deposits, as they increased their reliance on advances from the Federal Home Loan Banks.
(6) Bank credit growth ebbed in November to a 5-3/4 percent annual rate as security acquisitions slowed and C\&I loans edged lower. Overall business borrowing appears to have been relatively weak last
month, despite some financing of corporate restructuring. In the longterm market, investment-grade industrial offerings remained sparse, although the market came up with a few new forms of insurance against "event risk" (present whenever a corporation is perceived as vulnerable to a takeover or significant financial restructuring). Junk bond issuance, however, remained robust in November, fueled by merger-related demands. In other sectors, municipal bond offerings dropped off last month, and it appears that consumer borrowing may have too. Available data suggest, however, that mortgage demand has been well maintained.
(7) For 1988, the staff expects debt growth to remain just below the center of its 7 to 11 percent monitoring range, at $8-3 / 4$ percent on a fourth-quarter to fourth-quarter basis. The targeted monetary aggregates, M2 and M3, also are likely to come in near the 6 percent midpoints of their ranges, increasing 5-1/4 and 6-1/2 percent, respectively. These growth rates represent a pickup of roughly 1 percentage point from 1987, despite the stronger restraining influence of rising interest rates this year. In 1988 growth of M2 has been more closely in line with its historical relation to income and interest rates than in 1987, when this aggregate expanded unusually slowly. At the beginning of this year, the opportunity costs of holding monetary assets were quite narrow, reflecting the declines in market interest rates after last October's stock market crash. As a result, money demand was rather buoyant early in the year. After midyear, however, M2 decelerated markedly, largely in response to the turnaround in market interest rates and opportunity costs that ensued from the series of tightening moves initiated by the Federal Reserve in
-7-

March. M1 growth also followed this uneven pattern over the year, but, reflecting its larger interest rate sensitivity, fell to just 4 percent on a fourth-quarter to fourth-quarter basis, its lowest rate of growth in nearly 20 years. The pickup in M3 growth for the year occurred despite some slowing in credit growth at depository institutions, but these institutions relied relatively less on Eurodollar borrowing and other nonM3 sources of funds in 1988 than they had in 1987.

## Policy Alternatives

(8) Two policy alternatives are presented below for Committee consideration. The relation between federal funds rates and borrowing under both alternatives is unusually uncertain, in light of the recent shortfalls in borrowing relative to the spread of the funds rate over the discount rate. The possibility of year-end pressures in the funds market and the scope for changing expectations of near-term policy actions add to this uncertainty over coming weeks. Under Alternative $B$, a borrowing objective of $\$ 400$ million would be retained, and federal funds would be expected to settle mainly into an $8-3 / 8$ to $8-1 / 2$ percent range, though slightly higher rates are possible through year-end. Alternative $C$ incorporates an increase in intended discount borrowing to $\$ 600$ million, with the federal funds rate likely to move up to around 8-7/8 to 9 percent. Similar conditions in the funds market also could be engendered through a 1/2 point rise in the discount rate to 7 percent, while keeping borrowing at $\$ 400$ million. These relations assume that most, though perhaps not all, of the recent shortfall in borrowing will persist; smaller banks may well remain less willing to tap the discount window, but large bank borrowing, while subject to the usual vicissitudes of computer problems, could return toward normal once the year-end, with its anticipated money market pressures, is past.
(9) The money growth paths from November to March associated with each alternative are presented in the table below. Under both alternatives, M2 growth over coming months would be relatively restrained,
reflecting recent and, under alternative $C$, prospective increases in market interest rates. As a consequence, this aggregate in March would be in the lower portion of its tentative 3 to 7 percent range for 1989. M3 through March would be above the midpoint of its tentative 3-1/2 to 7-1/2 percent range under either alternative, boosted by the expected surge in managed liabilities at banks to fund lending associated with mergers and buyouts.

Alt. B Alt. C
Growth from November
to March
M2
M3
M1
4
7
1-1/2

6 to 10
7 to 11
(10) Short-term market interest rates are likely to retreat somewhat under alternative $B$. These rates now embody some near-term firming of policy, and as funds ease back a bit from their recent trading range and as no subsequent tightening move materializes, short-term rates are likely to drop. The 3 -month Treasury bill rate should fall from around the recent 8 percent level to $7-3 / 4$ percent or even below. The extent of any decline could be damped for a time, however, reflecting the effects of normal yearend activity and a potential surge in credit demands associated with corporate restructuring over coming months. These developments will have their greatest impact on short-term rates, especially in light of the large volume of bank financing of equity retirements. Any declines in long-term

Alternative Levels and Growth Rates for Key Monetary Aggregates

| Levels in billions |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1988 October | 3037.2 | 3037.2 | 3868.7 | 3868.7 | 783.5 | 783.5 |
| November | 3053.3 | 3053.3 | 3888.9 | 3888.9 | 783.7 | 783.7 |
| December | 3064.7 | 3064.3 | 3911.9 | 3911.6 | 785.2 | 785.0 |
| 1989 January | 3075.0 | 3072.4 | 3937.7 | 3936.4 | 786.5 | 785.7 |
| February | 3084.2 | 3078.5 | 3960.6 | 3957.4 | 787.5 | 785.5 |
| March | 3092.6 | 3082.5 | 3979.6 | 3973.1 | 787.9 | 784.0 |
| Monthly Growth Rates |  |  |  |  |  |  |
| 1988 October | 1.2 | 1.2 | 4.7 | 4.7 | 1.8 | 1.8 |
| November | 6.4 | 6.4 | 6.3 | 6.3 | 0.3 | 0.3 |
| December | 4.5 | 4.3 | 7.1 | 7.0 | 2.3 | 2.0 |
| 1989 January | 4.0 | 3.2 | 7.9 | 7.6 | 2.0 | 1.1 |
| February | 3.6 | 2.4 | 7.0 | 6.4 | 1.5 | -0.3 |
| March | 3.3 | 1.6 | 5.8 | 4.8 | 0.6 | -2.3 |
| Quarterly Ave. Growth Rates |  |  |  |  |  |  |
| Q2 | 7.7 | 7.7 | 7.7 | 7.7 | 6.3 | 3.8 6.3 |
| Q3 | 3.6 | 3.6 | 5.7 | 5.7 | 5.2 | 5.2 |
| Q4 | 2.8 | 2.8 | 4.6 | 4.5 | 0.9 | 0.9 |
| 1989 Q1 | 4.2 | 3.4 | 7.1 | 6.8 | 1.6 | 0.5 |
| Sep. 88 to Dec. 88 | 4.0 | 4.0 | 6.1 | 6.0 | 1.5 | 1.4 |
| Nov. 88 to Mar. 89 | 3.9 | 2.9 | 7.0 | 6.5 | 1.6 | 0.1 |
| Dec. 88 to Mar. 89 | 3.6 | 2.4 | 6.9 | 6.3 | 1.4 | -0.5 |
| Q4 87 to Q4 88 | 5.3 | 5.3 | 6.4 | 6.4 | 4.1 | 4.1 |
| Q4 88 to Q1 89 | 4.2 | 3.4 | 7.1 | 6.8 | 1.6 | 0.5 |
| Q4 87 to Nov. 88 | 5.4 | 5.4 | 6.4 | 6.4 | 4.0 | 4.0 |
| Q4 87 to Dec. 88 | 5.3 | 5.3 | 6.5 | 6.4 | 3.9 | 3.9 |
| Q4 88 to Mar. 89 | 4.0 | 3.0 | 6.9 | 6.4 | 1.4 | -0.0 |
| 1988 Target Ranges: | 4.0 | - 8.0 | 4.0 | - 8.0 |  |  |
| 1989 Ranges (Tentative): | 3.0 | to 7.0 | 3.5 | - 7.5 |  |  |

ACTUAL AND TARGETED M2




rates might be quite limited, given the recent rally in bond markets. These markets already seem to be building in some prospective budget deficit reduction, and would be sensitive to any indication of disappointing progress. Moreover, the dollar likely would come under downward pressure under this alternative, raising concern about future inflation trends, especially if the decline occurred in the context of continued strength in the economy as envisioned in the staff forecast.
(11) From a November base, M2 growth is expected to average 4 percent at an annual rate through March under alternative $B$, maintaining its average pace of October and November. Liquid balances may be boosted a little over the near term by the spate of corporate buyouts. This effect should be minimal for M1, since share sellers are unlikely to keep funds in idle or low-yielding balances for long. For M2, any such effects are expected to dissipate over the first quarter as funds are redeployed. Even though short-term rates might drop from recent levels under this alternative, they would remain above those of late summer and early fall. This net advance in interest rates and deposit opportunity costs coming on top of the earlier increases would damp M2 demand in the first quarter about as strongly as it was restrained in the second half of this year. Based on the greenbook forecast for GNP, M2 velocity is expected to rise at a 4 percent annual rate in the first quarter, near its estimated pace in each of the last two quarters of 1988.
(12) M3 growth of 7 percent at an annual rate is anticipated from November to March under alternative $B$, somewhat above the average of the last two months. This aggregate should accelerate around year-end, spurred
by massive $L B O$ and merger financing requirements, which will require a substantial pickup in managed liabilities, including large CDs. However, M3 growth is expected to moderate to around 6-1/2 percent in February and March, as bank credit growth returns to its former trend. Quarterly average M3 growth would be associated with a gain of M3 velocity in the first quarter of about $1-1 / 2$ percent, close to the pace of the previous two quarters.
(13) Credit-financed corporate restructuring is expected to boost the growth rate of the debt of domestic nonfinancial sectors to a 10 percent annual rate from November to March, leaving this aggregate in the upper half of its tentative $6-1 / 2$ to $10-1 / 2$ percent range for 1989 . Net equity retirements over these four months are projected at a record pace, with business borrowing at banks and in the commercial paper market bearing the brunt of the outsized credit demands. Abstracting from the effects of the pickup in equity retirements, business borrowing would be expected to continue at about the pace of earlier this year. In the household sector, mortgage borrowing is likely to continue near the pace of the last few quarters as home sales are anticipated to hold close to recent levels for several months, especially to the extent that interest rates stabilize or ease off under alternative $B$. Consumer credit growth may pick up temporarily early next year if, as expected, auto makers step up their sales promotions to boost demand. The federal government is expected to increase further its issuance of coupon securities, now that the Treasury has longbond authority, but as seasonal financing needs ease with a pickup of tax receipts, the Treasury is expected to lessen net bill issuance. State and
local government offerings are likely to stay relatively subdued, though any tendency for rates to drop under this alternative might foster a renewed interest in refunding outstanding debt.
(14) Although market rates incorporate some near-term firming of policy, an immediate rise in federal funds to the $8-7 / 8$ to 9 percent area associated with alternative C likely would elicit some further increase in short-term market interest rates. Such increases, however, are likely to be less than the nearly half point upward movement of the federal funds rate. In addition, the prime rate would be boosted further. Long-term rates would be likely to rise by somewhat less, especially if Federal Reserve actions were seen as further reducing the potential for higher inflation. A discount rate increase would be viewed as a more forceful step, prompting a more immediate increase in short-term rates and one that might be larger as well if markets interpreted it as portending even further policy tightening. Downward pressure on the dollar would be offset, and the currency could even firm for a time, especially if the tightening took the form of a discount rate increase. Any upward pressure on the dollar would likely be mitigated by firmer policy abroad, as foreign monetary authorities took advantage of this opportunity to respond to the potential for inflation pressures in their own economies.
(15) M2 growth probably would be held down to a 3 percent annual rate from November to March under alternative C, placing this aggregate just at the lower end of its tentative 1989 target range. The higher funds rate of this alternative would reinforce the restraining influence on M2 demand of rate increases earlier this year. Given the still flatter market yield
curve, however, household demands for those liquid assets whose rates do adjust promptly-such as money funds--could be relatively strong. With higher market interest rates, M1 likely would remain about unchanged on balance through March. Some restraint also would show through to M3, which would be expected to post a $6-1 / 2$ percent annual growth rate over the next four months. Higher market interest rates would curb inflows to institu-tion-only money funds, and should damp credit extensions by depository institutions somewhat, even as a further shifting of business credit demands from long-term markets toward banks also is induced. By March M3 still would be well above the 5-1/2 percent midpoint of its 1989 target range.

## Directive Language

(16) Draft language for the operational paragraph, with the usual options for varying degrees of reserve pressure and for symmetry and asymmetry, is presented below:

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 NOVEMBER September through MARCH Beeember at annual rates of about ___ AND__ztz and 6 percent, respectively. The Chairman may call for Committee 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 $\qquad$ TO _ 6 to $\nexists \theta$ percent.

SELECTED INTEREST RATES

|  | $\qquad$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\qquad$ Treasury bills $\qquad$$\qquad$ secondary market $\qquad$ |  |  | cds <br> sec mkt <br> 3-month | $\begin{aligned} & \text { comm. } \\ & \text { paper } \\ & \text { 1-month } \end{aligned}$ | money market mutual fund | bank prime loan | -U.5. Gov't. constant-$\qquad$ maturity yiolds |  |  | corp. A utility rec off | Bond <br> Bunyer | $\qquad$ |  |  |
|  | federal funds | $\begin{gathered} 3 \\ \text { month } \end{gathered}$ | ${ }_{\text {month }}^{6}$ | $\underset{\text { month }}{12}$ |  |  |  |  | 3-year | 10-year | 30-year |  |  | sec mkt <br> fixedrate | primary <br> fixedrate | market <br> ARM |
| 87--High | 7.62 | 6.84 | 7.36 | 7.64 | 8.49 | 8.12 | 6.70 | 9.25 | 9.29 | 9.96 | 9.97 | 11.50 | 9.59 | 11.98 | 11.58 | 8.45 |
| Low | 5.95 | 5.24 | 5.36 | 5.40 | 5.83 | 5.88 | 5.28 | 7.50 | 6.37 | 7.03 | 7.34 | 8.79 | 6.92 | 8.97 | 9.03 | 7.47 |
| 88--High | 8. 59 | 7.97 | 8. 16 | 8.18 | 9.23 | 9.26 | 7.85 | 10.50 | 9.00 | 9.36 | 9.42 | 10.73 | B. 34 | 10.97 | 10.71 | 8. 26 |
| Low | 6.58 | 5.61 | 5.81 | 6.15 | 6.58 | 6.50 | 6.03 | 8.50 | 7.33 | 8.16 | 8.40 | 9.63 | 7.64 | 9.98 | 9.84 | 7.49 |
| Monthly |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DEC 87 | 6.77 | 5.77 | 6.36 | 6.69 | 7.66 | 7.76 | 6.57 | 8.75 | 8.13 | 8.99 | 9.12 | 10.42 | 8.43 | 10.82 | 10.65 | 7.96 |
| JAN 80 | 6.83 | 5.81 | 6.25 | 6.52 | 6.92 | 6.76 | 6.57 | 8.75 | 7.87 | 8.67 | 8.83 | 10.05 | 8.11 | 10.43 | 10.43 | 7.85 |
| FEB 88 | 6.58 | 5.66 | 5.93 | 6.21 | 6.60 | 6.55 | 6.22 | 8.51 | 7.30 | 8.21 | 8.43 | 9.75 | 7.83 | 10.02 | 9.89 | 7.61 |
| MAR 88 | 6.58 | 5.70 | 5.91 | 6.28 | 6.63 | 6.57 | 6.04 | 8.50 | 7.50 | 8.37 | 8.63 | 9.91 | 8.08 | 10.12 | 9.93 | 7.52 |
| APR 88 | 6.87 | 5.91 | 6.21 | 6.56 | 6.92 | 6.80 | 6.09 | 8.50 | 7.83 | 8.72 | 8.95 | 10.23 | 8.22 | 10.44 | 10.20 | 7.58 |
| MAY 88 | 7.09 | 6.26 | 6.56 | 6.90 | 7.24 | 7.07 | 6.20 | 8.84 | 8.24 | 9.09 | 9.23 | 10.61 | 8.30 | 10.73 | 10.46 | 7.71 |
| JW 88 | 7.51 | 6.46 | 6.71 | 6.99 | 7.51 | 7.41 | 6.51 | 9.00 | 8.22 | 8.92 | 9.00 | 10.41 | 8.14 | 10.62 | 10.46 | 7.85 |
| NUL 88 | 7.75 | 6.73 | 6.99 | 7.22 | 7.94 | 7.72 | 6.77 | 9.29 | 8.44 | 9.06 | 9.14 | 10.40 | 8. 15 | 10.64 | 10.43 | 7.84 |
| ALG 88 | 8.01 | 7.06 | 7.39 | 7.59 | 8.35 | 8.09 | 7.06 | 9.84 | 8.77 | 9.26 | 9.32 | 10.45 | 8.16 | 10.87 | 10.60 | 0.01 |
| SEP 88 | 0.19 | 7.24 | 7.43 | 7.53 | 8.23 | 8.09 | 7.40 | 10.00 | 8.57 | 8.98 | 9.06 | 10.26 | 7.96 | 10.62 | 10.48 | 8.14 |
| OCT 88 | 8.30 | 7.35 | 7.50 | 7.54 | 8.36 | 8.12 | 7.50 | 10.00 | 8.43 | 8.80 | 8.89 | 10.11 | 7.78 | 10.41 | 10.30 | 8.12 |
| NOV 88 | 8.35 | 7.76 | 7.86 | 7.87 | 8.78 | 8.38 | 7.64 | 10.05 | 8.72 | 8.96 | 9.02 | 10.12 | 7.80 | 10.56 | 10.27 | 8. 15 |
| Woak ly |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SEP 788 | 8. 15 | 7.27 | 7.43 | 7.55 | 8.32 | 8.15 | 7.37 | 10.00 | 8.64 | 9.06 | 9.11 | 10.22 | 7.98 | 10.68 | 10.53 | B. 14 |
| SEP 1488 | 8.13 | 7.23 | 7.40 | 7.48 | 8.22 | 8.07 | 7.38 | 10.00 | 8.53 | 8.94 | 9.01 | 10.21 | 7.88 | 10.54 | 10.40 | 8.12 |
| SEP 2188 | 8. 17 | 7.17 | 7.38 | 7.47 | 8.17 | 8.03 | 7.41 | 10.00 | 8.53 | 8.94 | 9.03 | 10.31 | 7.92 | 10.61 | 10.40 | 8.13 |
| SEP 2888 | 8. 24 | 7.28 | 7.49 | 7.58 | 8.19 | 8.08 | 7.43 | 10.00 | 8.61 | 9.00 | 9.09 | 10.29 | 7.93 | 10.53 | 10.42 | B. 14 |
| OCT 588 | 8.38 | 7.25 | 7.48 | 7.58 | 8.29 | 8.13 | 7.48 | 10.00 | 8.53 | 8.89 | 8.99 | 10.05 | 7.83 | 10.44 | 10.38 | 8.10 |
| OCT 1288 | 8.27 | 7.29 | 7.46 | 7.51 | 0.31 | 8.10 | 7.47 | 10.00 | 8.43 | 8.79 | 8. 90 | 10.20 | 7.83 | 10.47 | 10.33 | 8.11 |
| OCT 1988 | 8.27 | 7.36 | 7.47 | 7.54 | 8.37 | 8. 11 | 7.48 | 10.00 | 8.43 | 8.81 | 8.90 | 10.08 | 7.77 | 10.43 | 10.28 | 8.13 |
| OCT 2688 | 8.29 | 7.45 | 7.57 | 7.58 | 8.41 | 8.15 | 7.54 | 10.00 | .8.46 | 8.81 | 8.90 | 10.00 | 7.70 | 10.29 | 10.22 | 8.13 |
| NOY 288 | 8.36 | 7.36 | 7.48 | 7.51 | 8.40 | 8.19 | 7.55 | 10.00 | 8.34 | 8.69 | 8.79 | 10.02 | 7.64 | 10.37 | 10.12 | 8.11 |
| NOV 988 | 8.31 | 7.50 | 7.66 | 7.68 | 8.50 | 8.27 | 7.56 | 10.00 | 8.53 | 8.85 | 8.92 | 10.08 | 7.77 | 10.53 | 10.24 | 8.14 |
| NOV 1688 | 8.26 | 7.83 | 7.90 | 7.90 | 8.71 | 8.38 | 7.60 | 10.00 | 8. 71 | 8.93 | 9.03 | 10.20 | 7.86 | 10.64 | 10.31 | e. 14 |
| NOV 2388 | 0.33 | 7.97 | 8.01 | 8.00 | 8.92 | 8.45 | 7.68 | 10.00 | 8.87 | 9.06 | 9.12 | 10.20 | 7.93 | 10.70 | 10.39 | 8.21 |
| NOV 3088 | 8.44 | 7.96 | 8.08 | 8.08 | 9.23 | 8.53 | 7.75 | 10.21 | 8.99 | 9.13 | 9.13 | 10.15 | 7.96 | 10.79 | 10.44 | 8.26 |
| DEC 788 | 8.59 | 7.97 | 8.16 | 8.18 | 9.22 | 9.26 | 7.85 | 10.50 | 9.00 | 9.05 | 9.05 | 10.02 | 7.96 | 10.72 | 10.46 | 8. 35 |
| Daily |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DEC 288 | 8.63 | 8.07 | 8.25 | 8.29 | 9.29 | 9.27 | . . | 10.50 | 9.13 | 9.18 | 9.18 | $\ldots$ | . | .. | $\cdots$ | . |
| DEC 888 | 8.50 | 7.98 | 8.20 | 8.24 | 9.20 | 9.24 | . | 10.50 | 9.03 | 9.02 | 8.97 | . | . | . | . . | . . |
| DEC 9 8B | B. 54.9 | 7.88 | 8.20 | 8.29 | 9.25 | 9.26 | - | 10.50 | 9.04 P | $9.07 p$ | 8.97p | $\cdots$ | . | . | . | . |




 commitments for 1 -year, adjustable-rate mortgagesiARMs) at Sals offering both FRMs and ARMs with the same mumber of discount points.



3. Excludes IRA and Keogh accounts
4. Net of large denomination time deposits held by money market mutual funds and thrift institutions.

| Period | Treasury bills |  |  | Treasury coupons |  |  |  |  |  | Federal agencies redemptions (-) | Net change outright holdings total ${ }^{4}$ | Nel RPs ${ }^{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Net purchases ${ }^{2}$ | Redemptions (-) | Net change | Net purchases ${ }^{3}$ |  |  |  | Redemptions ( - ) | Net change |  |  |  |
|  |  |  |  | within <br> 1 -year | 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 |
| 1987--01 | -1,914 | 800 | -2,714 | 1.767 | 5 | 1226 | 920 | -- | -252 8.948 | 110 | $-3,076$ 14,735 | -14,254 |
| 02 | 5,823 | -- | 5,823 | 1,767 | 5,036 | 1,226 | 920 | -- | 8,948 | 37 59 | 14,735 12 | 2,121 $-1,433$ |
| 03 | 4,690 | 8,229 | -3,539 | 143 | 2,356 | 619 | 493 | 70 | 3,610 | 59 70 | - 12 | $-1,433$ 2,533 |
| Q4 | 4,334 | -- | 4,334 | 1,449 | 2,639 | 596 | 445 | 70 | 5,059 | 70 | 9,323 | 2,533 |
| 1988--01 | 319 | 2,200 | -1,881 | -- | -800 | -175 | -- | -- | -975 | 155 | -3,011 | -3,514 |
| Q2 | 423 | 2, | 423 | 1,092 | 3,661 | 1,017 | 966 | -- | 6,737 | 130 | 7,030 | 5,220 |
| 93 | 1,795 | -- | 1.795 | -- |  | - | -- | -- | -- | 77 | 1,717 | 1,393 |
| 1988--1pr. | 423 | -- | 423 | 1,092 | 3,661 | 1,017 | 966 | -- | 6,737 | 120 | 7,040 | 9,111 |
| May | -- | -- | -- |  | -- | -- | -- | -- | -- | 11 | -11 | -10,575 |
| June | 515 | -- | -- | -- | - | -- | -- | -- | -- | -- | 515 | 6,683 $-5,941$ |
| July | 515 | -- | 515 | -- | -- | -- | -- | -- | -- | -- | 515 -10 | $-5,941$ $-1,655$ |
| August | -- | -- | , -- | -- | -- | -- | -- | -- | -- | 10 | -10 1.280 | $-1,655$ 8,989 |
| Septenber | 1.280 | -- | 1,280 | -- | -- | -- | -- | -- | -- | 75 | 1,280 300 | 8, 989 $-6,150$ |
| October | 375 | -- | 375 | -- | - | -- | -- | -- | -- | 75 14 |  | $-6,150$ 3,096 |
| November | 3,599 | -- | 3,599 | -- | -- | -- | -- | -- | -- | 14 | 3,585 | 3,096 |
| Sept. 7 | 104 | -- | 104 | -- | -- | -- | -- | -- | -- | -- | 104 | -2,454 |
| 24 | 528 | -- | 528 | -- | -- | -- | - | -- | -- | -- | 528 | 5,272 14,235 |
| 21 | 648 | -- | 648 | -- | - | -- | -- | -- | -- | -- | 648 | 14,235 |
| 28 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -9,176 |
| Oct. 5 | -- | -- | -- | -- | -- | -- | -- | -- | -* | - | -- | -12,315 |
| O. 12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5 | -5 | 6, 033 |
| 19 | 310 | -- | 310 | -- | -- | $\cdots$ | -- | -- | -- | -- | 310 | 262 |
| 26 | 17 | -- | 17 | -- | - | -- | -- | -- | -- | 70 | -53 | -1,996 |
| Nov. 2 | 323 | -- | 323 | -- | -- | -- | -- | -- | -- | -- | 323 | 1,627 |
| 9 | 2,985 | -- | 2,985 | -- | -- | -- | -- | -- | -- | -- | 2,985 | -1,362 |
| 16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 | -14 | 1,341 |
| 23 | 60 | -- | 60 | -- | -- | -- | -- | "- | -- | -- | 60 | -1,160 |
| 30 | 278 | -- | 278 | -- | -- | -- | -- | -- | -- | -- | 278 | 5,629 |
| Dac. 7 | 50 | -- | 50 | 649 | 1,824 | 562 | 431 | -- | 3,468 | -- | 3,518 | -4,050 |
| Memo: LEVEL (bil. $\$)^{6}$ Dec. 7 | -- | -- | 116.8 | 25.6 | 55.3 | 12.6 | 26.9 | -- | 120.4 | -- | 244.4 | -3.8 |

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

2. Outright transactions in market and with foraign accounts.
3. Outright transactions in market and with foreign accounts, and short-lerm notes acquired in exhange for maturing bills. Excludes maturity shifts and rollovers of maturing coupon issues.
4. Reflects net change and redemptions $(-)$ of Treasury and agency securities.
5. Includes changes in RPs ( + ), matched sale-purchase transactions ( - ), and matched purchase sale transactions ( + ).
6. The levels of agency is sues were as follows: \begin{tabular}{|c|c|c|c|c|}

\hline | within |
| :---: |
| 1 year | \& $1-5$ \& $5-10$ \& over 10 \& total <br>

\hline 2.4 \& 3.4 \& 1.1 \& .2 \& 7.1 <br>
\hline
\end{tabular}


[^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. This total included $\$ 145$ million resulting from a computer problem at a commercial bank.
