Open Market Operations in 1973

Editor's Note: *The following is adapted from a report submitted to the Federal Open Market Committee by Alan R. Holmes, Senior Vice President of the Federal Reserve Bank of New York and Manager of the System Open Market Account. Sheila Tschinkel, Manager, Securities Department, was primarily responsible for preparation of the report.*

The Federal Reserve implemented an active policy of restraint during 1973 to counter the powerful resurgence of inflationary pressures in the economy. The System moved forcefully to limit monetary growth through the conduct of open market operations and through several regulatory changes, bringing short-term rates of interest to unprecedented levels by the summer. The Federal Open Market Committee (FOMC) continued to express its policy intent in terms of quantitative objectives for the deposit and reserve aggregates, although these targets were frequently qualified by concern for domestic financial markets and the international financial situation. The M_1 definition of the money supply—demand deposits and currency in the hands of the public—remained the central focus of policy formulation and implementation. The Committee lowered its longer run objective for M_1 a number of times during the year in response to the acceleration of demands on the limited capacity of the economy.

The Committee's quantitative objectives for the aggregates continued to be framed with a view to the long-range economic outlook. They are changed relatively infrequently, and reflect the leverage the Committee seeks to exert on underlying economic forces. The FOMC's operational instructions to the Manager convey the thrust of its policy intent and specify a response to emerging patterns of monetary growth. In 1973, the Committee continued its practice of using two-month tolerance ranges[1] for the deposit and reserve aggregates to generate modifications in the Manager's weekly nonborrowed reserve targets. The tolerance range for growth in reserves to support private deposits (RPD) was designed to foster the desired growth of M_1 and M_2—M_1 plus time and savings deposits other than large negotiable certificates of deposit (CDs.) In practice, the relation between RPD and these two aggregates often proved hard to predict, leading to somewhat more emphasis on the underlying behavior of the aggregates themselves.

The Committee's instructions to the Manager involved (1) specifying his response to incoming information on the aggregates and (2) specifying a range within which the Federal funds rate was allowed to move in the period between meetings. When the aggregates were strong relative to their prescribed ranges, the Manager was to restrain nonborrowed reserves so that the Federal funds rate would rise, and conversely when the aggregates were weak. Unduly sharp fluctuations in money market conditions were to be avoided.

The Committee's operational strategy, as implemented by the Manager, initiates a series of reactions in the banking system and in the financial markets. Market participants' assessments of the economic outlook interact with anticipations of monetary policy's likely response to these prospects. Participants have developed a heightened awareness of the System's use of quantitative targets in recent years. They seek to anticipate System-engineered changes in reserve availability and in the Federal funds rate in making trading decisions and portfolio adjustments. These expectations and reactions, together with the institutional setting and underlying economic forces, act as major determinants of monetary and credit flows.

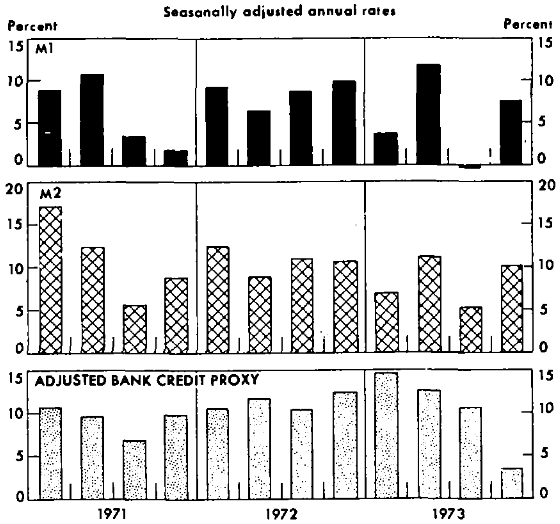
The interplay between the various factors in the monetary process rarely results in smooth growth of the aggregates. In 1973, the narrow money supply (M_1)

[1] Alan R. Holmes, "Open Market Operations in 1972", *Federal Reserve Bulletin* (June 1973), pages 405-16.

Chart I

GROWTH IN MONETARY AGGREGATES

Seasonally adjusted annual rates



M1 = Currency plus adjusted demand deposits held by the public.

M2 = M1 plus commercial bank savings and time deposits held by the public, less negotiable certificates of deposit issued in denominations of $100,000 or more.

Adjusted bank credit proxy = Total member bank deposits subject to reserve requirements plus nondeposit sources of funds, such as Euro-dollar borrowings and the proceeds of commercial paper issued by bank holding companies or other affiliates.

Source: Board of Governors of the Federal Reserve System.

increased by 5.7 percent (see Chart I).[2] While this reflects a moderation from growth in 1972, the quarterly changes were remarkably diverse and often not indicative of underlying economic trends. M_2 expanded at an 8.6 percent rate. The slower growth compared with the previous year was mainly related to the deceleration in M_1; an upward revision of Regulation Q ceilings in early summer and a temporary suspension of the interest rate constraint on four-year or longer time deposits in denominations of more than $1,000 sustained the inflow of such deposits at commercial banks.

Of far greater import for both the pattern of interest rates and credit flows was the absence of interest rate ceilings on large CDs during a period of monetary stringency. Demands on the banking system were bolstered during part of the year by the feverish speculative activity in the foreign exchange markets and shifts of borrowers out of the commercial paper market. The adjusted credit proxy, a more inclusive measure of member bank deposit liabilities, registered a 10.6 percent gain as banks accommodated enormous loan demands over the first two thirds of the year. Partly for this reason, RPD increased by 9.2 percent over the year, well above the growth in M_1. Total loans and investments at all commercial banks rose by 12.6 percent, just a bit below the 14.6 percent expansion in 1972 (see Chart II).

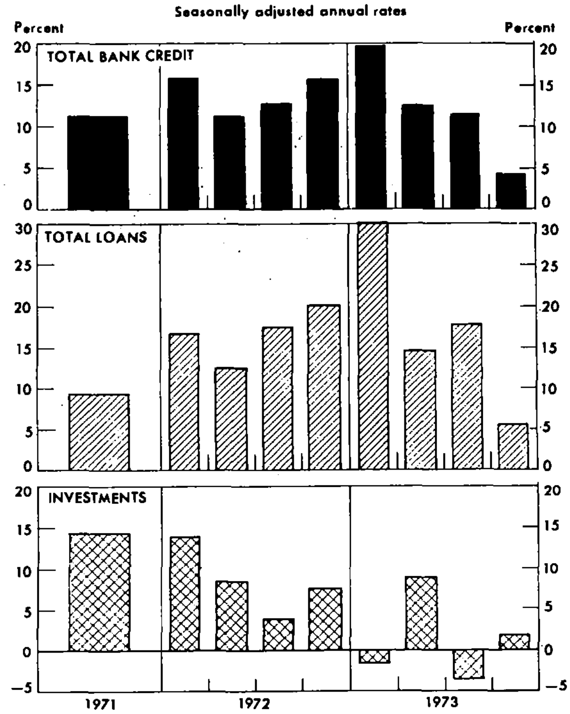
1973—AN OVERVIEW

THE FOMC'S POLICY OVER THE YEAR. In setting its long-run goals for the aggregates, the Committee initially sought to offset the overly rapid monetary expansion of 1972. The surge in spending and the bleak outlook for prices encouraged it to emphasize monetary restraint. At its March meeting, the FOMC lowered its longer run objective for

Chart II

CHANGES IN BANK CREDIT

Seasonally adjusted annual rates



Source: Board of Governors of the Federal Reserve System.

[2] The data on the aggregates in this introductory section reflect the annual revision of the series published in early 1974. The data used subsequently in describing operations during the year are those available at the time.

growth in M_1, and it retained an objective of moderate growth over the remainder of the year.

The Committee's reaction to deviations in money supply growth from the longer run path was influenced by its consideration of shifts in the underlying economic situation. Given continuing indications of a booming economy and the strength shown by the broad measures of the aggregates, it avoided a significant easing of money market conditions after M_1 decelerated in the first quarter. In the spring, the FOMC moved promptly to resist the renewal of rapid monetary growth, which brought expansion in M_1 to an unexpectedly strong 11.9 percent growth rate in the second quarter from 3.8 percent in the first. The Committee resisted accommodating the cumulation of bank demands for reserves in the spring and summer by permitting the Federal funds rate to rise more rapidly and even further than originally contemplated at its meetings. It maintained this posture and accepted an emerging shortfall of M_1 growth toward the end of the summer as inflationary pressures persisted.

The Committee began to temper its approach as the cumulative impact of increasing restraint, including sharply higher interest rates, was expected to keep monetary growth weak. It appeared toward the end of the third quarter that the "no growth" quarter just ended would be followed by further sluggishness in the final quarter. The staff suggested that delays in responding to this weakness could require increasingly sharp short-run adjustments to return M_1 to a longer run path of moderate expansion. The Committee's desire to get back on this moderate growth path was also a response to signs that expansion in real output would slow slightly in the fourth quarter and slacken further in the first half of 1974. Concern that the Mideast oil embargo would significantly worsen these prospects mounted as the year drew to a close. At the same time, growth in the money stock rebounded to a 7.5 percent rate in the final quarter of the year and the Committee moved cautiously in light of these contrary forces.

THE FOMC'S OPERATIONAL INSTRUCTIONS TO THE MANAGER OVER THE YEAR. The FOMC stipulated explicit responses to the behavior of the aggregates during the year, underscoring its basic policy intent by adjusting its tolerance ranges for RPD and the aggregates. At its first three meetings of the year and again in June, the Committee reduced the lower ends of the ranges suggested by the staff as consistent with longer run objectives. In this way, the FOMC indicated its tolerance of relatively slow growth in the near term and forestalled the possibility of a reduction in the prevailing restraint on bank reserve growth. In August, the Committee reduced the entire suggested range for RPD to indicate its concern over the rapid pace at which this measure had expanded in previous months. Thereafter, given indications of rather weak money supply growth in the months ahead, the FOMC generally raised the upper ends of the tolerance ranges by modest amounts. This increased the potential for some easing of reserve pressures, an intention that the Committee made explicit at its final meeting of the year.

In its instructions to the Manager, the Committee usually indicated that potential divergence between growth in RPD and the deposit measures be resolved to reflect the higher priority given to the latter, particularly M_1. In the event, a number of factors weakened the correlation between these measures during the year. Since RPD incorporates a weighting of the different types of private deposits by their respective percentage reserve requirements, it is particularly sensitive to changes in the composition of deposits and to bank liability management. RPD growth was stimulated relative to M_1 over the first two thirds of the year by the rapid rise in CDs which, in turn, reflected the sharp rise in bank loans and the suspension of Regulation Q ceilings in mid-May. The System acted to curtail bank credit and monetary expansion by raising reserve requirements on most demand deposits in early July. It imposed marginal reserve requirements on large CDs to take effect in June and increased them in September, before reducing them to their initial level in early December. However, the momentum of bank credit expansion was strong and this increase in reserve ratios bolstered RPD growth in the summer. When monetary expansion subsequently decelerated, RPD growth slowed. The regulatory amendments were thus a further source of variation in the reserve-deposit multiplier over the year, adding to the fluctuations which typically arose from shifts in the distribution of deposits among the different categories of member banks and changes in bank holdings of excess reserves. In view of the FOMC's concern with attaining its objectives for the deposit measures, the Manager found RPD of lesser importance in the determination of his response to the emerging patterns of monetary growth.

THE MANAGER'S IMPLEMENTATION OF THE FOMC'S INSTRUCTIONS. Open market operations in the first three months of the year increased the pressure on bank reserves and money market conditions in a continuation of the response to overly rapid money supply growth in late 1972. In establishing weekly targets for nonborrowed reserves, the Manager was mindful of the Committee's desire to see an orderly movement in the Federal funds rate. The Federal funds rate rose to 7 percent by mid-March, an increase of about 150 basis points from the start of the year. The Trading Desk acted to reduce nonborrowed reserve targets in relation to reserve requirements during this period. Member bank use of the discount window climbed by \$800 million to \$1.9 billion, on average, from December to March. For a time, in March and early April, the aggregates, and M_1 in particular, began to weaken relative to their tolerance ranges, leading to a pause in the move toward restraint.

Shortly after the April FOMC meeting, growth in the deposit measures appeared to be accelerating and open market operations brought additional pressure on bank reserve positions. Member bank borrowings changed relatively little, on average, but the Federal funds rate responded sharply.[3] The funds rate had reached 8½ percent by the end of June, when another wave of excessive monetary growth emerged and the Manager moved more aggressively to curtail the expansion of nonborrowed reserves. Enlarged bank demands for reserves, combined with some reluctance to increase use of the discount window, caused the Federal funds rate to rise abruptly to over 10 percent at the beginning of July, a larger increase than had been anticipated at the time. Actions to restrain the availability of nonborrowed reserves continued with little interruption over the summer, although the increase in the average Federal funds rate slowed somewhat, bringing it to 10½ percent during most of August and 10¾ percent near the end of that month. The aggregates moved down within their tolerance ranges by early September, and the Manager held his reserve objectives steady until after the September FOMC meeting. While average member bank borrowings rose by an additional \$300 million between June and August, it dropped back shortly after the beginning of September, leading to fairly persistent upward pressure on the Federal funds rate.

In response to the FOMC's instructions and weakness in the aggregates, the Manager adopted a more generous approach to the provision of nonborrowed reserves toward the end of September. The Desk provided reserves at a growing pace, and the Federal funds rate, after showing little tendency to decline, moved down to 10 percent in mid-October. The funds rate rose a bit above 10 percent in November as M_1 strengthened. But in December the FOMC again voted for more generous reserve provision, and the rate was just over 9½ percent at the year-end. While the decline in the Federal funds rate after September was rather modest, the Desk's increased provision of nonborrowed reserves enabled banks to reduce their borrowing to an average of \$1.3 billion in the last month of the year from the peak level of \$2.1 billion in August.

THE SECURITIES MARKETS OVER THE YEAR. The intensification of pressures on bank reserve positions in the early part of the year quickly spilled over into the short-term credit markets. Borrowers had strong inducement to switch from open market paper to taking down bank loan commitments as the rise in the bank prime rate was slowed by the activities of the Committee on Interest and Dividends (CID). To help finance loan demand, banks aggressively issued a large volume of CDs.

The rise in CD rates often outdistanced the Federal funds rate, and many banks were reportedly paying 11 percent for 60- to 89-day prime CDs over most of August and September, more than double the rates offered at the start of the year (see Chart III). Rates on longer CDs adjusted upward after the remaining applicable Regulation Q ceilings were suspended in May, although banks rarely showed inclination to commit themselves to pay high rates for long periods of time. The introduction of a dual prime rate structure in late April prompted a steady rise in the prime loan rate charged large businesses in the months that followed, bringing it to a record 10 percent by September. Commercial paper rates were also pushed higher, but activity in this market receded sharply over the first eight months of the year. Treasury bill rate increases were damped until June by demand from foreign central banks, which periodically depleted dealer inventories. Thereafter, bill rates rose sharply in response to the accelerated rise in the Federal funds rate. The rate on the three-month issue stood at 9.05 percent in mid-September, an increase of almost 4 percentage points from the beginning of the year. A series of increases in the Federal Reserve discount rate, which brought this rate to an unprecedented 7½ percent by mid-August, confirmed the shift to a higher rate structure.

Near the end of September, the Committee's adoption of a less reluctant approach to reserve provision was followed by a precipitous drop in short-term interest rates. Thereafter, rates fluctuated dramatically in response to conflicting economic developments and changing market assessments of the outlook for System policy. The initial

[3] In April, the Federal Reserve began to permit member banks with particularly heavy seasonal reserve outflows to borrow a portion of their reserve needs at the discount window. Since this borrowing privilege is prearranged, it is not included with regular borrowing in this report. Seasonal use of the discount window rose from \$5 million to \$163 million in August and then declined steadily to \$41 million in December.

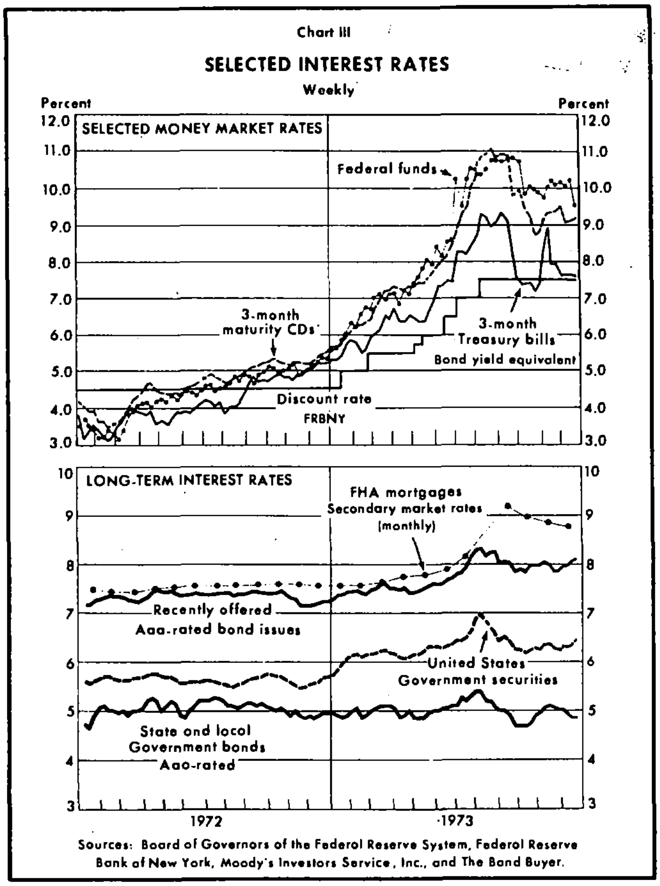


Chart III
SELECTED INTEREST RATES
Weekly

Sources: Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York, Moody's Investors Service, Inc., and The Bond Buyer.

declines were partly eroded by the year-end as the System's moves toward a less restrictive policy stance proved more measured than participants anticipated. Bank offering rates on large CDs fell to as low as 8½ percent for three-month maturities by the end of October, but they subsequently moved back to close the year at 9½ percent. Bank willingness to permit CDs to run off toward the end of the year, in anticipation of further interest rate declines, was facilitated by a shift of borrowers back to the use of commercial paper. Banks reduced the prime rate only marginally, and it thus remained above commercial paper rates in the last four months of 1973. Treasury bill rates became particularly volatile, reflecting sensitivity to developments in the foreign exchange markets as well as to domestic monetary influences. The bid rate on the three-month issue dropped by nearly 200 basis points between early September and early October. Thereafter it rose as high as 8.62 percent but closed the year at 7.45 percent.

The long-term debt markets were partly insulated from money market pressures, and yields never reached the levels observed in late 1969 and 1970. The funneling of business credit demands into the banks and sizable internal cash flows, aided by dividend restrictions, kept public offerings of corporate bonds at a modest $13.6 billion in 1973, down $5 billion from the previous year. Bond yields rose moderately through June and then climbed sharply, paralleling the escalation in short-term rates. Yields peaked for the year in early August and then fell sharply, as the view that monetary restraint had reached a plateau set off an anticipatory buying spree. The impact of the Mideast oil embargo on fuel costs and inflation worries generally had stronger impact on long-term bonds as the year drew to a close and yields rose again. The yield on recent Aaa-utility issues was at 8.10 percent near the end of December, around ⅞ percentage point higher than one year earlier. Trends in the municipal bond market were similar, but yields rose somewhat less toward the year-end as bank interest in tax-exempt securities reemerged. The Bond Buyer's municipal index rose only 5 basis points over 1973 to 5.16 percent. Government coupon yields generally moved in concert with corporate issues although some additional upward adjustments were related to the Treasury's refinancing of a relatively larger share of 1973 maturities in the long-term bond market. The Treasury's expanded use of long-term borrowing was part of an overall plan to increase the viability of the long-term Government market by increasing supplies. Over the year, an improvement in the tradability of such issues was apparent.

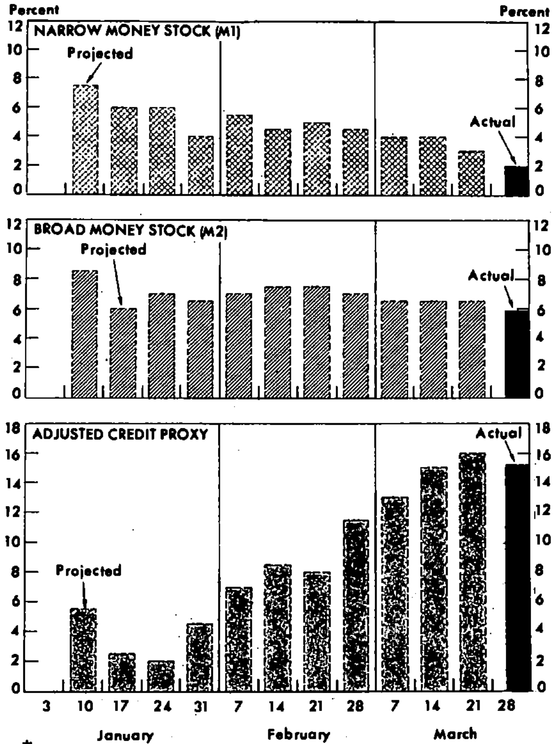
Treasury cash borrowing fell sharply from $15.3 billion to $7.7 billion during 1973, but sales of Federally sponsored agencies rose by over $10 billion to $14.4 billion. The housing-related agencies became particularly heavy borrowers as the climb in short-term rates eroded deposit flows at the thrift institutions. The steep rise in mortgage commitments from 1970 to early 1973 led to a continued expansion in mortgage lending over the first half of the year. Mortgage rates rose steadily during most of 1973, and rate limitations in a number of states, as well as a drop in thrift institution commitments, limited the growth in mortgage credit toward the end of the year.

JANUARY—MID-APRIL

THE COMMITTEE'S INSTRUCTIONS. At its first three meetings of the year, the Committee voted for slower growth in the aggregates over the months ahead than had occurred in the previous six months. When the Committee met on January 16, the staff's analysis indicated that it would take time for additional pressure on bank reserve positions

Chart IV

WEEKLY FORECASTS OF QUARTERLY GROWTH IN THE MONETARY AGGREGATES, 1973*



*As of two days after end-of-statement week shown.
Source: Board of Governors of the Federal Reserve System.

to reduce money supply growth from the excessive pace of late 1972. While it was expected that intensified reserve pressures would achieve the moderate expansion in M_1 desired over the months ahead, growth in the near term was expected to remain rapid in view of the accelerated pace of economic activity. The Committee chose tolerance ranges for M_1, M_2, and RPD that were at least as restrictive as the alternatives presented by the staff and reduced the lower ends of these ranges to indicate its willingness to accept substantially slower growth in the near term. The Committee agreed that open market operations should be directed at restraining reserve growth and anticipated that the Manager would achieve the attendant firming in the money market in advance of the Treasury's February refunding operation.

Money supply growth decelerated sharply in January, but the outlook presented at the February 13 meeting continued to indicate considerable growth in the aggregates over the months ahead. The FOMC again chose more restrictive two-month tolerance ranges for the aggregates than presented by the staff and anticipated that some additional firming of money market conditions would ensue. Estimates made soon after the meeting indicated that M_1 growth would remain strong while RPD was beginning to accelerate and moved above its specified range. In view of this, the Committee agreed on March 1 that the Federal funds rate should be permitted to rise somewhat further than had been contemplated earlier.

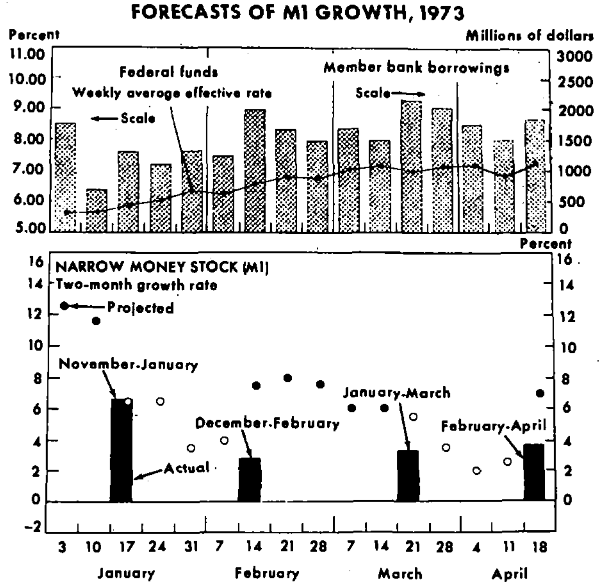
By the time of the March 19-20 FOMC meeting, growth in M_1 and M_2 had moderated, although RPD and credit proxy growth were well above levels previously indicated. In view of recent sharp price increases and evidence suggesting a continuation of overly rapid economic growth, the Committee reduced its longer run objective for M_1. While RPD growth was expected to remain rapid, the FOMC chose the lowest two-month ranges suggested for the money supply measures and reduced the bottom ends of the tolerance ranges for all measures. When M_1 and RPD growth decelerated even more because of weaker than expected expansion in private demand deposits, a majority of the Committee agreed, on April 11, to avoid an easing of money market conditions in the days before its April meeting.

THE MANAGER'S RESPONSE. The Manager moved promptly after the January FOMC meeting to limit nonborrowed reserve availability. By the end of January, the Federal funds rate had risen to 6⅜ percent from 5⅞ percent two weeks earlier (see Chart V). Estimates of M_1 growth steadily moved lower, while RPD was within the range specified for the two months ended February, and the Desk acted to stabilize conditions in the money market during the refunding operation. The Desk adopted a more reluctant approach to reserve provision soon after the Committee's February meeting, when estimates of M_1 over February and March indicated that growth would remain strong while larger than anticipated time deposit expansion was adding to M_2. At the same time, extraordinarily large gains in negotiable CDs brought credit proxy growth well above earlier expectations and pushed RPD up to a 5 percent rate, well above the 2.5 percent top of the range specified for February and March combined. Accordingly, the Manager continued to hold back on the provision of nonborrowed reserves, anticipating that trading in Federal funds would average around 7 percent in the weeks leading up to the Committee's meeting in March.

The Manager initially continued with the same reserve strategy after the March meeting, expecting the Federal funds rate to remain around 7 percent. While record expansion in large CDs boosted credit proxy growth above earlier expectations, a weakness in demand deposits began to moderate growth in the money supply measures and in RPD. As a result, these measures began to move below their tolerance ranges toward the end of March. In response, Desk operations were directed at encouraging less money market tautness. While the Manager would have ordinarily continued with this shading of reserve objectives, the Committee decided on April 11 to avoid further modifications until the next meeting.

The Account Management encountered difficulty over much of this period in avoiding unduly sharp fluctuations in money market conditions. While member bank borrowings rose considerably, on average, they sometimes varied by as much as $700 million from week to week. Bank response to anticipations of further increases in the Federal funds rate caused them to build up excess reserves early in a statement week, bidding aggressively for Federal funds and using the discount window heavily over the weekend. Substantially easier money market conditions would then emerge when the hoarded reserves were pressed on the market. The Desk often adapted its operations to this pattern, supplying some reserves early in the week and, on occasion, withdrawing them at the end of the statement period.

Chart V
MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF M1 GROWTH, 1973



Note: Solid bars are actual growth rates for each two-month period and are placed at the time of FOMC meetings. Dots preceding each bar represent weekly projections of these growth rates.

THE SECURITIES MARKETS. Developments in the credit markets in the opening months of the year reflected awareness that the System would respond to the persistence of inflation and the strong pace of money supply growth, leading to higher interest rates. Market participants were quick to note the Desk's reluctance to supply reserves as the Federal funds rate rose above previous levels. Two ½ percentage point increases in the Federal Reserve discount rate, bringing it to 5½ percent by the beginning of March, underscored the System's intent.

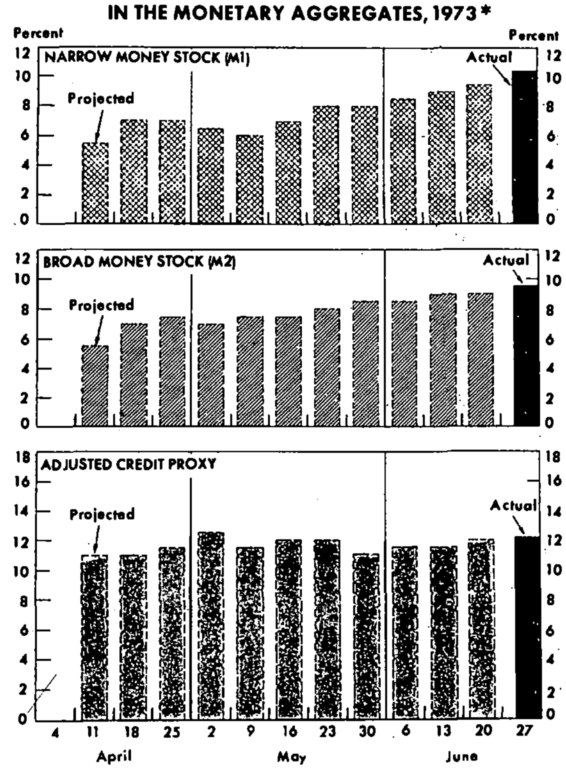
The emergence of strong loan demand at banks, bolstered by the low level of the prime rate in relation to rising market rates, and the resulting pressures in the CD market also had an impact on the structure of rates. By mid-March rates paid by major banks on CDs maturing in up to 89 days had risen by around 150 basis points to 7⅛ percent and Regulation Q ceilings constrained the availability of funds with a longer maturity. Treasury bill rate increases were tempered by the strength of foreign central bank demand, but still rates on most issues rose by well over 100 basis points. The rate on the three-month issue reached 6.55 percent in early April but then moved back down to 6.19 percent when an easier climate emerged in the money market.

In the long-term debt markets, the pull of short-term interest rates and concern over inflation generated an upward adjustment in yields. But expectations of light corporate and Government borrowing demands kept the rise in yields to modest proportions in the first few months of the year. In its February refunding, the Treasury sold a 3½-year 6½ percent note priced to yield 6.60 percent and auctioned $1 billion of a 6¾-year 6⅝ percent note which was awarded at an average yield of 6.74 percent. Interest in the new issues was initially restrained as dealers were anxious about burdensome financing costs. However, demand from foreign central banks soon spilled over into the Treasury coupon sector, and the market improved in the weeks that followed.

Published data showing a deceleration in money supply growth over the first quarter began to outweigh evidence of continued rapid economic expansion in the formulation of interest rate expectations. The less-than-2 percent growth first reported in M_1 over the three months ended March, generated the view that the System could soon move to stimulate more rapid expansion. The stability of the funds rate around the 7 percent level was interpreted as an encouraging sign and when the Desk entered the market to make outright purchases of Treasury bills on April 6 when Federal funds were trading at 7⅛ percent—a rate previously thought to be acceptable—a major rally ensued in the securities markets.

The change in attitudes had the most impact on longer term securities amid dealer efforts to cover short positions. Expectations of continued modest calendars of bond offerings also helped yields retrace earlier increases. The yield on recently offered Aaa-utility issues was 7.47 percent in mid-April, around 20 basis points above its level at the start of the year. The Bond Buyer's index, at 5.07 percent, was around its early-January average and down 27 basis points from the level of one month earlier. At the same time, the confluence of business demands for short-term credit kept money market rates under some pressure. Rates on large CDs and commercial paper thus increased by another 25 to 35 basis points between the March and April meetings. The three-month Treasury bill rate rose but then fell back to 6.20 percent, while rates on longer issues began to experience modest declines.

Chart VI
WEEKLY FORECASTS OF QUARTERLY GROWTH IN THE MONETARY AGGREGATES, 1973*



* As of two days after end-of-statement week shown.
Source: Board of Governors of the Federal Reserve System.

MID-APRIL TO JUNE

THE COMMITTEE'S INSTRUCTIONS. At the Committee's April 17 meeting, demands for money were expected to strengthen in the near term, given the transactions needs of a booming economy. At the same time, the staff thought that the previous rise in interest rates would continue to limit money growth so that the reserve conditions consistent in the near term with the FOMC's longer run objective for M_1 could be achieved without further money market pressure. The broad money supply (M_2) and RPD were anticipated to slow, and the extraordinarily rapid bank credit expansion of previous months also seemed likely to taper off. Against this background, the Committee voted to seek moderate growth in the aggregates over the months ahead, anticipating that the two-month expansion rates indicated for the reserve and deposit measures would be associated with little change in the Federal funds rate.

In the months that followed, most aggregates measures exhibited excessive strength. The Committee voted in May to seek slower growth in the aggregates over the months ahead than had occurred in the previous half year. It responded to signs of further acceleration by raising the upper limit of its constraint on the Federal funds rate at its May meeting and twice in the weeks that followed.

THE MANAGER'S RESPONSE. The Manager moved almost immediately after the April FOMC meeting to adopt a more reluctant approach to reserve provision when it was projected that M_1 and M_2 growth over April and May would move above acceptable ranges. RPD growth, however, fell below its tolerance range, given a shift in the multiplier. The Desk was soon anticipating that the Federal funds rate would rise to around 7½ percent, compared with about 7 percent prevailing just prior to the meeting (see Chart VII). The success of the Treasury refunding in early May gave no cause for modifying this approach, although the Committee had provided for this possibility in its directive.

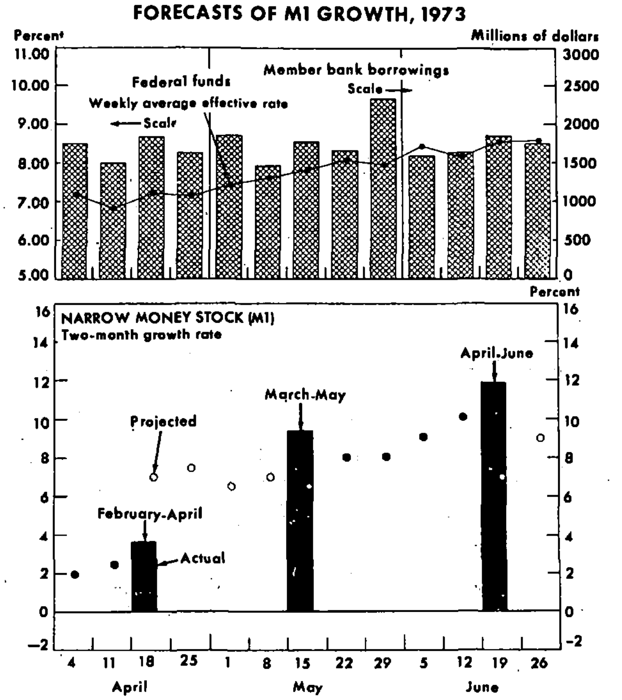
At its May 15 meeting, the Committee retained close to the same two-month acceptable range for M_1 but the range for RPD was lowered somewhat from the interval specified the month before, given recent experience and the expectation that higher interest rates would soon curb deposit growth. The upper limit placed on the Federal funds rate was raised.

The Account Manager soon found himself pressing against the Federal funds rate constraint as projected M_1 growth accelerated to a 10 percent rate over May and June. The expansion in M_2 was well above acceptable growth, although shifts in the distribution of deposits worked to keep RPD just a bit above the 11 percent upper end of the range established for this measure. In view of these developments, the Committee decided on May 24 and again on June 8 to raise the upper limitation on the Federal funds rate. By the June 18 Committee meeting, the Manager was anticipating reserve conditions consistent with a funds rate of around 8½ percent.

The Manager's growing reluctance to supply nonborrowed reserves over the period starting with the April meeting became readily apparent in the money market. Member banks became less willing to increase borrowing much above the $1,850 million level reached in March. In this situation, and with deposit levels rising steadily, enlarged demands for reserves pushed the Federal funds rate progressively higher over the two months with little interruption.

THE SECURITIES MARKETS. The emergence of more rapid money supply growth during April quickly generated bond market expectations of increased monetary restraint. These were confirmed by the rise in the Federal funds rate and three rounds of increases in the Federal Reserve discount rate, which brought the rate to 6½ percent at all Reserve Banks by June 15. Rates in the CD market, spurred by bank demands, led rate increases on other instruments, even though the cost of increasing such liabilities had been stepped up by the Board's action on May 16 to subject them to marginal reserve requirements, a move taken to brake the rapid expansion in bank loans. Although the outlook in the bill market had been improved by substantial Treasury redemptions of maturing issues, it was outweighed by the spreading impact of monetary restraint, and the rate on the three-month issue rose another 100 basis points to 7.20 percent by mid-June.

Chart VII
MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF M1 GROWTH, 1973



Interest rate expectations began to be affected in June by the belief that the pace of economic activity would soon begin to moderate. In fact, many observers began to suggest that a recession would emerge by the year-end and that the System would move to counter such a development. The response to the growing monetary stringency was thus tempered by some feeling that it could well turn out to be of fairly short duration. For a while, anticipations of stronger Administration wage-price control measures also convinced many that the need for prolonged monetary restraint would be reduced. Although the System had suspended the remaining Regulation Q ceilings on large CDs, as part of the broad regulatory package adopted on May 16, banks showed little interest in extending the maturity of these liabilities. Rates on longer term Treasury bills were still below 7 percent by mid-June and price declines in the long-term bond markets were moderate despite the further tightening of money market conditions.

Yields on intermediate-term Treasury issues rose prior to the May refunding operation but declined afterward as dealers made good progress in distributing the new issues. The Treasury redeemed $1.65 billion of maturing issues for cash, auctioned $2 billion of 6⅞ percent seven-year notes at 7.01 percent, and $650 million of 7 percent 25-year bonds at 7.11 percent. The bonds were sold at the lowest accepted bid price, the second time that the Treasury had utilized this technique. (In early January, $625 million of a twenty-year bond had been sold at a price to yield 6.79 percent.) Subsequent yield increases were modest, as banks remained generally unwilling to reduce holdings of coupon issues. Over the two-month period ended in mid-June, the yield on United States Government securities maturing in ten years rose from around 6.70 percent to 6.90 percent. The returns on recently offered Aaa-rated corporate utility issues increased by a similar amount to around the 7.60 percent level reached in mid-March. Reflecting hopes that banks might again become more active participants in the tax-exempt market, the Bond Buyer's index, at 5.13 percent over the first two weeks of June, was essentially unchanged from its average in the first half of April. Mortgage yields continued to creep up, and the rates established in the biweekly Federal National Mortgage Association auction rose 15 basis points to 8.04 percent.

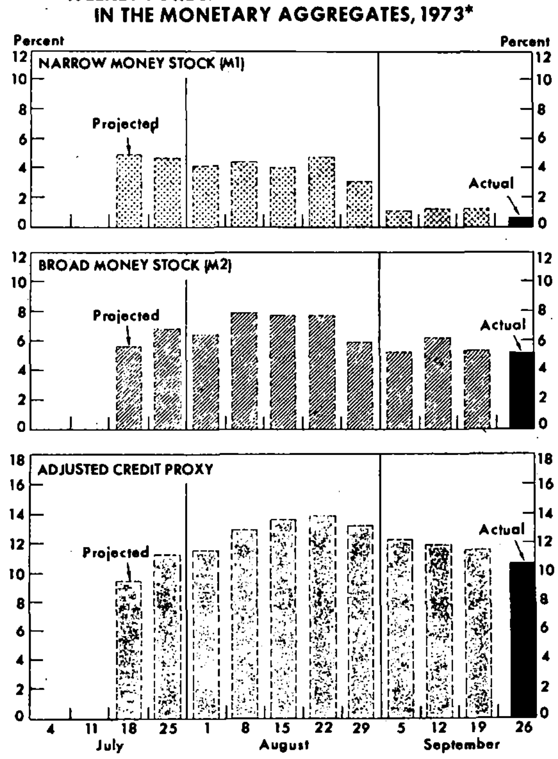
JULY—MID-SEPTEMBER

THE COMMITTEE'S INSTRUCTIONS. When the Committee met on June 18-19, money supply growth estimated for the second quarter was rapid. The Committee voted to seek somewhat slower growth in the aggregates over the months ahead and underscored the need for monetary restraint by adopting a range for M_1 growth in June and July with a midpoint that was below the expansion then projected. The ranges adopted for M_2 and RPD implied similar restraint. New estimates soon indicated another wave of excessive M_1 growth. On July 6, the Committee agreed to raise the upper constraint on the Federal funds rate from the limit adopted at the June meeting.

The FOMC was willing to see a further intensification of reserve pressures as the summer progressed. At its July 17 meeting, the Committee again voted for slower growth in the aggregates and raised the upper constraint on the Federal funds rate from the limit agreed upon earlier that month. The members agreed on August 3 that the funds rate could rise even further if necessary. By the time of the August 21 meeting it was expected that the prior rise in short-term rates would continue to limit money demand in the months ahead following a marked deceleration in July. The Committee became willing to accept slow growth for a while, especially because RPD showed no such tendency and even strengthened. At its August meeting, the Committee placed emphasis on bringing expansion in this measure below the range thought consistent with its near-term objectives for the money supply measures.

Chart VIII

WEEKLY FORECASTS OF QUARTERLY GROWTH IN THE MONETARY AGGREGATES, 1973*

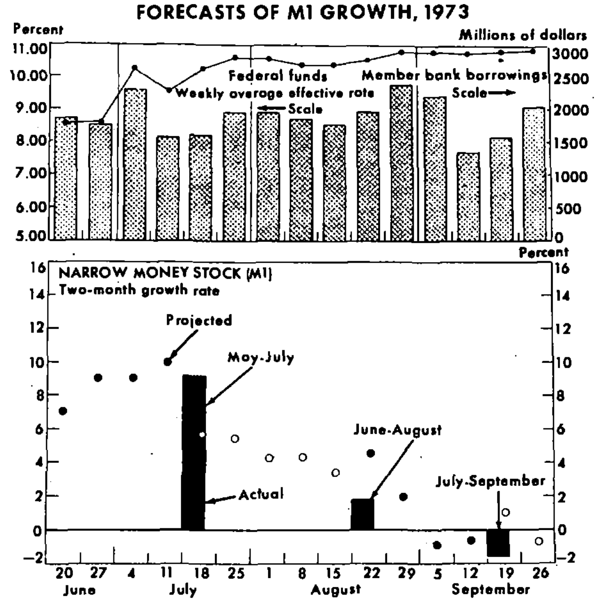


*As of two days after end-of-statement week shown.
Source: Board of Governors of the Federal Reserve System.

THE MANAGER'S RESPONSE. The System moved to adopt a substantially more restrictive posture at the end of June when incoming data showed more rapid than acceptable growth in the aggregates. It was expected that this shift in reserve strategy would raise the Federal funds rate to 9¼ percent from the 8½ percent average then prevailing, although a much larger increase developed. After the July 17 meeting, M_1 moved within an acceptable range, but M_2 and RPD continued to increase at overly rapid rates following enlarged inflows of time deposits to commercial banks. Actions to restrain the availability of nonborrowed reserves thus continued without interruption until early August, although the anticipated weekly rise in the Federal funds rate became more gradual. The weekly average Federal funds rate had risen to about 10½ percent by late July (see Chart IX). Subsequently, data indicated a further slowing in monetary growth and RPD moved within its specified range. The Desk sought no further intensification of pressures in the weeks leading up to the August 21 meeting. Shortly after this meeting, the Manager raised his sights for the Federal funds rate a shade in view of the emphasis placed by the Committee on limiting the rapid growth in RPD. A further deceleration of demand deposit growth helped bring RPD within its 11 to 13 percent range for August and September combined, and the Desk sought no additional pressure on bank reserve positions. The Federal funds rate stabilized at around 10¾ percent in the weeks leading up to the September 18 meeting.

The move toward further restraint initiated at the end

Chart IX
MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF M1 GROWTH, 1973



of June attracted widespread attention. Bank avoidance of both Federal funds and discount window borrowings over the quarterly statement publishing date led to a sharp convergence of reserve demands in the two days before the July 4 holiday on Wednesday. The Desk pumped in $3,314 million of reserves in the two days, but the cumulative deficiencies of the banks proved too large to head off the extraordinary strain. The average Federal funds rate climbed sharply to 10.21 percent from 8.59 percent the week before, and trading took place at rates as high as 15 percent for the first time.

This episode complicated operations for a number of weeks. Expectations that the System would continue and possibly intensify restraint led to a concentration of demands for funds at the start of a statement week. This reflected a continuation of the pattern that had emerged with the onset of restraint; only the pressures in the money market were often more difficult to temper given the enlarged demands for nonborrowed reserves.

THE SECURITIES MARKETS. There was a sharp and dramatic response in the securities markets to the implementation of a clearly more restrictive monetary policy. The Board reaffirmed the System's intent on July 2 by approving requests by all Federal Reserve Banks to raise their discount rates to 7 percent and by announcing the adoption of a ½ percent increase in reserve requirements on the bulk of demand deposits at member banks. Market participants soon began to project that tightening would continue indefinitely. The upward pressure spread quickly from the Federal funds rate to dealer financing costs and Treasury bill rates. The rate on the three-month issue rose from about 7¼ percent to a high of 9.05 percent on August 14, the day that another ½ point increase in the discount rate, to a record 7½ percent, was announced. The bill rate subsequently fell by 60 basis points but rose again to around the same peak after the Board's announcement in early September of an increase in the marginal reserve requirement on large CDs to 11 percent. Aggressive competition continued in the CD market, raising yields on ninety-day CDs by 63 basis points to around 11 percent over the same interval.

The influence of higher short-term rates spilled over to the markets for long-term debt, given expectations that banks would abstain from buying new issues and/or liquidate holdings as monetary restraint persisted. The climb in long-term rates intensified with the approach of the August refunding. The Treasury announced on July 25 that it would auction $2 billion of additional 7¾ percent four-year notes and $500 million of 7½ percent twenty-year bonds, the latter using the uniform-price technique adopted at the start of the year. The remaining $2 billion financing need would be met through an auction of 35-day tax anticipation bills.

Dealers soon became concerned that investor demand would be insufficient to permit them to distribute issues before they had to be financed at burdensome costs. Enlarged demands by Federal agencies, as they moved to preserve mortgage flows, added to the gloomy outlook. A precipitous drop in note and bond prices emerged prior to the auctions, which were scheduled for July 31 and August 1, amid large-scale short selling. Desk purchases of intermediate-term coupon issues on behalf of Government investment accounts helped impart some stability to the market. Even so, only $2.1 billion of acceptable bids were received for the $2 billion of 7¾ percent notes, and these came under heavy selling pressure shortly thereafter. Public bids for the twenty-year bonds at the lowest acceptable price amounted to only $260 million. The tax anticipation bills sold on August 8 were issued at a substantial average rate of 10.03 percent—on a bond equivalent basis—even though banks were permitted to pay for 50 percent of subscription by crediting Treasury Tax and Loan Accounts.

The decline in bond prices ended quite suddenly. Evidence of a deceleration in money supply growth during

July and August convinced many participants that the next move in System policy would be in the direction of less restraint. Thus, despite the slight edging up of the daily level of Federal funds trading after the August FOMC meeting, securities dealers began to cover some short positions in notes and bonds. An explosive rally emerged in the debt markets as it became apparent how short aggregate trading positions had become and as investors sought to capture the prevailing yields on securities rather than risk missing a turn in rates. Prices rose sharply over the rest of August and in September so that, by the time of the September FOMC meeting, the increase in yields on notes and bonds that had occurred over the summer had been largely eradicated. The index of Government securities maturing in ten years averaged 7.09 percent, close to its level of mid-July and well below its August 8 peak of 7.54 percent. Recently offered Aaa-rated utility issues were yielding 8.03 percent, reflecting a decline of around 27 basis points in six weeks. The Bond Buyer's index of yields on twenty-year municipal bonds had fallen over 50 basis points to 5.05 percent, merely 5 basis points above its lowest level of the year.

MID-SEPTEMBER—DECEMBER

THE COMMITTEE'S INSTRUCTIONS. Starting with its September 18 meeting, the FOMC voted to seek moderate growth in the aggregates over the months ahead. The cumulative increases in interest rates over the year and the sharp deceleration of money supply growth in the late summer led the staff to reduce its estimates of the demands for money that were likely to emerge in the months ahead. It appeared that a delay in a move toward easing could require a much more substantial move at a later time to achieve moderate M_1 growth. At its September 18 and October 16 meetings, the FOMC raised the upper ends of the two-month tolerance ranges for the aggregates a bit above those suggested by the staff, expecting that reserves would be provided more readily as the period unfolded and that the Federal funds rate could decline.

In fact, M_1 became considerably stronger in the closing months of the year, and it appeared that growth in previous months would be revised upward. While inflation remained a disturbing problem, the pace of real economic activity decelerated and it appeared that the curtailment of oil supplies from abroad could have significantly adverse effects. The Committee at its November 20 meeting retained the objective of moderate growth in the long run. M_1 growth continued to strengthen, and by the end of November appeared to be moving above an acceptable range for the last two months of the year. On November 30, however, the Committee agreed to forestall a tightening of money market conditions because of current uncertainties with respect to the economic outlook and the sensitive state of market psychology. At its final meeting of the year, on December 17-18, the FOMC moved further in the direction of less restraint and decided to seek some easing of bank reserve and money market conditions, provided that the aggregates did not appear to be growing excessively.

THE MANAGER'S RESPONSE. After the September meeting, estimated money supply growth over the two months ended October fell below an acceptable range and the Manager moved to provide reserves more readily. While the Manager was careful in light of the FOMC's desire to avoid generating market impressions that monetary restraint was being relaxed significantly, the securities markets responded dramatically to the first sign that the System was changing its reserve and money market objectives.

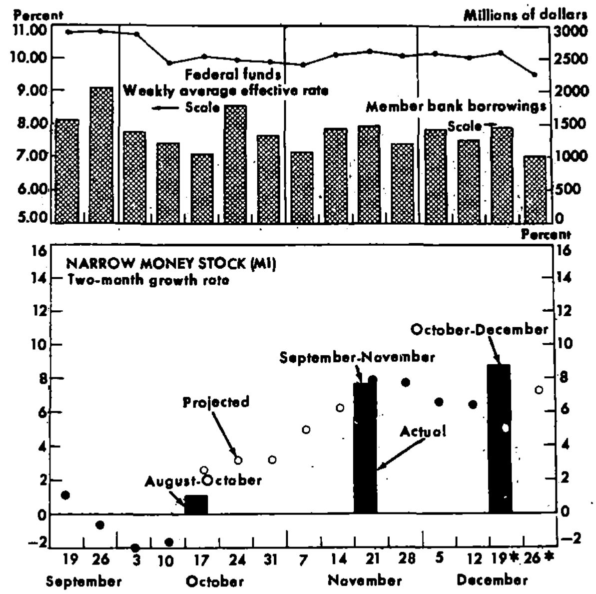
Three-month bill rates plummeted from 8.68 percent on the day of the meeting to 6.96 percent by September 27. At the same time, a downward shift in member bank borrowings and enlarged demands for Federal funds by major banks seeking to avoid issuing CDs until rates fell further kept the money market under constant pressure. The Manager asked for guidance in resolving the inconsistency between the indicated response to the aggregates, which were expected to fall below the FOMC's objectives for the September and October period, and the state of the credit markets. The Committee agreed at a telephone meeting on October 2 that money market conditions should be allowed to ease somewhat if this easing did not threaten to reinvigorate the sharp rally in the markets for short-term securities. While the Manager became more aggressive in his efforts to supply nonborrowed reserves, the money market remained under pressure and the Federal funds rate showed no tendency to move below 10¾ percent. At the same time, M_1 growth weakened further and the other measures moved well below their specified ranges. On October 10, the Committee held a second telephone meeting and directed the Manager to supply reserves consistent with some easing of money market conditions beyond that indicated eight days earlier. The Desk redoubled its efforts to achieve this and, following substantial additions to nonborrowed reserves, the funds rate had declined to 10 percent by the October FOMC meeting.

In the weeks after the October 16 meeting, estimates of money supply growth initially remained within the range indicated as acceptable for the two months ended November while bank willingness to permit CDs to run down pulled RPD below its range. The Account Manager retained a somewhat more generous approach to the provision of nonborrowed reserves and began permitting doubts about reserve availability to be resolved on the side of a bit less tautness, with the Federal funds rate settling a shade under 10 percent (see Chart XI). This process was halted shortly thereafter when estimates of M_1 growth strengthened, reaching 8 percent over the two months. While the Desk adopted a more grudging approach and the Federal funds rate rose to around 10¾ percent, efforts to restrict reserve supplies more noticeably were tempered by the Treasury refunding that was in process and by the unsettled conditions that developed in the securities markets.

The surge in M_1 growth during November and the uncertainties attributable to the oil shortage led the staff to conclude that demands for M_1 in the near term could increase, while the economic outlook became more uncertain. The Committee established tolerance ranges for the aggregates over the two months ended December that were

Chart XI

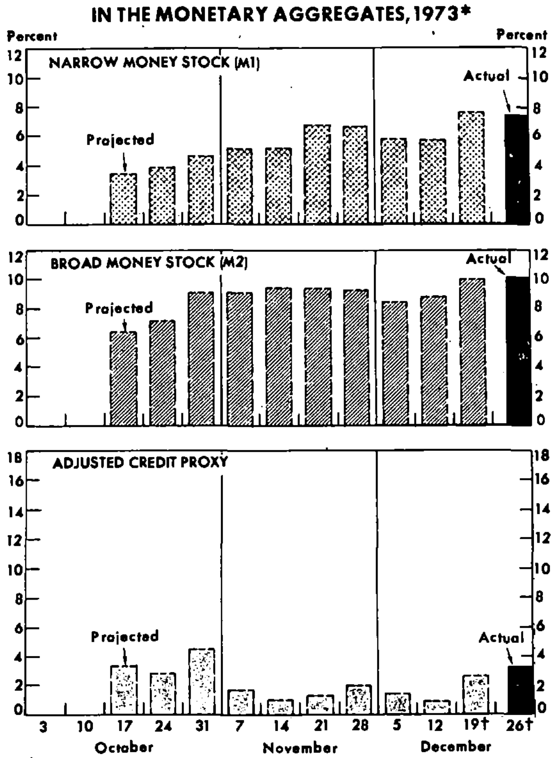
MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF M1 GROWTH, 1973



*Reflects annual bench-mark revisions.

Chart X

WEEKLY FORECASTS OF QUARTERLY GROWTH IN THE MONETARY AGGREGATES, 1973*



* As of two days after end-of-statement week shown.
† Reflects annual bench mark revisions.
Source: Board of Governors of the Federal Reserve System.

likely to be consistent with little change in money market conditions. Soon after the meeting, however, incoming data suggested that growth in M_1 and also M_2 might be stronger than acceptable over the two months. While these conditions ordinarily would have called for limiting reserve availability and thus generating a rise in the Federal funds rate, the Manager sought to maintain prevailing money market conditions until the December meeting following the Committee's concurrence on November 30 with the Chairman's recommendation of this course of action.

At its December 17-18 meeting, the Committee concluded that the economic situation and outlook called for a modest easing of monetary policy. The FOMC also decided to place somewhat more emphasis on money market conditions until its next meeting and directed the Manager to seek some easing of these conditions provided that the aggregates did not appear to be growing excessively. Accordingly, the Desk moved promptly after the meeting to provide nonborrowed reserves at a more generous pace. But the process was delayed again just before the year-end when estimates of the aggregates turned out stronger than anticipated and it appeared that M_1 was moving above an acceptable range for December and January combined. The Manager was providing reserves consistent with Federal funds trading in a 9¾ to 10 percent range as the year drew to a close. While this was below the level in November, the faster growth in the aggregates, with M_1 increasing at a 7½ percent rate over the fourth quarter, had forestalled the emergence of a more significant easing in conditions of reserve availability.

THE SECURITIES MARKETS. There was an ebullient reaction in the securities markets in late September when participants sensed the System's response to the deceleration of money supply growth to a 0.3 percent rate over the third quarter. A spectacular decline in short-term rates occurred shortly after the September meeting when the Desk purchased a small volume of Treasury bills at a time when the money market was not particularly firm in comparison with previous weeks. Banks reduced offering rates on CDs by over 2 percentage points to around 8½ percent between September and the end of October. Dealers in prime commercial paper reacted similarly, with rates on 90- to 119-day paper falling to 8⅜ percent from close to 11 percent. Treasury bill rates plummeted, with the three-month issue dropping by about 2 percentage points to around 7 percent. Later, when M_1 growth accelerated and the funds rate failed to decline significantly, the reaction was almost as sharp.

The Treasury bill market was especially volatile toward the end of the year. Expectations that the System would ease to ward off an economic slowdown generated by fuel scarcities were dampened by signs of accelerated M_1 growth. Increased bill sales by foreign central banks, due to the improved international position of the dollar, added to market caution. A significant increase in rates occurred after the Treasury announced, in early November, the sale of bills to raise new cash. In all, the Treasury raised an additional $8 billion of cash in the bill market in the last three months of the year, as its needs were enlarged by redemptions of nonmarketable issues held by foreign central banks. The central banks also liquidated a substantial volume of marketable coupon issues toward the end of the year as the dollar improved against other currencies. By the year end, bill rates were still 40 to 50 basis points above the low points reached in late September and early October. Short-term bill rates remained above rates on longer maturities, with the three-month issue bid at 7.45 percent and the one-year issue at 6.86 percent. The continued moderation of business credit demands at banks, reflecting in part a shift of borrowers to the commercial paper market, led to modest CD growth in the final months of the year. Offering rates retraced part of the earlier declines, with the ninety-day maturity closing the year at 9½ percent.

The long-term debt markets were also highly responsive to expectations of a change in System policy and to changing assessments about prospects for the economy. Yields declined in late September and early October. The terms of the Treasury's refunding, announced on October 24, were greeted favorably, but the emerging pressures on short-term rates soon began to dampen market sentiment. The Treasury auctioned $3.8 billion of issues to replace maturing securities, and the package included $1.5 billion of 25½-month notes, $2 billion of six-year notes, and $300 million of additional 7½ percent bonds due in 1993. Coupon rates of 7 percent were established for both notes. The October 30 auction of the six-year notes at an average yield of 6.82 percent was disappointing, and yields adjusted higher before the two auctions held on the next day. The 25½-month notes were sold at 6.91 percent, and the long-term bonds were awarded at 7.35 percent with all bonds awarded at the price of the lowest accepted tenders.

Dealers were unable to reduce inventories significantly in the weeks that followed, and coupon prices declined quite steadily. The rounds of price increases expected to result from potential fuel scarcities deepened concern over inflation and had particular impact in the long-term markets. By the last week in December, the yield on ten-year Government securities reached 6.87 percent, little changed from its early-October level. Corporate bond yields experienced more pronounced increases, reflecting expectations of enlarged financing demands in 1974. The yield on recently offered Aaa-rated utility issues rose to 8.10 percent, 20 basis points below its August high. Stronger bank interest in municipal issues benefited the tax-exempt market, and the Bond Buyer's index stood at 5.16 percent, 43 basis points below its August high.