Monetary Policy and Open Market Operations in 1981

The Federal Reserve System pursued a policy of monetary restraint in 1981 as part of a sustained effort to break the inflationary momentum that had built up over the years. Economic activity was expanding rapidly as the year began, but the economy then leveled off in the second and third quarters before declining in the closing months. Meantime there were encouraging reductions in the measured rates of price increase and significant progress in blunting inflationary expectations. Signs of slower labor cost increases offered hope of further gains on the price front in 1982.

The Federal Open Market Committee's (FOMC) policy of restraint involved a slowing in the pace of expansion planned for its money and credit objectives. For M-1B, adjusted for shifts into negotiable order of withdrawal (NOW) accounts, the FOMC sought growth of 3½ to 6 percent from the fourth quarter of 1980 to the fourth quarter of 1981, ½ percentage point below the range set for M-1B for 1980.[1] Since M-1B had come out above the upper bound in 1980, the new range implied a greater deceleration than the ½ percentage point change in the range. For M-2, M-3, and bank credit, the growth ranges were 6 to 9 percent, 6½ to 9½ percent, and 6 to 9 percent, respectively, unchanged from those set for 1980.[2] As with M-1B, the ranges for M-2 and M-3 implied a deceleration from actual 1980 growth rates since both measures had exceeded their ranges that year. Furthermore, the growing importance of money market mutual funds (MMMFs) was expected to add to the growth of the broader measures, which meant that similar growth rates would have more restrictive implications than previously.

Adapted from a report submitted to the Federal Open Market Committee by Peter D Sternlight, Senior Vice President of the Bank and Manager for Domestic Operations of the System Open Market Account Fred J Levin, Manager, Securities Department, and Ann-Marie Meulendyke, Research Officer and Senior Economist, Open Market Operations Function, were primarily responsible for preparation of this report, with the guidance of Paul Meek, Monetary Adviser. Connie Raffaele, Robert Van Wicklen, and Catherine S Ziehm, members of the Securities Analysis Division staff, participated extensively in preparing and checking information contained in the report

[1] The shift adjustment for M-1B was an estimate of the extent to which NOW account deposit growth in excess of the previous trend came from sources other than demand deposits and, hence, represented an increase in M-1B that would not have occurred in the absence of legalization of nationwide NOW accounts The estimates were made from survey data The adjustments assumed 77 5 percent of NOW accounts came from demand deposits in January and 72 5 percent in the remaining months of 1981 It was estimated that the remainder of the transferred funds came from M-2 components, so that no shift adjustment was needed for that measure

[2] The FOMC also established a range of 3 to 5½ percent for M-1A (shift adjusted) at its February meeting However, by midyear, the bulk of the initial transfers of funds into NOW accounts appeared to have taken place, and the measure was given no further emphasis in policy deliberations For the year, it expanded 1½ percent

Chart 1

Targeted and Actual Growth of M-1B

Adjusted for NOW account shifts

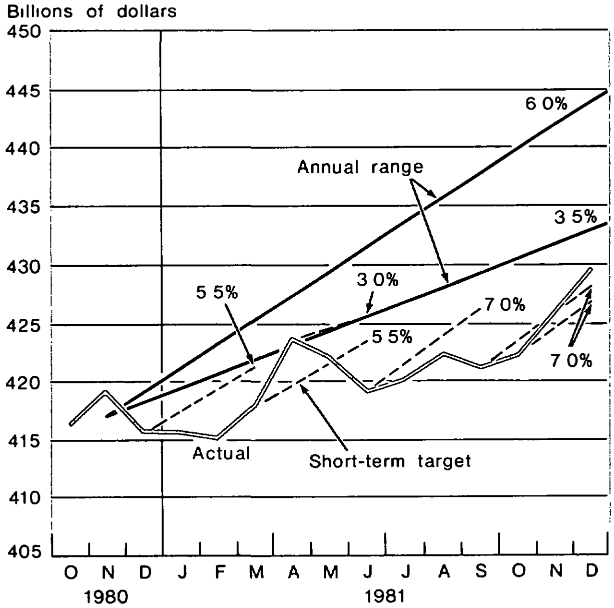


Chart 2

Targeted and Actual Growth of M-2

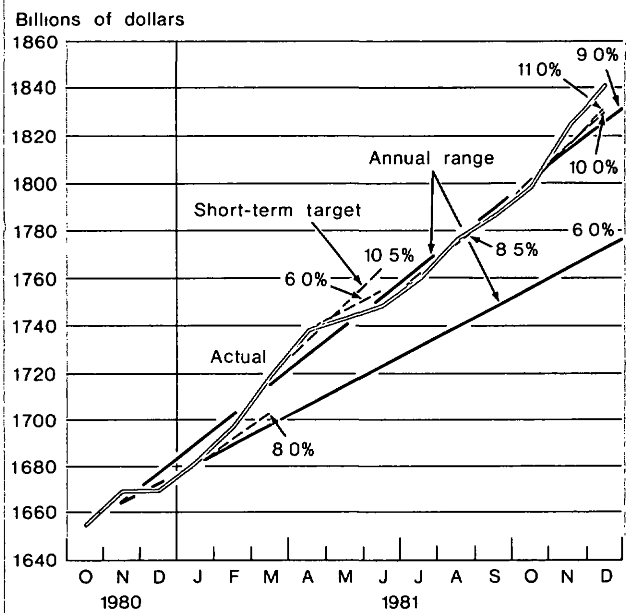


Chart 3

Targeted and Actual Growth of M-3

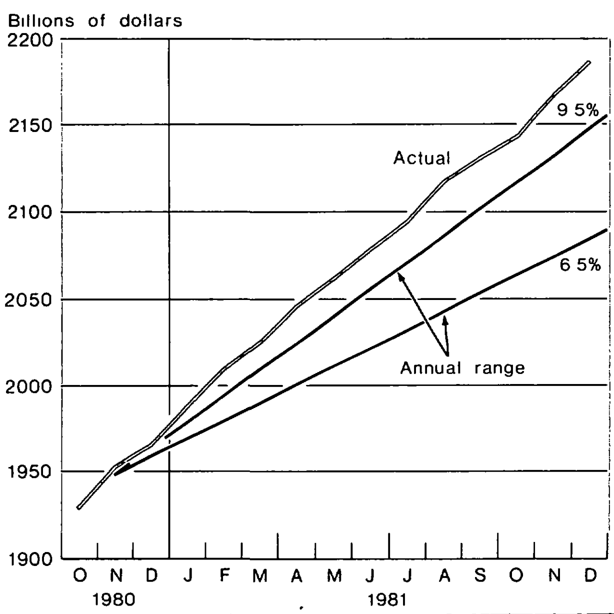
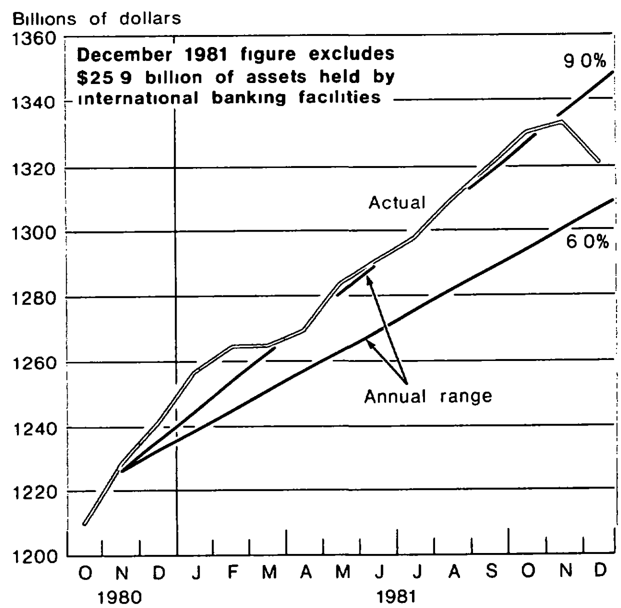


Chart 4

Bank Credit: Levels and Associated Range



It turned out that the various monetary aggregates in 1981 diverged more than had been expected. The narrow measures were weak, compared both with their performance of other recent years and with the FOMC's objectives. The broader measures meantime grew about as much as in 1980, or even more, and they tended to be high relative to the objectives. M-2 hugged the upper bound of the Committee's four-quarter range and slightly exceeded it for the year. M-3 was above the upper boundary of its four-quarter range throughout the year. Bank credit generally fluctuated around the upper bound of its associated range, ending slightly within the range. Charts 1 to 4 illustrate the behavior of the various measures relative to their ranges.[3]

Faced with such different signals from the various monetary measures, the Committee gave weight to both M-1B (shift adjusted) and M-2. Operationally, this meant that it was often willing to accept some of the shortfall in M-1B when M-2 was around the upper bound of its range. The 7½ percentage point spread between their growth rates was unprecedented for a period of cyclically high interest rates. Chiefly responsible appeared to be the public's alacrity in economizing on low-return deposits in favor of those offering market-related interest rates All the components of M-1B are subject to some type of interest rate ceiling, while many elements in M-2 and M-3 provide market-related rates These latter components grew very rapidly during the year, continuing a trend of recent years. In some cases, they drew funds that might otherwise have been invested directly in market instruments. In its midyear review of the long-run targets, the Committee recognized these developments, indicating that it would accept M-1B around the bottom of its range and M-2 around the top of its range for the year. By the year-end, the divergence was even greater than anticipated at midyear, with M-1B ending below its range and M-2 slightly above its range.

The FOMC continued to pursue the reserve-oriented approach to controlling money growth begun in October 1979. A review of the procedure completed early in the year concluded that quicker changes in the path for nonborrowed reserves and the discount rate were probably desirable to speed up the response to large deviations of total reserves and money from path. This approach was followed in April when money expanded rapidly. The Federal Reserve lowered the nonborrowed reserve path and raised the discount rate and the surcharge During much of the rest of the year, the FOMC gave weight to the strength of M-2 as well as to the weakness in M-1B. In the face of such divergent signals, path adjustments of the above-noted kind were avoided. It was not until early November, in the context of a visibly slowing economy and continued apparent weakness in M-1B, that a second adjustment was made to the nonborrowed reserve path specifically to speed a return of total reserves to path. Around this time, the surcharge on the discount rate was also reduced and then eliminated and the discount rate lowered.

The maintenance of a restrictive monetary policy in the face of embedded inflationary expectations meant that interest rates tended to be high during much of the year. Rates were also volatile. At times, market participants concentrated on factors tending to boost rates, including estimates of large and prolonged Federal deficits and substantial growth of broad money aggregates. At other times, participants were heartened by the slow growth of the narrow monetary measures, the weakening in economic activity, and signs of slowing inflation. Interest rate volatility itself probably also contributed to somewhat higher rates than might otherwise have prevailed, as lenders and dealers sought additional protection against the greater risks

The capital markets continued to function reasonably well during the year despite adverse conditions. A large volume of Government, corporate, and municipal debt issues was sold For much of the year, short-term rates were higher than long-term rates, as is typical in periods of monetary restraint. Potential long-term investors were reluctant to extend the maturities of their portfolios unless substantial rate declines appeared to be a near-term prospect Rallies tended to be short-lived.

In these circumstances, many corporate borrowers chose to sell intermediate- rather than long-term issues, as the risks seemed less and the buyers more receptive Deep discount securities offering low, or even zero, coupons also came into vogue as investors sought to lock up high yields for the life of the issue. By the year-end, with the economy having weakened, short-term rates had come down below long-term rates and were somewhat below those of a year earlier. Long-term rates were well above the levels where

[3] The figures in this report are based on the seasonal and benchmark data that applied during 1981 and the definition of M-2 in effect at the time In February 1982, M-2 was redefined to include retail repurchase agreements (RPs) and to exclude institutional MMMFs Benchmark and seasonal revisions were also made Net revisions to the growth rates of the various monetary aggregates were very small The new data show that, for the four quarters of 1981, M-1B (shift adjusted) grew 2 3 percent M-1B not shift adjusted—now referred to as M-1—grew 5 percent over the four quarters of 1981, compared with 4 9 percent on the unrevised basis M-2 expanded 9 5 percent, and M-3 grew 11 4 percent after revision Changes in the quarterly patterns also were small Table 1 displays growth rates before and after the revisions

they had started the year, although generally below the September-October peaks. Long-term municipal rates, though, reached record levels late in the year.

The Economy and Financial Market Developments

The economy

The pace of economic activity slackened as 1981 progressed. At the start of the year, the economy was expanding rapidly, extending the recovery begun in the second half of 1980. Real gross national product (GNP) in the first quarter grew strongly at an 8.6 percent seasonally adjusted annual rate. The middle two quarters were essentially flat—a slight decline in the second quarter and a slight rise in the third. The economy weakened notably in the final quarter, with real GNP falling at a 4.5 percent rate. For much of the year, many observers felt that the economy was surprisingly resilient, given the extent of monetary restraint and the depressed levels of the automobile and housing sectors. Still, the drop, when it occurred, was steeper than many had expected, particularly as it came soon after the enactment of large tax cuts The unemployment rate was virtually steady through midsummer but then climbed in the final months.

The inflation rate, as measured by the various indexes, slowed irregularly over the year. The greatest improvement was in wholesale prices. The producer price index rose at a 12 percent annual rate through April and at a 4.5 percent average over the balance of the year. For the year the increase was 7.1 percent, compared with 11.9 percent during 1980. The rise in consumer prices also slowed between the first and second quarters but speeded up again in the third quarter before moderating to a 5.2 percent annual rate in the fourth quarter. For the year the consumer price index rose 8.9 percent, compared with 12.4 percent in 1980. Some of the slowing in both wholesale and consumer price advances reflected developments in the volatile energy and agricultural sectors, but there also was deceleration in other components. The implicit GNP price deflator, which is less volatile, rose 8.9 percent from the fourth quarter of 1980 to the fourth quarter of 1981, modestly below the 9.9 percent increase a year previous.

The financial markets

Interest rates during the year were volatile and frequently higher than seemed consistent with a weakening pattern of economic activity and some slowing of inflation (Chart 5). After peaking in May, short-term rates fluctuated in a high range and then began to fall in September. They declined sharply in the fourth quarter, reflecting the weak economy, slowing infla-

Chart 5

Selected Interest Rates

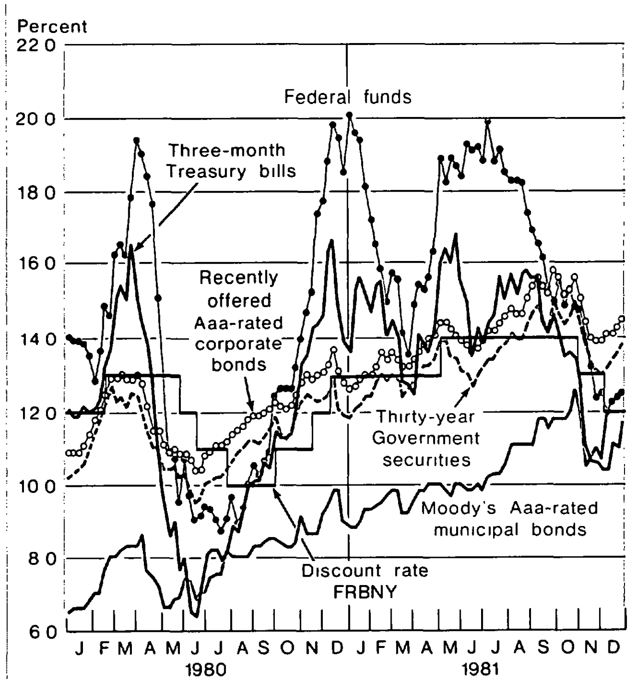
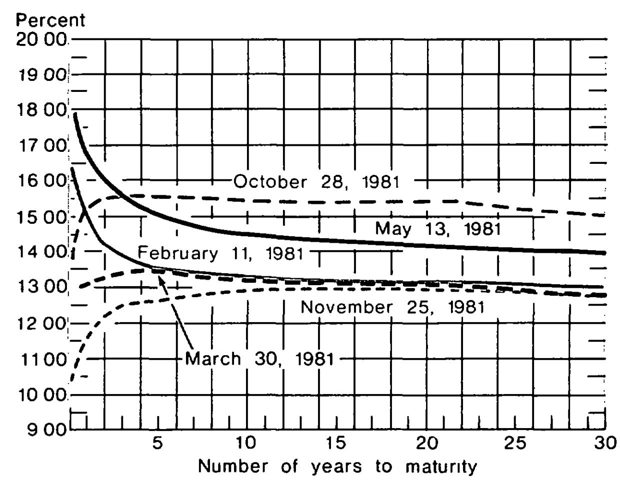


Chart 6

Yield Curves for Selected U.S. Government Securities



tion, and the Federal Reserve's provision of reserves in the effort to meet money growth objectives. Long-term rates, on the other hand, peaked somewhat later and remained above the late-1980 levels at the year-end. Long-term rates were held up by concerns about ongoing Treasury deficits, as well as uncertainty about whether there would be more permanent gains in the battle against inflation than after earlier episodes of restraint during the last decade and a half.

During the year, investor expectations responded to changing evidence concerning monetary growth, the state of the economy, the size of prospective Federal deficits, and the outlook for inflation. During the first quarter, slow growth of M-1B led to a marked decline in short-term interest rates, as the Reserve System supplied nonborrowed reserves while the demand for total reserves fell. Long-term rates changed little as the economy remained strong, so that the yield curve on Treasury issues, which had been steeply inverse through mid-February, became virtually flat by the end of March (Chart 6). In early April, short-term rates began to rise sharply, first as market participants discovered that the FOMC had not lowered the Federal funds rate range even though funds had traded below the lower end of its range for a couple of weeks. More importantly, the pickup in M-1B growth in late March and April against the background of a strong economy was troubling, while the System's rapid response to the overshoot generated strong upward pressure on the Federal funds rate There was also growing concern that large budget deficits would result from the President's economic program, and the steeply inverted yield curve that developed by mid-May stood significantly above that of six weeks earlier (Chart 6).

Rates in all sectors stayed high through the summer. Long-term rates rose more than short-term rates, as concerns about Treasury deficits and prospective supplies of corporate debt weighed heavily. By August, money market conditions began to ease in response to the persistent weakness in M-1B. With long-term rates still holding up, or rising, the yield curve developed a humpbacked shape. Continued declines in short rates relative to long rates and the mildly accommodative monetary policy stance produced, by the end of October, a positively sloped yield curve for the nearby years. A major rally was touched off at that time by cumulating evidence of economic weakness. This lowered the yield curve and steepened its slope. The rally came to a halt in late November, with short-term rates at their lows for the year and long-term rates well below their September-October highs. Rates backed up again through the year-end. A sense of caution returned as budget deficits and strengthening money growth came into focus.

Debt issuance

With a substantial deficit to be financed and a large volume of maturing issues to be rolled over, the Treasury was a major borrower during the year. Marketable debt held outside the Federal Reserve and Government accounts rose a net $88 4 billion in 1981, similar to the $90 billion increase the year before. (A net pay down of $10.3 billion of publicly held nonmarketable issues, including $2 4 billion denominated in foreign currencies, contributed to the cash need) The Treasury raised a net of $23.2 billion from the public through bills and $65.2 billion through coupon issues. In addition, it replaced $68 billion of maturing coupon issues and continued rolling over the $172 billion of publicly held bills that was outstanding at the end of 1980

The Treasury maintained its regular cycles of Treasury bill and coupon sales during the year. In view of the large cash needs, it added a quarterly seven-year note cycle beginning with an auction on December 30, 1980. It also substituted a twenty-year bond for a fifteen-year bond at the start of 1981. Some consideration was given to the possibility of eliminating the offering of long-term bonds, on the grounds that the Treasury should not make a commitment to pay high interest rates for an extended period when the Administration was resolved to end inflation. However, given the huge financing needs and the desirability of maintaining a balanced debt structure, the Treasury decided to continue to sell bonds on a regular basis. With this ongoing commitment to debt extension, the average maturity of the outstanding debt was lengthened over the year by two months to fifty months.

The market for issues of Federally sponsored agencies was subject to considerable strain during the year. During the summer, investors became wary of the issues of the Federal National Mortgage Association (FNMA) and to a lesser degree the Federal Home Loan Banks (FHLBs). The prevailing high interest rates caused the costs of FNMA and the thrift institutions that rely on FHLBs to rise well above the yields on their mortgage portfolios. Market participants became concerned by June about their sustained viability, and interest rate spreads between the debt of these agencies and the Treasury widened significantly. The spreads increased through August, especially for FNMA issues, for which the spreads widened to well over a full percentage point compared with a more normal ¼ to ½ percentage point. Later in the year, as short-term yields declined, spreads fell back toward more usual levels.

Net new cash raised by various Federal agencies during the year amounted to $33.3 billion, compared with the $24.9 billion raised the year before. (These figures do not include Government National Mortgage Association pass-through certificates.) Most borrowing was by FNMA, FHLBs, and the farm credit agencies, with FHLBs accounting for the stepped-up issuance in 1981. Debt was issued in maturities ranging from six months to ten years.

Corporate bond issuance was again heavy in 1981, with a total of $37 billion of public offerings, although this was below the record level of almost $42 billion in 1980. Many corporations faced weakening liquidity positions and were eager to extend the maturities of their outstanding debt. However, they tended to wait for declines in bond yields to rush their offerings to market. A large portion of the year's debt issuance took place during rallies in the spring and toward the year-end.

Given interest rate volatility and the high degree of uncertainty about the future, investors tended to favor intermediate-term issues increasingly in 1981. Indeed, according to an estimate by Salomon Brothers, about half of the nonconvertible debt issuance by domestic corporations in 1981 was in intermediate-term issues, compared with only about one quarter in the late 1970s Another major change was the active issuance of debt with coupons well below current rates, offered at an initial discount. Some investors found these issues attractive because they offer certain advantages should interest rates fall. They are less likely to be called early and a part of the return is, in effect, already invested at the high rates prevailing when the bonds were issued. Issuers found their costs lower on such offerings and also gained a tax advantage since the accrued interest obligations can be treated as an expense before the actual payment must be made.

Sales of tax-exempt bonds amounted to $46 billion in 1981, about 70 percent of which were revenue issues In 1980, total borrowing had been $47 billion, with 65 percent consisting of revenue bonds. (These figures do not include borrowings with maturities of one year or less.) During the latter part of the year, the yields on tax-exempt issues had to rise to new highs to attract investors, in part because the changes in the tax laws reduced the importance of tax-free income for the traditional purchasers of these issues. Also, there was a year-end surge in offerings by state housing authorities to fund relatively low-rate mortgages. The tax-exempt sector shared in the early stages of the November rally but reversed course before the taxable sector, with rates in some cases ending at their highs for the year.

Monetary and Credit Aggregates and Monetary Policy

Behavior of the aggregates

Growth rates of the narrow and broad aggregates diverged to an unusual extent in 1981. The narrow measures generally were weaker than intended, while the broader aggregates expanded at a more rapid pace than was sought by the FOMC. In responding to developments over the year, efforts were made to interpret this divergence, with weight being given to both M-1B (shift adjusted) and M-2.

M-1B (shift adjusted) grew just 2.1 percent between the fourth quarter of 1980 and the fourth quarter of 1981. (Figures do not allow for the benchmark and seasonal revisions made in February 1982. The revised figures are given in Table 1) This was well below the Committee's target range of 3½ to 6 percent. Except when growth accelerated in April, M-1B (shift adjusted) was below the range through the year (Chart 1) The perceived extent of the weakness depends somewhat on the choice of dates. Measured from December 1980 to December 1981, it grew 3.3 percent, and inclusion of January 1982 would bring M-1B within an extension of the 1981 "growth cone". Measures of volatility of M-1B also depend on one's vantage point, although the volatility was less than in 1980 While quarterly average growth rates in 1981 showed alternating strength and weakness, growth rates computed from the last month of the previous quarter to the last month of the new quarter were reasonably steady for the first three quarters, then more rapid in the final quarter (Table 1). In any event, there seems little reason to believe that short-run variations in money growth rates—say from one quarter to the next—are significant for the performance of the economy so long as they do not cumulate in one direction or the other for a long period.

M-1B itself showed considerably more growth than the shift-adjusted measure in the early part of the year, as individuals opened NOW accounts with funds transferred from savings and other accounts as well as from demand accounts. Initially it was expected that there would be about a 2 to 3 percentage point difference in the growth rates over the year as a whole. By December 1981, the shift adjustment cumulated to $12.4 billion, which meant a 3 percentage point difference in the growth rates. Much of the shift took place early in the year, causing the adjustment factor to reach $9.8 billion by April. The differences then moderated though they widened somewhat in the final two months. Demand deposits also dropped dramatically in January and were decidedly weaker than other transactions accounts through April. Thereafter the differences generally were modest.

M-2 generally was close to or slightly above the upper bound of its 6 to 9 percent range during 1981 and increased 9.5 percent over the four quarters (Chart 2), about the same rate as the year before. It accelerated rapidly in the three months ended in April, at a 13.5 percent pace, moving above its target range by March. A sharp deceleration in May and June brought it back within its range. M-2 then fluctuated around the upper bound of its range for some months before a two-month spurt at the close of the year once again took it slightly above its range.

The non-M-1B components of M-2, as a group, expanded rapidly on average although their accelerations and decelerations showed a similar pattern to M-1B. The individual nontransactions components showed a wide range of growth rates. MMMF shares grew extremely rapidly through most of the year, increasing from $75.8 billion in December 1980 to $184.5 billion in December 1981. Six-month money market certificates (MMCs) also expanded rapidly through August but declined thereafter, posting a net increase of 9 percent. The 2½-year small savers certificates grew fairly rapidly early in the year, slowed when the rate cap kept yields well out of line during the spring and early summer, then accelerated dramatically when the interest rate cap was removed at the start of August. Overall they increased about 88 percent. On the other hand, overnight RPs (issued by commercial banks) and Eurodollars (issued by Caribbean branches of member banks), which served as short-term investment media for excess corporate cash, changed little over the year. Savings deposits and traditional types of small time deposits subject to below-market interest rate ceilings declined over the year.

M-3 expanded 11.2 percent from the fourth quarter of 1980 through the fourth quarter of 1981 (Chart 3), well above the upper bound of the 6½ to 9½ percent target range. It moved above that range in January and stayed above throughout the year, even though there was a modest deceleration after April. Large time deposits expanded at a 21 percent average rate over the four quarters. Sharp variations in the rates of change of large time deposits appeared to be related to the behavior of bank credit (Chart 4). When that measure decelerated from January to April, large time deposits decelerated as well. When bank credit

Table 1

Monetary Aggregates in 1981

Seasonally adjusted annual rates

Period	M-1B* Unrevised	M-1B* Revised	M-2 Unrevised	M-2 Revised	M-3 Unrevised	M-3 Revised
Growth from previous quarter:						
Quarter 1	−0.9	−0.9	8.2	7.5	12.4	11.2
Quarter 2	5.2	5.8	10.6	12.0	10.6	12.2
Quarter 3	−0.4	−0.4	7.2	8.3	10.3	11.2
Quarter 4	4.6	4.7	10.6	8.8	9.8	9.2
Growth from three months earlier.						
March	2.1	2.2	11.7	10.8	12.6	12.4
June	1.1	1.9	7.2	9.3	10.3	11.5
September	1.9	1.8	8.6	8.6	10.5	10.8
December	8.3	7.6	12.2	10.0	10.0	9.3
Growth from December 1980 to December 1981	3.3	3.4	10.3	10.0	11.3	11.4
Growth from four quarters earlier·						
1981-Quarter 4	2.1	2.3	9.5	9.5	11.2	11.4
1980-Quarter 4	7.3	7.3	9.6	9.2	10.2	10.0
1979-Quarter 4	7.5	7.4	8.8	8.4	9.8	9.8
1978-Quarter 4	8.2	8.2	8.3	8.2	11.2	11.3
1977-Quarter 4	8.2	8.2	11.5	11.5	12.6	12.5
1976-Quarter 4	6.2	6.2	13.7	13.6	11.4	11.3

* Data for 1981 are adjusted for the estimated impact of shifts into NOW accounts

growth picked up again between May and October, large time deposits resumed a relatively rapid pace of growth. When bank credit growth slackened in November, large time deposits declined.

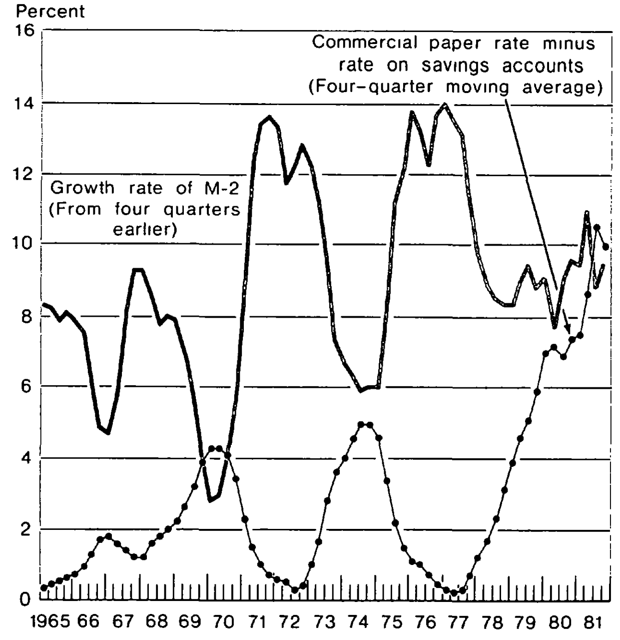
The divergence in the average rates of expansion of the narrow and broad aggregates in 1981 was unprecedented for a period of cyclically high interest rates. The growth of M-1B, adjusted, slowed markedly for the year as a whole, as businesses and consumers economized on transactions balances with a low rate of return. M-2 growth, however, continued at a rapid clip, reflecting the growth of the components that offered market-related interest rates.[4] Through 1978, in contrast, M-2 had typically slowed more than M-1 during periods of rising rates because interest rate ceilings caused a shift to market instruments whenever market rates were above the ceilings (Chart 7). In those days, M-2 also accelerated earlier and more sharply when interest rates fell below the ceilings.

Sensitivity of M-2 to interest rate moves began to change during 1978 As the economy entered an extended period during which interest rate ceilings were binding, the incentives to find substitutes strengthened, and regulatory changes permitted the market-related components to develop The importance of instruments that paid market rates grew dramatically. By the final quarter of 1981, about 45 percent of M-2 consisted of instruments that could pay market rates, compared with 2 percent at the start of 1978. Some of these funds came out of the M-2 components subject to ceilings, leaving total M-2 unchanged But, in other cases, funds were attracted that were previously invested, or would have been invested, directly in market instruments rather than being intermediated through banks, thrift institutions, and MMMFs.

Some of the shift into market-rate-based instruments in M-2 reflected a transitional adjustment in response to the existence of new options. This probably raised the average growth rate for M-2 relative to M-1B by more than would be expected to occur during future interest rate cycles. The transition still appears to be in progress. The changes in M-2 composition suggest that M-2 growth will no longer be so severely constrained by rising interest rates as that of M-1. Indeed, it seems possible that M-2 market-related components could attract funds from longer term instruments whenever short-term rates rise above long-term rates. Conversely, funds might move out of M-2 when the yield curve shifts to a positive slope. At the same time, savings and other low-interest components of M-2 could behave in an opposite fashion, and the net result on M-2 as a whole is uncertain. In 1981, the conflicting forces served to maintain growth that was well above the rates recorded in earlier periods of high interest rates but well below the peak growth rates associated with reintermediation in times of declining rates.

Chart 7

Sensitivity of M-2 Growth to Short-term Interest Rates



Implementation

During 1981 the FOMC continued to follow the supply-oriented procedures adopted in October 1979. As before, the Committee provided, on occasion, for speeding up the adjustment process through path or discount rate changes when the demand for total reserves departed significantly from path. Given the frequent divergence between M-1B and M-2, the Committee gave somewhat greater explicit attention to M-2 than in the previous year. (In the remaining sections, all reference will be to the shift-adjusted version of M-1B which formed the basis of policy during 1981.)

[4] "Market-related rates" means either completely unrestricted rates, such as on overnight RPs and Eurodollars and on MMMF shares, or rates that are tied to a market rate such as six-month MMCs

MMCs were first permitted in June 1978 The 2½-year small savers certificates were introduced at the start of 1980 From March 1980 until August 1981, however, they were subject to a rate cap which often was below market rates All savers certificates paying a market-related tax-exempt rate were introduced in October 1981

The Committee reaffirmed its support for making adjustments to the nonborrowed reserve path on occasions when total reserves and money were far above or below their objectives. Targeting nonborrowed reserves means that intended discount window borrowing will adjust automatically to satisfy the difference between total reserve demand and nonborrowed reserve supply. Studies of the first year's experience with the new procedures suggested that, to speed the response when a large discrepancy developed, adjustments should probably be made to the nonborrowed reserve path. This in fact had been done on six occasions during 1980.

In practice, however, supplemental adjustments were made only during two reserve periods in 1981, as most episodes of reserve divergence from path involved shortfalls of M-1B that coincided with overshoots of M-2. In a mechanical sense, the reserve paths by themselves give much more weight to M-1B than to M-2. This arises because most of the deposits in M-1B are subject to relatively high reserve requirement ratios, while those in M-2 are subject either to low reserve requirements or to none at all. When total reserves and M-1B were well below path but M-2 was strong, the path was not lowered This had the effect of giving more weight to M-2 than would have occurred automatically. Downward path adjustments were made in April when both measures were above path, and an upward adjustment was made in early November when M-1B was far below path and M-2 had slowed.

Although explicit changes in the nonborrowed reserve path aimed at speeding the return of total reserves to their track were limited in number, there were frequent path adjustments of a more technical nature. For the most part, they were made to both the total and nonborrowed reserve paths to incorporate new information about reserve multipliers. In addition, there were instances where borrowing had been quite different from anticipated levels early in the intermeeting period, and path adjustments were made to avert abrupt changes in conditions of reserve availability deemed inconsistent with the thrust of policy.

The FOMC continued to set broad bands around the Federal funds trading range. These bands served to trigger consultation when funds traded persistently outside these ranges. This occurred during the early part of the year and led to Committee discussions In the latter part of February, M-1B had weakened sufficiently so that total reserves were well below path and the funds rate was pushing below the 15 percent lower bound. In a telephone consultation, the Committee indicated willingness to see funds trade below the range (although it was also inclined to tolerate some shortfall in reserves, given the strength in the broader aggregates). No formal change was made in the funds rate range. During April, money growth was exceptionally strong, and the Federal funds rate was allowed to trade above the range during the latter part of the April-May intermeeting period. A Committee telephone consultation confirmed that and other responses to the bulge in money. No further conflicts arose between the reserve objectives and the Federal funds rate bands over the balance of the year.

Estimating the impact on reserves of so-called operating factors continued to be a challenge. In 1981, the average absolute projection miss was about $600 million from the first day of the statement week. (The standard deviation was $735 million.) Even by the final day of the week the average absolute error was $120 million (and the standard deviation was $165 million). Large errors are most likely to occur in winter, when weather has a greater impact on check clearing. Weeks containing partial holidays are often troublesome as adjustments between open and closed banks need to be worked out.

Revisions to reserve estimates from the start of the week were smaller on average in 1981 than in the previous year when the absolute average had been around $750 million The gain came primarily as a result of the reduction of both the mean and variance of float. The reorganization of the interdistrict check transportation system in September 1980 played a key role in these changes.

With considerable uncertainty and variability remaining in the behavior of the operating factors, the Trading Desk continued to employ RPs and matched sale-purchase agreements to affect reserves on a temporary basis. Helped by the lower variance in float, the volume of temporary transactions arranged in the market did decrease to $269 billion in 1981, compared with $370 billion the year before.[5] The decline might have been greater had it not been for the need to offset the reserve absorption from the transfer of funds to the Federal Reserve in early July associated with the special Iranian accounts. Since it was not known when the funds would be paid out, it was not practical to use outright securities purchases as an offset. The funds finally were transferred in mid-August, returning the reserves to the banking system.

Outright transactions during the year amounted to $25.9 billion. Of these, $11.4 billion was arranged in the market, $12.6 billion with foreign accounts, and the remainder consisted of redemptions of maturing issues. The net increase in the portfolio was $8 5 billion to a

[5] These figures include customer-related RPs as well as RPs and matched sale-purchase agreements on behalf of the Reserve System

level of $139.8 billion at the year-end. As usual, most of the increase supported the rise in currency outstanding. Nonborrowed reserves increased modestly, while foreign currency holdings declined somewhat.

Conducting Open Market Operations

January through March

A pattern that was to characterize much of the year emerged near its start, as the narrow aggregates fell below the Committee's path while M-2 was in line with its path or somewhat above. As the demand for reserves weakened along with the narrow money measures, the nonborrowed reserve-targeting procedure led to declines in borrowing and a fairly steep drop in short-term interest rates. The strength in M-2 had little offsetting impact on reserve demands, since much of it was concentrated in MMMF shares with zero reserve requirements.

About midway through the quarter, after the Federal funds rates had declined to about 15 percent from the 19 to 20 percent range prevailing in December, the Committee decided to accept some shortfall in the growth of the narrow aggregates in view of the strength in the broad aggregates The nonborrowed reserve path was lowered temporarily relative to the total reserve path to maintain borrowing pressure on banks and thus reduce the likelihood that short-term rates would drop precipitously. Subsequently, the narrow aggregates showed additional weakness for a time, and the funds rate eased a bit further before firming at the period's close.

At the December 1980 meeting, the Committee had specified growth objectives for the December-March period at annual rates consistent with the midpoints of the tentative annual ranges for growth for all of 1981 adopted the previous July. These ranges centered on 4¼ percent for M-1A, 4¾ percent for M-1B, and 7 percent for M-2, after allowing for the impact of the introduction of nationwide NOW accounts on December 31 (Table 2). In light of the rapid advance in the aggregates since the summer of 1980, the Committee was willing to accept some shortfall from these rates if that developed in the context of reduced pressures in the money market. The Committee had agreed upon an initial level for adjustment and seasonal borrowing of $1.5 billion to be used to construct the nonborrowed reserve path. The Federal funds rate range had been placed at 15 to 20 percent, with the end points serving as potential triggers for a Committee consultation if funds were to trade persistently outside the range.

Operations early in the year were complicated by the difficulties in measuring the impact of NOW accounts on money growth, the effects of seasonal pressures in the money market, and the transfer of funds related to the settlement of the hostage crisis with Iran. Following the December FOMC meeting, the staff had built reserve paths for the intermeeting period, using its December projections for the monetary aggregates at the time and the growth rates for January consistent with the Committee's three-month objectives. The aggregates in December turned out well below path, with the narrow aggregates actually declining sharply and M-2 showing only modest growth. January estimates were erratic from week to week and thus highly uncertain. The staff had to gauge the proportion of funds that were flowing into the newly authorized NOW accounts from demand deposits versus other interest-bearing assets in order to compute the adjusted measures for M-1A and M-1B. These flows proved much stronger than had been envisioned, so that even slight revisions to the estimated proportions from one week to the next had large impacts on their estimated growth. Overall, incoming data suggested some pickup in money growth in January, but the levels remained below those built into the path.

With the narrow aggregates weak and the Desk supplying nonborrowed reserves in line with the path, the implied weekly borrowing levels consistent with the path gradually moved downward in December and averaged about $1.1 billion in January. Actual discount window borrowing, however, did not begin to recede until after the turn of the year. Even then, it fluctuated widely from week to week and remained generally above expectations (Chart 8). The average weekly effective rate on Federal funds reached a record of 20.06 percent in the week of January 7, and trading remained in the 19 to 20 percent area over the next two weeks. Late in December and early in January, banks' demands for excess reserves were persistently higher than allowed for in the path so that nonborrowed reserves tended to be scarce. Heavy dealer financing demands and the lingering effects of corporate and bank year-end positioning activity tended to keep the funds rate from declining appreciably until late in the month.

Meanwhile, in the week of January 21, the Desk faced special problems relating to the transfers of Iranian funds. As the week began, negotiations between the United States and Iran to resolve the hostage situation were proceeding actively. It was clear that resolution would entail the unfreezing of Iranian assets held at commercial banks and the New York Reserve Bank, but the timing of the transfer and its effect on bank reserve availability were in question. On Friday of that week (and again on Monday), the Desk provided reserves by arranging customer RPs in

Table 2

Specifications from Directives of the Federal Open Market Committee and Related Information

Date of meeting	Specified short-term annualized rates of growth for period mentioned (percent) M-1B*	M-2	Range for Federal funds rate (percent)	Associated initial assumption for borrowed reserves (millions of dollars)	Basic discount rate and surcharge on day of meeting and subsequent changes (percent)	Notes
12/19/80	December to March 4¾	7	15-20	1,500	13 + 3 surcharge	The short-run specifications also included an objective of 4¼ percent growth for M-1A (adjusted for NOW account shifts) The Committee indicated some shortfall in growth would be acceptable if that developed in the context of reduced pressures in the money market
2/3/81.... .	December to March 5-6	8	15-20	1,300	13 + 3 surcharge	The short-run specifications also included an objective of 5 to 6 percent for growth of M-1A (adjusted for NOW account shifts) In a telephone conference on February 24, the FOMC modified the directive to accept some shortfall in growth of M-1A and M-1B from the rates specified at the February meeting
3/31/81. ...	March to June 5½ (or somewhat less)	10½	13-18	1,150	13 + 3 surcharge 14 + 4 surcharge on 5/5	For simplification, the Committee decided to focus on M-1B as the measure of transactions balances and to omit any reference to M-1A in its statement of monetary objectives for the short run In a telephone conference on May 6, the FOMC agreed that the reserve paths should continue to be set on the basis of the short-run money growth objectives set at the March meeting, recognizing that the Federal funds rate might continue to exceed the upper end of the range indicated for consultation at that meeting
5/18/81	April to June 3 (or lower)	6	16-22	2,100	14 + 4 surcharge	

Table 2 *(continued)*

Specifications from Directives of the Federal Open Market Committee and Related Information

Date of meeting	Specified short-term annualized rates of growth for period mentioned (percent) M-1B*	M-2	Range for Federal funds rate (percent)	Associated initial assumption for borrowed reserves (millions of dollars)	Basic discount rate and surcharge on day of meeting and subsequent changes (percent)	Notes
7/7/81	June to September 7	see notes	15-21	1,500	14 + 4 surcharge	The 7 percent objective for M-1B growth was set provided that growth of M-2 remained around the upper limit of, or moved within, its range for the year
8/18/81	June to September 7	see notes	15-21	1,400	14 + 4 surcharge 14 + 3 surcharge on 9/22	The short-run specifications for M-1B was again made provisional on M-2 growth remaining around the upper limit of, or moving within, its range for the year
10/6/81	September to December 7	10 (or slightly higher)	12-17	850	14 + 3 surcharge 14 + 2 surcharge on 10/13 13 +2 surcharge on 11/2 13 on 11/17	In setting the objective for growth of M-2, the Committee recognized that its behavior would be affected by recent regulatory and legislative changes, particularly the public's response to the availability of the all savers certificate
11/18/81	October to December 7	11	11-15	400	13 12 on 12/4	
12/22/81	November to March 4-5 (M-1)	9-10	10-14	300	12	The transactions measure of money was redesignated as M-1 with the same coverage as M-1B The target no longer reflected the shift adjustment for conversion of outstanding interest-bearing assets into NOW accounts

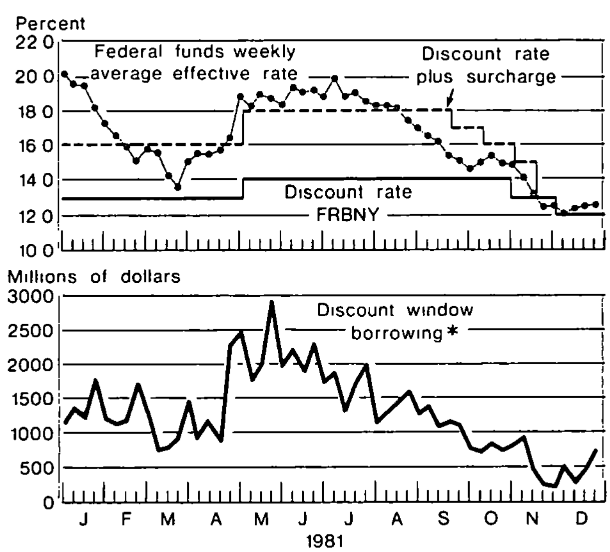
* Abstracting from the effects of deposit shifts connected with the introduction of NOW accounts on a nationwide basis on December 31, 1980

the market when the funds rate was firm, even though estimates suggested a surplus of nonborrowed reserve supplies relative to the objective for the week. (These estimates assumed that all funds transferred from banks to Iran would flow back to the banking system the same day, which was not certain.) Later on Friday, after receiving instructions to sell Iran's $1.1 billion of Treasury bill holdings, the Desk purchased these for the System Account. The proceeds, along with the $1.4 billion of Iran's balances held at the New York Reserve Bank, were invested by arranging matched sale-purchase transactions with the System Account. The reserve effects of these two operations were offsetting.

The funds transfers were supposed to take place over the weekend, but it was not until the wee hours of Tuesday that commercial banks were instructed to transfer $5.5 billion to the New York Reserve Bank for payment to Iran. The funds were placed at the Bank of England and returned to the banking system late that day. The result left a large surplus of reserves, augmented by the discount window borrowing of one bank involved in the transfer (which the Desk treated as nonborrowed reserves for path-setting purposes). After the transfer on Tuesday, the funds rate plummeted, dropping to 10 percent. The Desk absorbed the glut of reserves on Wednesday by arranging nearly $7 billion of matched sale-purchase transactions in the market.

Chart 8

Money Market Conditions and Borrowed Reserves



*Excludes extended credit borrowing by thrift institutions (and a small amount of emergency credit borrowing) starting in the week of August 19 which was treated as nonborrowed reserves for path purposes.

The week encompassing the Iranian funds transfers was the start of the second reserve subperiod (three weeks ended February 4) following the December meeting. In the last two weeks of that subperiod, the Desk encountered a problem involving discount window borrowing that has occurred from time to time since the beginning of the reserve-targeting approach in October 1979. Borrowing through Tuesday of the January 28 statement week was averaging about $1.8 billion, well above the $1.2 billion level expected to be associated with the nonborrowed reserve objective for that week. If the Desk acted to achieve the objective, banks were likely to end up holding about $600 million more excess reserves than their estimated demand. The glut of reserves would then result in a sharp easing in money market conditions on the settlement day, perhaps disrupting the markets and giving a misleading impression about System policy intentions. Faced with this situation, the Desk deliberately sought to undershoot the nonborrowed reserve objective that week by about $500 million, somewhat less than the overshoot in borrowing.

Given the shortfall in nonborrowed reserves in the January 28 week, a relatively large increase would have been needed in the February 4 statement week to achieve the average path level for the three-week period as a whole. In turn, this would have implied a sharp drop in expected borrowing for that week, down to about $250 million. To avoid an abrupt easing in financial market pressures likely to be generated by such a reduced borrowing level, and given the proximity of a major Treasury financing, it was decided to lower the nonborrowed reserve path by $280 million relative to the total reserve path. This left projected borrowing for the week at $1.1 billion, about the same as in the previous week. Nonborrowed reserves for the three-week subperiod ended February 4 were virtually equal to the revised path, according to final figures. Reflecting the weakness in the narrow aggregates, total reserves averaged $390 million below path, with most of the shortfall in required reserves.

At the February 3 meeting, the Committee sought a near-term pickup in money growth to make up for the shortfalls in the narrow aggregates that had occurred in December and January. Accordingly, it adjusted upward the December-to-March growth objectives for both M-1A and M-1B to 5 to 6 percent and raised the M-2 objective to 8 percent. The Federal funds rate range continued at 15 to 20 percent.

During the first subperiod that followed the February meeting (four weeks ended March 4), incoming data for February suggested that the narrow aggregates were growing well below path. M-2 growth, on the other hand, appeared to be picking up strongly that month and was projected to be on or above path. Reflecting the weakness in the narrow aggregates, implied discount window borrowing associated with achieving the nonborrowed reserve path gradually moved lower. Actual borrowing also trended down, though it fluctuated widely from week to week, and the Federal funds rate eased substantially. By the February 25 statement week, estimates before the weekend suggested that achievement of the average nonborrowed reserve path for the subperiod implied borrowing of $770 million over the remaining two weeks. Meanwhile, the funds rate dipped below 15 percent on Friday and continued to edge lower after the weekend. It became evident that pursuit of the nonborrowed reserve path was inconsistent with funds trading remaining within the Committee's specified range.

At a special telephone conference on Tuesday, February 24, the Committee discussed the strength of M-2 and M-3 and the easing in money market conditions, as well as the uncertainties over the behavior of the narrow aggregates. It decided to accept some shortfall in growth of the narrow aggregates, implying a reduction of the nonborrowed reserve path. While the funds rate range was not formally changed, it was recognized that pursuit of the nonborrowed reserve path might lead to further declines in the funds rate, depending on subsequent growth of the aggregates. In the final week of the first subperiod, the Desk chose not to offset an undershoot in nonborrowed reserves and an overshoot in borrowing in the previous week. Nonborrowed reserves for the subperiod thus came out $70 million below the downward revised path. Total reserves were $220 million below path.

At the start of the second reserve subperiod, growth of the monetary aggregates did indeed appear to be weaker. Accordingly, it was decided not to continue with the downward adjustment of the nonborrowed reserve path in the second subperiod that had been applied in the first subperiod. Estimated borrowing consistent with achieving the nonborrowed reserve path in the second subperiod (four weeks ended April 1) dropped to $800 million. Subsequently, the narrow aggregates began to show renewed strength. As the second subperiod progressed, weekly borrowing levels consistent with the path gradually moved upward, climbing back to around $1.1 billion by the final week. The funds rate continued to edge lower for a while, briefly touching as low as 13 percent in mid-March, but returned to the 15 percent area by the end of the month. Nonborrowed reserves for the second subperiod were very close to path, while total reserves averaged $320 million below path

April through June

The Federal Reserve responded quickly and forcefully to a surge in money growth in April. The Desk's pursuit of the nonborrowed reserve path in line with the Committee's aggregates objectives automatically forced banks to step up their discount window borrowing, putting upward pressure on short-term rates. To apply further restraint, the nonborrowed reserve path was lowered substantially in early May, forcing even higher borrowing, and the Board of Governors approved increases in both the basic discount rate and the surcharge on frequent borrowing by large banks. Following these actions, growth of the monetary aggregates began to slow. At first, the Committee was willing to tolerate the slowdown to make up for the overrun in April. Later, as the money stock weakness continued through June, reserve pressures on banks were gradually relaxed.

The Committee's targets for second-quarter growth of the monetary aggregates, set at the March 31 meeting, were formulated to take into account the disparate trends in the money stock measures and their relationship to the Committee's annual ranges. The objective for growth of M-1B of 5½ percent or somewhat less was set with recognition that a portion of the first-quarter shortfall apparently reflected the rapid expansion of MMMF shares which were being used, to some extent, as transactions balances. The objective for M-2 growth of about 10½ percent gave weight to the staff's projection that the expansion of MMMF shares would remain strong in the second quarter. At this meeting, the Committee stopped specifying short-run objectives for M-1A, after adjustment for the effects of flows into NOW accounts, growth of the two narrow measures would be similar.

Initial estimates of monetary aggregates growth following the March meeting were in line with path rates for April, set equal to the Committee's objectives. As the intermeeting period progressed, however, estimates for April M-1B growth were repeatedly revised upward to rates well above path. In turn, estimated discount window borrowing consistent with achieving the nonborrowed reserve path rose sharply from the initial $1,150 million level. By the final week of the first reserve subperiod (four weeks ended April 29), implied weekly borrowing needed to achieve the nonborrowed reserve path had climbed to $1.7 billion. Nonborrowed reserves for the first subperiod were close to path Reflecting the strength in the aggregates, total reserves averaged $160 million above path, with required reserves $310 million above path.

At the start of the second reserve subperiod (three weeks ended May 20) the demand for total reserves was projected to be about $550 million above path. Given this large gap, it was decided, in consultation with the Chairman, to reduce the nonborrowed reserve path relative to the total reserve path by $250 million. Average borrowing associated with the nonborrowed reserve path over the second subperiod rose to nearly $2 billion. The following Monday, on May 4, the Board approved Reserve Bank requests to raise the basic discount rate from 13 to 14 percent and to lift the surcharge on frequent borrowing by large banks from 3 to 4 percentage points.

Although the gap between projected reserve demands and the total reserve path narrowed a bit in the following week, it was still quite wide. Consequently, the nonborrowed reserve path was reduced by an additional $120 million and by a further $114 million to offset an overshoot in borrowing in the April 29 week. (Discount window borrowing on the settlement day of that week was a record $8.6 billion, as the Desk had difficulty in hitting the weekly nonborrowed reserve objective because of sizable revisions to reserve projections and a shortage of collateral in the market.) These adjustments followed a Committee telephone consultation on May 6, at which it instructed the Desk to continue aiming for reserve paths consistent with the money stock objective set at the March meeting, recognizing that Federal funds in the days remaining before the May meeting were likely to trade in ranges that exceeded somewhat the 13 to 18 percent consultation band. Nonborrowed reserves for the second subperiod averaged close to the downward revised path, while total reserves came out $450 million above path.

As banks were forced to borrow increasing amounts at the discount window beginning in early April, the Federal funds rate began to climb. At first, the rise was delayed a bit as banks seemed content to hold unusually low excess reserves or to run deficiencies. Funds traded in the 15 to 15½ percent range over the first three weeks of April and then shot up to 20 percent in the wake of the extreme reserve stringency in the April 29 week. Thereafter, the funds rate seemed to be settling down in the 17 to 18 percent area, but the announcement of the discount rate actions on May 4 pushed the rate up almost immediately to around 19 percent where it remained in the days preceding the May Committee meeting

When the Committee met on May 18, the members agreed about the importance of maintaining a posture of restraint to reduce growth of the monetary aggregates rather quickly The economy had expanded well above expectations in the first quarter, and the velocity of the narrow money stock had grown at an unusually rapid rate. Indications of continuing strength in the economy, coupled with a possible turnaround in the velocity of money, posed the risk of excessive growth of the aggregates as the year unfolded. Although the major price indexes were rising at somewhat reduced rates, there was little indication of a reduction of the underlying inflation rate or an abatement in inflationary expectations. Accordingly, and also in light of the rapid money growth in April, the Committee sought a substantial deceleration in growth for the April-June period to rates of 3 and 6 percent for M-1B and M-2, respectively. Moreover, given the overshoot in April, the Committee indicated that it was willing to accept some shortfall of M-1B growth from the two-month rate specified. An initial borrowing assumption of $2.1 billion was established, and the funds rate range was lifted to 16 to 22 percent.

A few days after the May meeting, staff projections of the aggregates for May were considerably weaker than those available at the time of the meeting. Projections suggested essentially no growth for M-1B for the month and only modest growth of M-2. Given the Committee's preference for such a slowdown, following the April bulge, the reserve paths were constructed using the staff's revised forecasts for May and the implied growth rates for June consistent with the Committee's two-month objectives. Hence, at the start of the first reserve subperiod (four weeks ended June 17), achievement of the nonborrowed reserve path was expected to imply the same $2 1 billion of discount window borrowing that the Committee had accepted as the initial assumption.

During the first week of the subperiod, borrowing bulged to $2 9 billion, as banks borrowed heavily over the three-day Memorial Day weekend—perhaps because many thought that another increase in the discount rate might be imminent. Under these circumstances, the Desk deliberately sought a level of nonborrowed reserves for the week that was well below the objective To have achieved the weekly objective, given the high borrowing, would have meant an overabundance of total and excess reserves and a sharp easing in money market conditions at the end of the week—a result that seemed inconsistent with the thrust of policy.

In the weeks that followed, estimates of M-1B for May were repeatedly revised downward, although projected M-2 growth remained close to, or only somewhat below, path As M-1B weakened, both the total and nonborrowed reserve paths were adjusted lower each week, for a total downward adjustment of $180 million, in keeping with the Committee's willingness to accept some shortfall from the aggregates growth targets specified at the May meeting. (The nonborrowed reserve path was lowered an additional $206 million in the second week to offset the impact of the unusually high borrowing over the Memorial Day weekend.) The effect of these adjustments was to keep implied weekly borrowing levels consistent with hitting the nonborrowed reserve paths from falling sharply below the $2.1 billion level. Reflecting these adjustments, both nonborrowed and total reserves averaged close to path.

By mid-June, estimates showed that M-1B had declined in May at a 5 percent annual rate, and little or no growth was projected for June. (Projected M-2 growth for the two-month interval, on the other hand, was only a touch below path) Given the extent of the M-1B growth shortfall from the Committee's two-month objective, it was decided that no further downward adjustments to the reserve paths were warranted. The paths for the second subperiod (three weeks ended July 8) were redrawn on the basis of 3½ percent growth of M-1B from March to June, the staff's projection of growth at the time.

During the second subperiod, incoming data for M-1B in June indicated even further weakness than earlier. This time, however, the reserve paths were not reduced to accommodate the shortfall As a result, the demand for total reserves fell increasingly below path. In turn, achievement of the nonborrowed reserve path implied lower and lower borrowing levels. By the final week of the subperiod, the weekly borrowing level consistent with hitting the nonborrowed reserve path had dropped to $1.4 billion. Total reserves for the subperiod averaged $100 million below path. Nonborrowed reserves were also about $100 million below path according to final figures, although preliminary numbers indicated that they were fairly close to path.

With the Desk supplying nonborrowed reserves more generously over the second subperiod, this should have led to some easing in the Federal funds rate over late June and early July. Instead, funds continued to trade around 19 percent, the same level that had prevailed since the beginning of May. One factor that apparently accounted for the firm money market over the period was that banks had been forced to borrow heavily over an extended time. Hence, even though borrowing pressures eased starting in late June, there was greater reluctance to resort to the window. Still another factor was that banks became increasingly disappointed when the funds rate failed to ease beginning in early June as many had expected, given the weakness in M-1B. In the week of June 17, in particular, banks made only light use of the discount window through Tuesday and thus accumulated large reserve deficiencies, expecting funds to break on the settlement day. Instead, funds shot up to as high as 30 percent at the close on Wednesday as banks were forced to borrow $6.4 billion to meet reserve requirements. The caution engendered by this experience tended to keep the funds rate firm well into July.

Interest rates varied over a wide range in the second quarter, as the markets were buffeted by the rapid changes in the money stock, shifting views on the economic and Federal budget outlook, and uncertainty over System policy intentions. Yields rose sharply through early May, reaching near-peak levels in the short-term markets and setting new records in many longer term sectors. (The records were eclipsed in the third quarter.) The markets were disturbed at the outset when the February FOMC policy record, released on April 4, was interpreted to mean that the System had not deliberately sought the trading in Federal funds below the 15 percent that had emerged in mid-March. Rapid money stock growth in April and the firming trend in the funds market put strong upward pressure on rates, as did the discount rate actions taken on May 4. While some participants were encouraged by Congressional actions to restrain Federal spending, many worried about the interest rate implications of a large tax cut and resulting high Federal budget deficits

Around mid-May sentiment began to change. The markets rallied strongly over the next month, and yields retraced a large portion of their earlier increases A series of statistics suggested that the economy was not so robust as previously thought and that inflationary pressures were waning. Reports indicated that the Administration might be willing to compromise on its tax-cut proposals. At the same time, the weakness in M-1B in May and early June convinced many participants that the money market would soon begin to ease. By mid-June, however, participants had grown impatient with the continued firmness in the funds market. Many began to appreciate that policy was also being significantly affected by the strength in M-2 As the quarter ended, yields were on the rise again.

July through September

The third quarter was marked by continued divergent trends in the narrow and broad monetary aggregates. Except for a brief time early in the quarter, growth of M-1B fell increasingly below the Committee's objectives; M-2 growth, on the other hand, was roughly in line with its corresponding objectives. As the Desk pursued the nonborrowed reserve path, the reserve approach automatically generated less borrowing pressures on banks, and the Federal funds market eased substantially by the quarter's end. Given the sustained strength in M-2, however, no steps were taken to reinforce this process either by raising the nonborrowed reserve path or by cutting the basic discount rate.

At the July meeting, the Committee affirmed its intention to seek growth of M-1B for the year near the lower bound of its specified range, recognizing that growth of the broader aggregates might be high in their annual ranges. M-1B had so far been growing well short of this pace, advancing at an annual rate of 2¼ percent through the second quarter. The 7 percent objective chosen at this meeting for expansion of M-1B from June to September, if continued in the fourth quarter, would bring growth up to the lower bound of the annual range by the year-end. At the same time, though, it was made conditional on M-2 remaining around the upper end of, or moving within, its growth range for the year.

The initial borrowing level for the intermeeting period was established at $1.5 billion. Early in the first reserve subperiod (three weeks ended July 29), incoming data suggested that growth of both aggregates in July was exceeding path rates—set a bit higher for M-1B than the Committee's three-month objective because of the expected impact of an early mailing of social security checks that month. Later in the first subperiod, and continuing through the second reserve subperiod (three weeks ended August 19), estimated M-1B growth for July was repeatedly revised downward to rates well below path. Consequently, after edging higher at first, implied weekly discount window borrowing consistent with the nonborrowed reserve path gradually moved downward in the second subperiod to the $1.4 billion level or below. Actual borrowing also fell, although it varied sharply from week to week. The Federal funds rate declined gradually from the 19 percent level at the time of the July meeting to around 18 percent by mid-August. Nonborrowed reserves were $90 million and $40 million below path in the first and second subperiods, respectively. Total reserves were $80 million above path in the first subperiod, reflecting an overshoot in excess reserves, but $200 million below path in the second subperiod.

Starting in the August 19 statement week, the Desk began to include thrift institution borrowing at the discount window under the extended credit program as nonborrowed reserves for path purposes, since such borrowing does not imply the same reserve pressures in the money market as adjustment borrowing. The amount of extended credit borrowing each week was treated as a market factor that supplied nonborrowed reserves. (The same procedure was followed with respect to special borrowing by one particularly large regional bank in 1980.) In this way, as the Desk aimed to achieve the nonborrowed reserve path, the reserves supplied through the extended credit program did not lead to an overabundance of total reserves.[6]

System open market operations between the July and August meetings were substantial. The Desk purchased for the System Account over $3 billion of Treasury bills ($1.4 billion in the market and the rest from foreign accounts) and nearly $1 billion of Treasury coupon securities in the market. These outright transactions were needed to counter the effect of seasonal factors that were draining reserves. In addition, the Desk arranged an unusual volume of temporary transactions stemming from the second phase of the settlement with Iran. As part of that settlement, $2 billion of funds was transferred from commercial banks to the New York Reserve Bank on July 10. Because of the uncertainty over when the funds would flow back to the banking system—as it turned out, not until August 17—they were placed in the foreign temporary investment pool To offset the effects on reserve availability, the Desk engaged in repeated rounds of System RPs in the market or passed through to the market portions of the enlarged foreign investment orders.

When the Committee met in August, it retained the 7 percent target for M-1B growth over the June-to-September interval, subject to the same provision that M-2 remain around the upper bound of, or move within, its range for the year. Since the expansion of M-1B had fallen well short of path in July, achievement of the three-month objective meant that a substantial pickup in growth was needed for the August-September period. Data available at the time of the meeting showed rapid increases in the first couple of weeks of August, and the paths were constructed to reflect the strength that was projected and also desired for the month in view of the earlier shortfall.

A few days after the meeting, however, estimates of M-1B growth for August were revised downward sharply. Although estimates were subsequently boosted as the period progressed, growth remained well below path. Incoming data for September suggested that M-1B was remaining weak in that month as well. In contrast, M-2 growth for the two months was generally estimated to be close to, or only slightly below, path. Moreover, flows of funds into retail RPs

[6] The volume of extended credit borrowing was fairly modest over the year In late October, it reached a weekly average peak of $464 million (largely accounted for by the borrowing of one institution) and thereafter dropped back to the $125 million area

at thrift institutions (not captured in the M-2 series) were artificially depressing its growth. After making allowance for this distortion, M-2 appeared to be expanding at rates somewhat above path.

Reflecting the shortfall in M-1B growth from the Committee's objectives, total reserves in the first reserve subperiod (four weeks ended September 16) averaged $160 million below path. (Nonborrowed reserves were $70 million below path.) At the start of the second subperiod (three weeks ended October 7), the gap between the total reserve path and the projected demand for total reserves swelled to around $370 million. Ordinarily, such a large gap would call for an upward adjustment of the nonborrowed reserve path relative to the total reserve path to speed money growth back to path. However, given the behavior of M-2, no adjustment seemed warranted. Even so, implied weekly borrowing consistent with the nonborrowed reserve path dropped from the initial level of $1.4 billion specified by the Committee to below $900 million by the end of the second reserve period. Total reserves for the second subperiod averaged $370 million below path, while nonborrowed reserves were $60 million above path. With borrowing pressures on banks easing, the Federal funds rate fell sharply, down from about 18 percent in mid-August to around 15 percent in mid-September. On September 21, the Board approved Reserve Bank recommendations for a reduction of the discount rate surcharge on frequent borrowing by large banks from 4 to 3 percentage points. By this time, though, very little borrowing was actually subject to the surcharge, and thus the action had no observable effect on the funds rate. Indeed, if anything, market participants seemed disappointed that no cut was made in the basic discount rate.

Despite the sharp drop in the Federal funds rate over the third quarter, other short-term rates edged higher in July and August before turning down in September. Although most rates finished the quarter lower on balance, the declines were much less than registered in the funds market Indeed, rates on Treasury bills beyond the shortest maturities ended the period somewhat higher, reflecting continued heavy Treasury issuance.

Meanwhile, yields on intermediate- and long-term securities were on a generally upward trend over the quarter in extremely volatile markets. New record-high yield levels were established in all the key sectors The mood was one of deep pessimism, dominated by concern over the prospect of continued large Treasury deficits in the wake of the Federal tax cuts Although participants responded favorably to the economic statistics showing a weakening economy and moderating inflation, this nourished only sporadic rallies. Investors remained largely on the sidelines, preferring to channel their funds to short-term instruments. Corporate borrowers avoided the capital markets in favor of bank loans and commercial paper. Trading activity was largely confined to dealers and trading accounts, who were hesitant to take sizable positions, and the markets were thin. Daily price movements of 2 to 3 points (25 to 40 basis points in long-term yields) were not uncommon. In the Treasury's August refunding, all three issues set new record yields in their maturity categories, with the auction average on the reopened thirty-year bond at 14 06 percent. At its peak in late September, the yield on Treasury long-term bonds in the secondary market touched as high as 15 29 percent.

October to the year-end

Growth of the monetary aggregates picked up substantially in the fourth quarter, but the strength was not apparent until the final month. Earlier in the period, estimates suggested that the narrow money stock measure was continuing to come in below path. Consequently, borrowing pressures on banks eased and money market rates fell considerably, spurred on by cuts in the basic discount rate. The sharp rebound in money growth that followed, however, went well beyond the Committee's objectives. The strength in the aggregates was unusual, as interest rates were still historically high and the economy was in the midst of recession with no recovery in sight Nevertheless, the reserve approach automatically began to apply increasing pressures in the money market—pressures that were intensified as money growth accelerated further early in the new year.

When the Committee met in October to consider its fourth-quarter objectives, it weighed the risks of inadequate versus excessive money growth against the background of continued divergent trends in the aggregates M-1B had advanced little in the third quarter, and its expansion for the year thus far was well below the lower bound of the Committee's annual range Growth of the broader aggregates, on the other hand, had remained close to, or somewhat above, the upper bounds of their respective ranges. The Committee agreed upon annual growth objectives for the September-to-December period of 7 percent for M-1B and 10 percent or slightly higher for M-2. It was noted that the behavior of M-2 would depend, in part, on the public's response to the availability of all savers certificates starting October 1.

The staff built the reserve paths for the intermeeting period on the basis of essentially straight-line money growth for the individual months of the quarter, but with some allowance for a one-time jump in M-2 in

October to reflect anticipated shifts of funds from retail RPs into the new all savers certificates. Over the first reserve subperiod (three weeks ended October 28), the monetary aggregates projections for October were fairly close to path. (Total reserves for the first subperiod ended up $60 million below path, while nonborrowed reserves were $50 million above path.) Hence, expected discount window borrowing implied by the nonborrowed reserve path remained around the $850 million initial level agreed to by the Committee.

Starting in the second subperiod (three weeks ended November 18), however, estimates of the aggregates began to fall below path M-1B was especially weak, but M-2 growth was also somewhat below path for October, as there was less switching of funds into the all savers certificates than had been anticipated. As money growth weakened, borrowing consistent with achieving the nonborrowed reserve path moved lower To encourage a bit quicker response in money growth back to path, while also avoiding a precipitous easing in money market conditions, the nonborrowed reserve path was raised modestly—by about $50 million—in the November 11 statement week. Expected borrowing associated with the nonborrowed reserve objective that week was about $500 million. However, actual borrowing was well above this level, which would have meant only modest borrowing in the final week of the subperiod if the nonborrowed reserve path were to be achieved. To avoid an abrupt reduction of reserve pressures only a few days in advance of the November FOMC meeting, it was decided to aim for reserve supplies a little below the nonborrowed reserve path, consistent with borrowing of $400 million in the final week. Nonborrowed reserves in the second subperiod averaged slightly below path, according to preliminary data, but $60 million above path after subsequent revision Total reserves were $30 million below path, with required reserves $140 million below path.

Meanwhile, on October 30, the Board announced a reduction of the basic discount rate from 14 to 13 percent. Earlier, on October 9, the discount rate surcharge on frequent borrowing by large banks had been lowered from 3 to 2 percentage points; on November 16, it was removed altogether. The reduction of the basic discount rate and the lessening of borrowing pressures on banks was reflected in a considerable easing in the money market The Federal funds rate dropped from about 15½ percent at the time of the October FOMC meeting to around 13 percent by the third week in November.

The securities markets rallied dramatically beginning in late October. Investors responded enthusiastically to mounting evidence of a slowdown in the economy and further moderation in inflation. Reports of continued weakness in the narrow money stock measure also buoyed sentiment, as did the cut in the basic discount rate and the general easing of money market conditions. Over the course of a month, rates on three- and six-month Treasury bills dropped about 3 percentage points to their lowest levels in over a year. Strong investor demand was evident in the Treasury's November refunding, with the thirty-year bond auctioned at an average yield of 14 10 percent. In the latter part of November, the yield on Treasury long-term bonds in the secondary market got as low as 12¾ percent. In the improving climate, corporate borrowers rushed offerings to market that had been deferred earlier The volume of gross corporate issues in November swelled to over $7 billion, nearly twice the average monthly volume recorded over the first ten months of the year.

By the time the Committee met in November, it was clear that the downward drift in the economy observed earlier had developed into a recession. The Committee continued to agree on the desirability of seeing more rapid growth of M-1B over the remaining months of the year, taking account of the strength in the broader aggregates. In this light, they chose growth objectives for the October-to-December period of 7 percent for M-1B and 11 percent for M-2. Given the shortfall of M-1B in October, it was understood that more rapid growth, consistent with the fourth-quarter objectives set at the October meeting, would be acceptable if the demand for transactions balances proved to be strong It was also understood that a modest shortfall of M-1B growth from path would not be unacceptable, particularly if the broader aggregates continued to expand rapidly.

On December 4, the Board announced a further 1 percentage point reduction of the basic discount rate to 12 percent In the meantime, the monetary aggregates were showing mixed trends early in the intermeeting period, with estimated M-1B growth for November slightly below path and M-2 growth slightly above. As the period progressed, however, estimates for M-1B in November were revised sharply upward. (A further large upward revision to M-1B in November was made late in December, reflecting new deposit information from a sample of quarterly reporting banks.) Preliminary data for the first couple of weeks in December suggested that the strength was continuing that month. Projected total reserve demand for the reserve period (five weeks ended December 23) thus rose above the total reserve path and average borrowing consistent with achieving the nonborrowed reserve path moved up to about $500 million from the $400 million initial level chosen by the Committee.

At the same time, actual borrowing in the first two weeks of the reserve period fell well below expectations, which would have implied sharply higher borrowing in the remaining weeks if the original nonborrowed reserve path were to be achieved. It was decided, however, to accommodate the borrowing shortfalls in the first two weeks and to set the objectives for nonborrowed reserves for the remaining weeks in line with the estimated average borrowing for the period This approach recognized the Committee's willingness to tolerate somewhat above-path growth of M-1B over the November-December interval to make up for the October shortfall. Nonborrowed reserves for the period averaged $90 million above path, while total reserves were $210 million above path.

Many banks apparently misjudged the Federal Reserve's policy stance in late November and early December, believing that the System's objectives for nonborrowed reserves implied only frictional levels of borrowing. Hence, they were reluctant to pay higher rates for Federal funds than the prevailing discount rate or to borrow from the discount window. Funds thus traded around 12½ percent in late November and very early December when the basic discount rate was 13 percent. After the announcement of a reduction of the discount rate to 12 percent on December 4, funds traded for a while around 11¾ percent. Discount window borrowing was extremely light early in the statement weeks of November 25 and December 2. While this should have resulted in sharply higher borrowing on the settlement day of those weeks, this did not happen, largely because of reserve projection errors. Even in the week of December 9, when borrowing did bulge on Wednesday after remaining low earlier in the week, participants tended to shrug this off as an aberration. By mid-December, however, the funds rate began to move higher as expectations changed, in part owing to the reported strength in the monetary aggregates.

Over the remainder of the year and into early 1982, the monetary aggregates continued to grow very rapidly M-1 bulged in the first week of January and, as the month unfolded, little of the strength washed out. Growth rates for the aggregates were thus well above the Committee's objectives for November to March set at the December meeting of 4 to 5 percent for M-1 and 9 to 10 percent for M-2. (M-1 has the same coverage as M-1B, but the target was set for the measure without adjustment for the impact of NOW account shifts.) As the aggregates strengthened, projections of the demand for reserves began to rise well above the total reserve path, forcing banks to borrow increasing amounts at the discount window and putting upward pressure on the funds rate.

The rally in the securities market faded soon after the November FOMC meeting. Interest rates across the maturity spectrum backed up sharply in December and continued to rise through January. While long-term yields in the Government and corporate sectors remained somewhat below their peak levels of late September, yields in the municipal sector set new record highs in early January before receding late in the month as the technical situation in that market improved. The rapid growth of the monetary aggregates and the firming trend in the money market in December and January were the principal factors responsible for the turnaround in yields, while the prospects for continuing large Federal deficits remained a major concern. At the same time, though, market participants took encouragement from statistics showing weakness in the economy and moderation in inflation. The rise in yields was thus tempered by the view that money growth would not remain strong with signs pointing to continuing recession.