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Open Market Operations in 1972

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. Paul Meek, Assistant Vice President, Open Market Operations and Treasury Issues function, was primarily responsible for preparation of the report.*

Federal Reserve policy during 1972 sought to promote the moderate monetary growth deemed essential to a strong economic expansion and to continued progress in dampening inflation. As in 1970 and 1971, the Federal Open Market Committee (FOMC) included the rate of growth of the money stock—private demand deposits plus currency in the hands of the public—as one of its important policy objectives. Once again, M_1 proved an elusive target. It grew at the relatively rapid rate of 8.3 percent over the year (see Chart I), well above the rate of other recent years. M_2—M_1 plus time and savings deposits exclusive of large negotiable certificates of deposit (CDs) —also grew rapidly, expanding at a 10.8 percent rate over the same period. The adjusted bank credit proxy—a close approximation of total member bank liabilities, exclusive of capital—grew at an 11.6 percent rate.[1]

The Committee adopted in February a reserve-targeting procedure for guiding open market operations. Under this procedure, which is described more fully below, the Committee formulated its operating instructions to the Desk in terms of tolerance ranges for the growth of reserves available to support private nonbank deposits (RPD). Typically, the Committee specified an expansion of this measure over a two-month period that the staff believed would mesh with the growth desired for the monetary aggregates. If RPD growth appeared likely to exceed its prescribed tolerance range, for example, the instructions called for the Desk to provide nonborrowed reserves more grudgingly to the banking system so long as the average Federal funds rate did not move out of the tolerance range established by the Committee. In consequence, nonborrowed reserves grew at a 6.0 percent rate over the year, compared with growth rates of 9.7 percent and 9.5 percent recorded for RPD and total reserves, respectively.

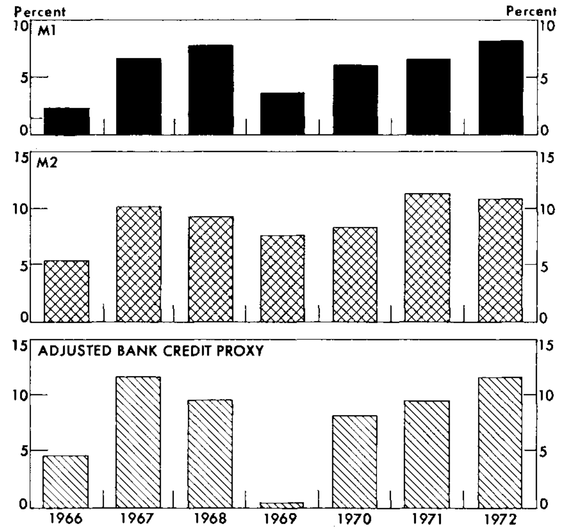
The economic recovery, which had seemed sluggish through much of 1971, gathered steam in 1972, reducing unemployment and the margin of unused capacity in the process. In 1970 and 1971, open market operations had pressed reserves on the banks to spark the monetary and credit creation needed to improve liquidity and to spur the credit-financed spending essential to economic revival. But in 1972 the quickening pace of the economy itself augmented the demands for money and credit falling on the banking system. The Federal Reserve's role shifted to resisting the banking system's demand for reserves as the banks sought to satisfy strong loan demands from the housing, business, and consumer sectors while continuing to add to their investment in securities.

Open market operations began the year on an expansive note as the Committee sought to make up for the sluggishness of M_1 in the latter part of 1971. By early February the ready availability of nonborrowed reserves had pushed the Federal funds rate down to 3¼ percent from 4¾ percent in early December. In the latter part of February, however, both RPD and the money stock began to grow rapidly. Under the new RPD procedures, the Desk promptly held back on the provision of nonborrowed reserves relative to the growth of reserve requirements, and the Federal funds rate rose within three weeks to the

[1] Since the FOMC sought in early 1972 to make up for the slow M_1 growth of the fourth quarter of 1971, the fifteen months ended in December 1972 provide perhaps a more appropriate time period for judging the behavior of the aggregates. Over this interval, M_1, M_2, and the credit proxy grew at rates of 7.0 percent, 10.6 percent, and 11.4 percent, respectively.

Chart I

CHANGES IN MONEY SUPPLY AND ADJUSTED BANK CREDIT PROXY



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.

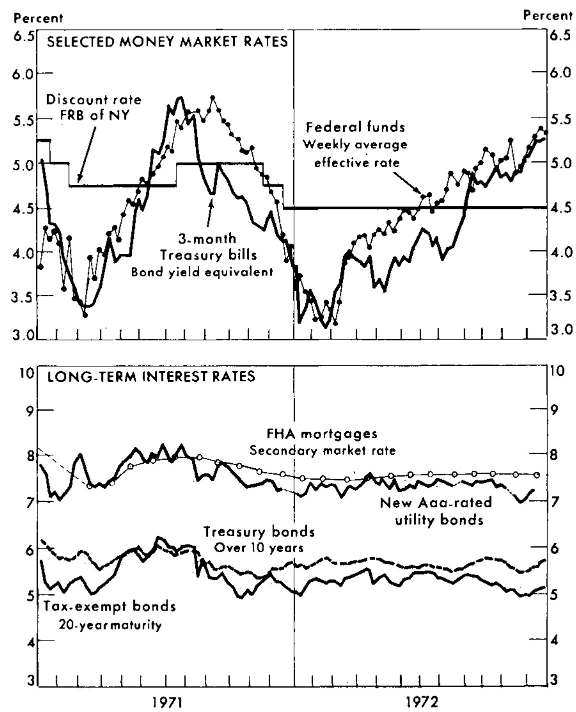
upper limit of the Committee's prescribed tolerance range. Subsequent periods of strength in RPD and M_1 led to a further moderate shift in operations, bringing the Federal funds rate about in line with the 4½ percent Federal Reserve discount rate at midyear. The growth in M_1, in fact, slowed to 6.1 percent in the second quarter from 9.2 percent in the first.[2]

By midyear, the economy was clearly moving ahead strongly while a resurgence of speculative international currency flows to Europe and Japan provided cause for concern. A burst of M_1 growth in July elicited further System efforts to damp down the provision of nonborrowed reserves, and the Federal funds rate rose to about 5⅛ percent near the end of the third quarter. However, a sharp reaction in market interest rates from mid-August to mid-September required the Manager of the System Account, under the FOMC's instructions, to avoid further reserve pressure. At about this point, the growth of both RPD and M_1 began to moderate, so that no further adjustments in reserve strategy were required under the RPD procedure for a number of weeks. About mid-November, M_1 and RPD again began to grow rapidly and open market operations again resisted the demand for reserves. The Federal funds rate rose to around 5⅜ percent at the year-end, compared with 4 percent a year earlier.

System efforts to restrain the growth of nonborrowed reserves over the year were reflected in the rise of member bank borrowings at the Reserve Banks from a minimal level of $33 million in February to $1,050 million in December. The Federal funds rate rose in parallel fashion from 3¼ percent to 5⅜ percent. Other short-term interest rates followed suit. The banks aggressively expanded their negotiable CDs to meet their loan demands—with the rate on 60- to 89-day CDs rising to 5⅜ percent in December, up 1⅜ percentage points over the year. Treasury bill rates increased as well, although there were several times

Chart II

SELECTED INTEREST RATES



Sources: Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York, and The Bond Buyer.

[2] These data on the aggregates reflect the revisions of early 1973. The data used later in describing operations during the year are those available at the time.

during the year when foreign central bank demand depressed bill rates relative to rates on other instruments. At the year-end, the three-month bill rate was bid about 5⅛ percent, 146 basis points above the level one year earlier.

In contrast, interest rates in the capital markets were comparatively stable over the year (see Chart II), as inflationary expectations diminished and demands for long-term credit proved moderate. Corporate borrowing in the long-term bond markets declined appreciably from the previous year. Municipal borrowing also receded somewhat toward the end of the year, as tax collections and Federal revenue sharing helped rebuild liquidity at the state and local government levels. Mortgage credit grew at a record clip, but a good savings inflow, thrift industry liquidity, and the growth of real estate investment trusts sustained the high volume of activity with little increase in yields. United States Government coupon issues traded in a narrower range of yields than in many years, although heavy Treasury financing in the last quarter contributed to a rise near the end of the year.

THE COMMITTEE'S RESERVE-TARGETING STRATEGY

The Committee's choice of a reserve strategy for open market operations in February continued the evolutionary search for more effective means of pursuing the Committee's long-term objectives for the monetary and credit aggregates. As the year progressed, the Desk developed new operational procedures and the Committee modified its own formulation of instructions to the Desk. For the Manager of the Open Market Account, the reserve approach necessitated formulating the Trading Desk's weekly operational targets explicitly in terms of reserves and changing the weekly reserve targets in accordance with the FOMC's new instructions.

THE FOMC'S INSTRUCTIONS TO THE MANAGER. The Committee embodied its reserve strategy in a set of interlocking instructions that together specified how the Manager should respond to incoming information on reserves and the aggregates between FOMC meetings. The Committee expressed its primary instruction in terms of RPD—i.e., total reserves less reserves required for United States Government and interbank deposits. Drawing on alternative specifications prepared by its staff for each meeting, it established a tolerance range for the growth of RPD from the calendar month before the FOMC meeting to the calendar month after the meeting. This corresponded approximately to the deposit behavior required in the four weeks after the FOMC meeting to move in the direction of the Committee's longer term goals for the aggregates.

During much of 1972, the Committee was concerned primarily with overly rapid growth of the money stock (M_1) and other aggregates. The Committee's reserve instruction ensured that, if the projected growth of RPD rose toward the top of its tolerance range, or above it, between meetings, the Manager was to retard the growth of nonborrowed reserves relative to deposit growth. This process would bring upward pressure on the Federal funds rate and member bank borrowings at the Reserve Banks. In time the portfolio adjustments set in motion by higher short-term interest rates would be expected, *ceteris paribus*, to dampen the growth of private deposits and RPD.

The Committee also stipulated, however, that it wished to avoid both sharp short-run fluctuations in money market conditions and undesirably large cumulative deviations in money market conditions in either direction in the interval between meetings. To this end, it chose a tolerance range within which the Manager could move the Federal funds rate between meetings. The Committee also indicated that—even if RPD were on target—allowance should be made for any significant deviations that developed between the actual rates of growth in the aggregates (mainly M_1) and the growth rates desired, because of a shift of the multiplier from that expected by the staff. Finally, it was understood that the Chairman might call upon the Committee to consider the need for supplementary instructions if serious problems arose in the attempt to achieve the Committee's multiple objectives.

These specifications of a response function for the Desk differed in a number of ways from those that had prevailed in 1971. In that year, the FOMC had called for the Desk to respond by varying the Federal funds rate promptly when the most recent information on M_1, M_2, and the credit proxy indicated a significant deviation from their respective tracking paths. The FOMC had prescribed generally modest changes in the Federal funds rate, giving considerably more weight to M_1 than to the other two aggregates.[3]

The intent of the new approach was to attempt to achieve better control of the aggregates through focusing on reserves as a handle for those aggregates. At the same time, use of the two-month growth rate provided a procedure

[3] Alan R. Holmes and Paul Meek, "Open Market Operations and the Monetary and Credit Aggregates—1971", *Monthly Review* (Federal Reserve Bank of New York, April 1972), pages 79-94.

for smoothing out swings in weekly data, whereas this had previously been done judgmentally by the Manager. It also appeared to be part of the Committee's intent to permit greater changes in the Federal funds rate than had been allowed previously.

THE MANAGER'S OPERATIONAL STRATEGY. In evolving practice, the Manager and his staff formulated each week's reserve targets on Friday morning in the light of new information on RPD and the other aggregates. At that time, both the Board of Governors and the New York Bank staffs presented new estimates of how RPD might grow over the prescribed two-month interval at current interest rates. Subordinate detail on the expected weekly behavior of RPD was included. The two staffs also presented their projections of the behavior of M_1, M_2, and the credit proxy for the remainder of the calendar quarter, and—near the end of the quarter—for the following quarter as well. Again there was subordinate weekly detail for the period leading up to the next FOMC meeting.

The starting point for the weekly review of strategy was the behavior of RPD itself—both for the weeks on which hard data were available and for the two-month interval. Suppose RPD were running above its weekly path and were projected above the top of its two-month tolerance range. The Manager would first examine whether this overrun resulted from such technical factors as higher excess reserves or a shift in the distribution of deposits toward banks with higher average reserve requirements, both relative to the assumptions made by the FOMC staff in drawing up the RPD path. If RPD strength persisted after allowance for these technical factors, the behavior of M_1 and the other aggregates relative to the Committee's desires had to be considered. If these aggregates were also in excess of the desired levels, then the Manager would set a weekly reserve target that involved scaling back the level of nonborrowed reserves relative to the behavior of deposits. (If, on the other hand, M_1 were on track, the Desk would tend to give less weight to RPD strength in setting its weekly targets.)

As noted earlier, the FOMC's choice of a reserve-oriented strategy led to a recasting of the Desk's weekly operational targets. For the first statement week after the FOMC meeting, the Desk developed a reserve target that it believed was consistent with the FOMC's initial money market conditions. The Desk first estimated the volume of excess reserves expected for the week under the given initial conditions, allowing for historical patterns and the carry-in from the preceding week of reserve excesses or deficiences by the banks. It then arrived at an estimate of total reserves for the week by adding its estimate of the likely level of excess reserves to required reserves, which were preestablished under lagged reserve accounting. The week's nonborrowed reserve target was then calculated by subtracting the member bank borrowing level associated with the initial Federal funds rate specified by the Committee.

The modification of weekly reserve targets in accordance with actual RPD behavior was quite straightforward under this procedure. If, for example, the behavior of RPD and the aggregates suggested the need to hold back on nonborrowed reserves, the Desk would increase the borrowing level to be subtracted from estimated total reserves to give the week's nonborrowed reserve target. (Typically, the Desk tended to move in \$50 million increments.) The Federal funds rate could be expected to rise, and this was appropriate as long as it had not reached the upper end of the FOMC's tolerance range. This procedure provided for an orderly week-to-week progression in the Federal funds rate when RPD and the aggregates so indicated, but avoided sharp fluctuations in the rate.

RESERVE TARGETING IN OPERATION. The Desk's experience immediately after the February 15 meeting provides a case study of the new procedures in operation. The FOMC's instructions specified a 6-10 percent range for the growth of RPD from January to March. The Federal funds rate was expected initially to average around 3¼ percent, well below the Federal Reserve discount rate of 4½ percent.

On February 18, the Desk learned that RPD for January had been revised downward sufficiently to add about 1 percentage point to the January-March growth rate. The Board staff's new estimate of that growth was 9 percent—about the middle of the range, allowing for the January revision—but the New York estimate was about 12 percent because of stronger expectations of growth in private nonbank deposits through mid-March. By February 25, incoming data showing pervasive deposit strength led both staffs to project RPD growth over the two months near the upper end of the FOMC's tolerance range. Moreover, the first-quarter growth rates of M_1, M_2, and the bank credit proxy appeared somewhat above what the Committee had expected. Some downward revision in weekly nonborrowed reserve targets was therefore indicated, carrying with it the likelihood that the Federal funds rate would rise.

The reserve outlook on February 25 for the March 1 statement week is shown in the table. With excess reserves estimated at \$270 million, bank demand for total reserves for the week was expected to approximate a daily average of \$31,795 million (line 3). Given the strength in RPD, it appeared appropriate to scale the nonborrowed reserve target down to around $31,700 million (line 4) rather than to continue supplying sufficient nonborrowed reserves to hold the Federal funds rate near 3¼ percent. Turning to prospective sources of reserves, a rise in float and a decline in Treasury balances at the Reserve Banks were expected to combine with other market factors to provide a $1,091 million rise in nonborrowed reserves (line 6). System open market operations undertaken prior to Friday would more than offset this, draining $1,148 million of reserves (line 7). Even so, projected nonborrowed reserves were still in excess of the targeted level (line 10). The reserve projections indicated a need to absorb a moderate amount of reserves through open market operations.

In the event, the Desk concluded that nonborrowed reserves were even more abundant than the statisticians were estimating, because reserves appeared to be abundant in the Federal funds market. It acted on Friday, February 25, to lower the week's average nonborrowed reserves by $321 million. On Monday, the reserve reports showed that market factors had supplied far more reserves than expected on Friday so that nonborrowed reserves still appeared above target. On Monday, Tuesday, and Wednesday, System operations absorbed an additional $1,380 million of reserves or about $200 million on a daily average basis for the statement week. Federal funds traded predominantly at 3¼ percent on Tuesday and Wednesday, with some trading as high as 3⅝ percent on the final day of the statement week (see Chart III). On balance, although nonborrowed reserves came out close to target, the average Federal funds rate of 3.18 percent was below what was implied by Friday's decision that nonborrowed reserves should be kept under a tighter rein.

On Friday, March 3, RPD continued to look on the high side for the weeks ahead, and the aggregates remained strong. The Desk again undertook to hold nonborrowed reserves below the estimated bank demand for total reserves, expecting that this would cause the Federal funds rate to rise to around 3½ percent. The projections indicated that market factors and previous System operations would drain $307 million of nonborrowed reserves (line 8), so that no further System action to absorb reserves was indicated. Upward pressure on the Federal funds rate on Thursday and Friday indicated that nonborrowed reserves appeared to be behaving as desired. No System action turned out to be required during the statement week. Federal funds traded chiefly at 3⅜ percent before the weekend, and 3½ percent thereafter. On the statement date, March 8, the banks bid up the rate as the extent of the

RESERVE ESTIMATES AND DATA — 1972

Daily average; in millions of dollars; not seasonally adjusted

	March 1 week as of		March 8 week as of		March 15 week as of	
	February 25	March 3	March 3	March 10	March 10	March 17
Bank demand for reserves:						
1. Required reserves	31,525	31,525	31,323	31,323	31,713	31,713
2. Excess reserves	270*	213	200*	167	250*	405
3. Total reserves	31,795*	31,738	31,523*	31,490	31,963*	32,118
4. **Approximate Desk nonborrowed reserve target**	31,700		31,400		31,850	
Sources of nonborrowed reserves:						
5. Nonborrowed reserves for preceding week	31,855	31,855	31,668	31,668	31,387	31,387
Change in nonborrowed reserves in current week:						
6. Market factors	+1,091*	+1,520	− 456*	− 431	+ 128*	+ 347
7. System operations	−1,148	−1,705	+ 149	+ 150	+ 11	+ 370
8. Total change	− 57*	− 185	− 307*	− 281	+ 139*	+ 717
9. Nonborrowed reserves* for current week (5+8)	31,798*	31,670	31,361*	31,387	31,526*	32,104
10. **Nonborrowed reserve target less projected nonborrowed reserves (4—9)**	− 98*		+ 39*		+ 324*	

Note: Reserve data are those employed at the time; data do not reflect revisions made subsequently.
*Projected.

cumulative reserve deficit became apparent. The rate rose as high as 4½ percent and member banks borrowed $704 million that night at the Reserve Banks (see Chart III). In the afternoon, even though it was too late to affect reserves that day, the Desk bought $76 million of Treasury coupon issues for delivery the next day, using the only channel open to it to indicate resistance to the sharp rise in the Federal funds rate.

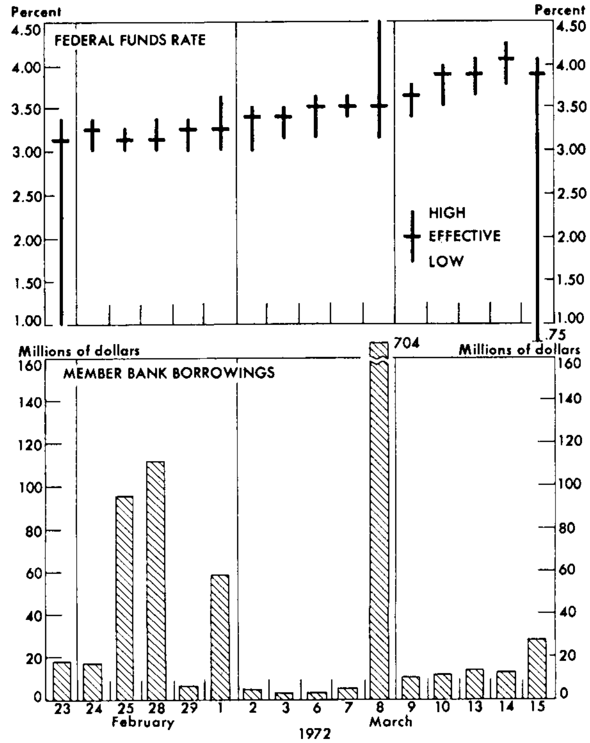
On Friday, March 10, the RPD estimates suggested a January to March growth rate of 10 to 11 percent, of which 1 percent still reflected the downward revision of January's data since the FOMC meeting. However, these estimates included lower excess reserves than assumed in the construction of the tolerance ranges and there had also been an unexpected shift of deposits toward "country" banks, which lowered the average required reserve ratio. M_1 growth for the first quarter was projected at 2 percentage points higher than had been expected at the February 15 meeting, and M_2 and the credit proxy were similarly strong. Accordingly, the Manager again planned to be a reluctant supplier of nonborrowed reserves.

The reserve outlook on March 10 was such that the interbank market for reserves—the Federal funds market —should have experienced considerable demand pressure. Member bank demand for total reserves in the March 15 statement week was expected to rise by $473 million from the previous week by virtue of a $390 million increase in required reserves for the week and the Desk's estimate that excess reserves would also rise. Since market factors and previous System action were expected to supply only a moderate amount of reserves, nonborrowed reserves were estimated to be more than $300 million below target. In this situation, the Federal funds rate opened on Friday, March 10, at 3¾ percent and began to rise further. At this point the Desk stepped in to supply reserves, chiefly through repurchase agreements, adding $252 million on average to weekly nonborrowed reserves. After the weekend, strong bank demand for reserves pushed the Federal funds rate to 4 percent. The Desk injected reserves on Monday and Tuesday, raising daily average nonborrowed reserves for the week by an additional $104 million. Market factors were also supplying an unexpectedly large volume of reserves (line 6). On Wednesday, March 15, member banks discovered belatedly that they had accumulated reserves substantially in excess of their requirements and Federal funds traded as low as ¾ percent (see Chart III).

The initial experience with reserve targeting after the February 15 meeting underscored one important point. The new procedure was effective in prescribing the Desk's response to incoming information, but that response did not assure that the RPD objective would be

Chart III

FEDERAL FUNDS RATE AND MEMBER BANK BORROWINGS FROM FEDERAL RESERVE BANKS



Sources: Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York.

attained. The Desk's management of nonborrowed reserves led to a ¾ percentage point rise in the Federal funds rate within a month, a somewhat larger change than the Committee had been willing to contemplate in previous years. RPD growth over the January-March interval turned out to be 9.9 percent, compared with the FOMC's 6 to 10 percent objective. However, after allowing for the January revisions and the unexpected behavior of deposit distribution and excess reserves, RPD, in fact, turned out to be about 1.5 percentage points above the upper end of the Committee's tolerance range.

The episode indicated that one month was too short an interval for the System's action to bring about the necessary change in private deposits, and hence in RPD. This result was quite consistent with System research findings that the lag from Desk action through nonborrowed reserves and the Federal funds rate to the response of deposits is measured in months rather than weeks. The mean lag from changes in the Federal funds rate to changes in private demand deposits was about four to five months in the Pierce-Thomson twelve-equation behavioral monthly model and in the Davis reduced-form equations.[4] According to both of these formulations, the principal impact on deposits of Desk-initiated changes in reserve management occurs beyond the four to five weeks ahead, and thus beyond the horizon of the FOMC's tolerance ranges. The RPD approach must be judged then on its effectiveness in triggering a Desk response appropriate to the FOMC's primary longer run objective of controlling the aggregates themselves. One cannot expect the Desk to be able to hit the FOMC's stated RPD objectives within the short period embraced by the FOMC's instructions if deposits depart significantly from the staff's estimates.

RESERVE TARGETING DURING 1972

MARCH-JUNE. By the March 21 FOMC meeting the Desk was managing reserves with a view to maintaining the Federal funds rate at 4 percent. The rise in the Federal funds rate had exerted upward pressure on other short-term interest rates. Treasury financing had also added $4.6 billion to the market supply of bills in the intermeeting interval, and the three-month bill rate had risen by 87 basis points from February 14 to March 20. Interest rates on long-term securities had shown little change over the interval. The growth rates of the aggregates appeared quite strong. M_1, after three months of slow growth, appeared likely to expand at a rapid rate in the first quarter (see Chart IV). M_2 and the credit proxy were expected to grow even more rapidly over the same interval.

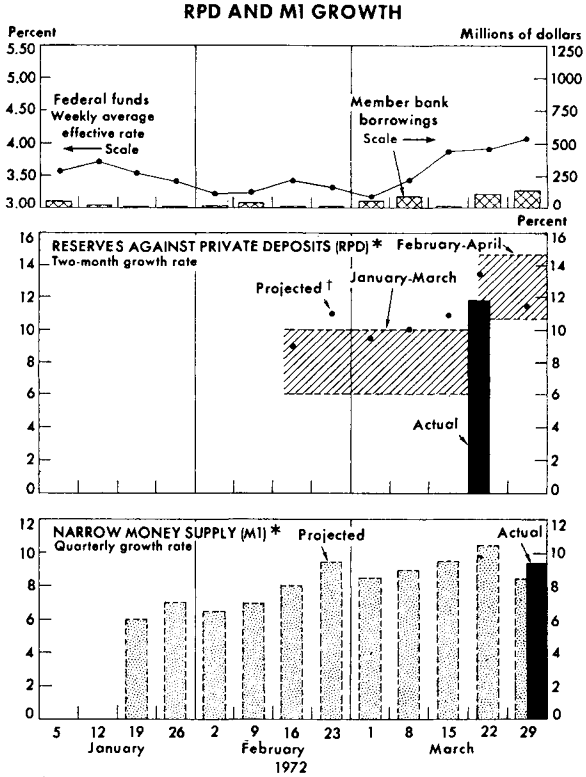
Against the background of a strengthening economic outlook, the Committee agreed that moderate growth in the aggregates was called for over the second quarter—rates of growth less rapid than appeared likely for the first quarter. The FOMC decided that a growth rate of 9-13 percent in RPD would be appropriate for the February-April period. The Committee was to be consulted if a marked rise in the weekly average Federal funds rate seemed indicated.

Implementation of the Committee's instructions proved straightforward. Deposit growth continued strong, and RPD gravitated above the FOMC's tolerance range, albeit about 1 percentage point of the growth reflected allowable technical factors. M_1, M_2, and the credit proxy rose above their tracking paths, although not dramatically so. Consequently, nonborrowed reserves were persistently held down, and average member bank borrowings at the Federal Reserve discount window rose to $106 million in the four weeks ended April 12, compared with $43 million in the preceding five weeks. The Federal funds rate rose from 4 percent to 4¼ percent over the intermeeting period. The upward pressure on both borrowings at the discount window and the Federal funds rate tended to be concentrated on Wednesdays, when the accumulated reserve deficiencies resulting from the System's reserve management had to be settled.

New questions of interpretation of the RPD targeting procedure arose in the interval after the FOMC's April 18 meeting. The Committee established a 7-11 percent

Chart IV

MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF RPD AND M1 GROWTH



*Seasonally adjusted annual rates.

†As of two days after end of statement week shown.

Sources: Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York.

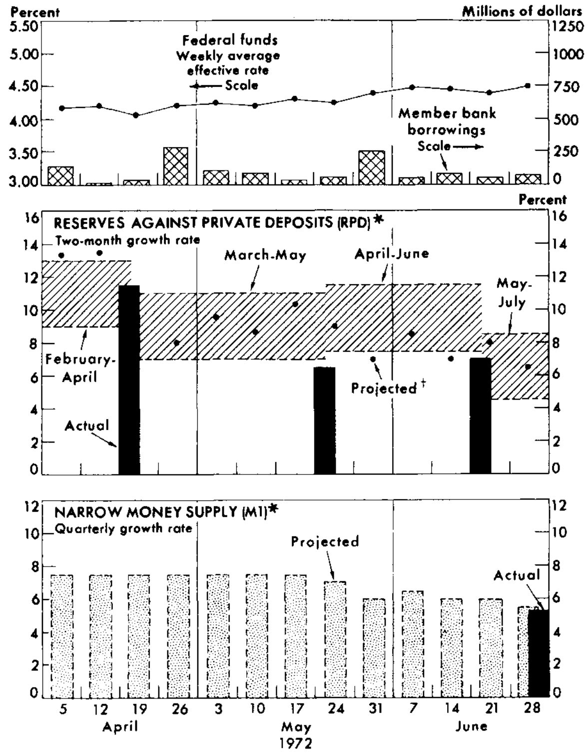
[4] Thomas D. Thomson and James L. Pierce, "A Monthly Econometric Model of the Financial Sector" (paper presented at the May 1971 meeting of the Federal Reserve System Committee on Financial Analysis), and Richard G. Davis, "Estimating Monthly Changes in Deposits with Reduced-Form Equations" (unpublished manuscript, Federal Reserve Bank of New York, April 1972).

tolerance range for the March to May growth in RPD at that meeting (see Chart V). The major objective continued to be a slower second-quarter growth rate for the aggregates than had prevailed in the first quarter. Through May 5, projections of RPD over the two-month interval tended to creep up. M_1 and M_2 were close to the path, and the credit proxy was running quite strong relative to expectations. The Desk continued to supply nonborrowed reserves a step behind the banking system's demand for reserves. On May 12, however, new data on M_1 suggested much weaker than expected behavior, so that RPD growth for the two-month interval was scaled down to about 8.5 percent. Projected growth of M_1, M_2, and the adjusted credit proxy for the second quarter remained quite strong.

The Manager felt at this point that discussions within the Committee and three months of experience had established that RPD was the handle through which the FOMC sought to control the aggregates rather than an end in itself. In emerging practice, account had already been taken of variations in excess reserves and in the average reserve ratio. With the aggregates still expected to be quite strong for the second quarter, it did not seem appropriate to become more generous in the provision of nonborrowed reserves. Member bank borrowings at the Reserve Banks averaged \$113 million in the five weeks ended May 17, about the same as in the previous four weeks. The Federal funds rate continued to fluctuate around the 4¼ percent level.

Chart V

MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF RPD AND M1 GROWTH



*Seasonally adjusted annual rates.
†As of two days after end of statement week shown.
Sources: Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York.

At both its May 23 and June 19-20 meetings, the Committee reiterated its desire to achieve moderate rates of growth in the monetary aggregates over the months ahead. In each case, it was expected that the RPD tolerance ranges established might necessitate some firming of money market conditions. Committee discussion, however, made clear that additional consultation would be in order if the Federal funds rate were to rise sharply.

After both meetings, the RPD and aggregate estimates were initially on the strong side, but subsequently turned weak. The Manager responded to strength in late May by supplying nonborrowed reserves sparingly, pushing the Federal funds rate toward 4½ percent. As weakness appeared, he shaded upward his weekly nonborrowed reserve targets, and the rate moved to around 4⅜ percent. Responding to initial strength in RPD and the aggregates after the June meeting, the Manager became a more reluctant supplier of nonborrowed reserves. Member bank borrowings at the Reserve Banks rose, and the Federal funds rate moved up to trade around the 4½ percent discount rate. As weakness in RPD developed, the Desk again planned to be a less reluctant supplier of reserves. But reserves fell persistently short of expected levels and member banks also borrowed little on the June 30 statement publishing date. The resulting reserve deficiencies led to strong upward pressure on the Federal funds rate around the July 4 holiday despite large System reserve injections. Banks responded by hoarding excess reserves in the following week and Federal funds continued to trade at 4⅝ percent and 4¾ percent before the weekend despite an abundance of nonborrowed reserves in the banking system. Thus, bank behavior and the problems of projecting nonborrowed reserves resulted for a time in greater than desired stringency in the money market.

JULY-SEPTEMBER. By the time the Committee met on July 18, the unintended firming of rates appeared advantageous. Private deposits had turned extraordinarily strong in the first two weeks of July, a development that had become clear only on July 14. RPD growth was now projected at the top of the 4½ to 8½ percent growth specified for May-July at the previous meeting. Reviewing these developments, the FOMC established a 3-7 percent tolerance range for RPD over the following two-month period (see Chart VI). M_1, which had risen at a 5.3 percent rate in the second quarter, was expected to grow somewhat faster in the third quarter, while M_2 and the credit proxy were both expected to grow more rapidly than M_1. The Desk was instructed to take account of the Treasury financing then in prospect, as well as capital market and international developments.

As the period unfolded, both private demand deposits and large CDs came in quite strongly, leading to a progressive increase in the projected growth of RPD over the two-month interval. The Account Management became more grudging with respect to nonborrowed reserves, expecting that money market conditions would become firmer and that a greater part of member bank reserve needs would be met through the discount window. The pace and extent of the System's moves were constrained, however, by the major Treasury financing under way during the period. The Federal funds rate rose from about 4⅝ percent at the time of the July meeting to about 4¾ percent by mid-August. Average member bank borrowings at the Reserve Banks rose in the four weeks ended August 9 to \$249 million from \$182 million in the preceding four weeks.

At its August 15 meeting the FOMC's staff indicated that M_1, M_2, and the credit proxy appeared likely to grow quite rapidly in the third quarter. The Committee agreed that the economic outlook called for moderate growth in the monetary aggregates over the months ahead. It decided that RPD growth in a 5-9 percent range for July to September would be appropriate, expecting this rate to bring some moderation in monetary growth. The Committee recognized that this goal might result in firmer money market conditions, but indicated that a marked firming should be avoided.

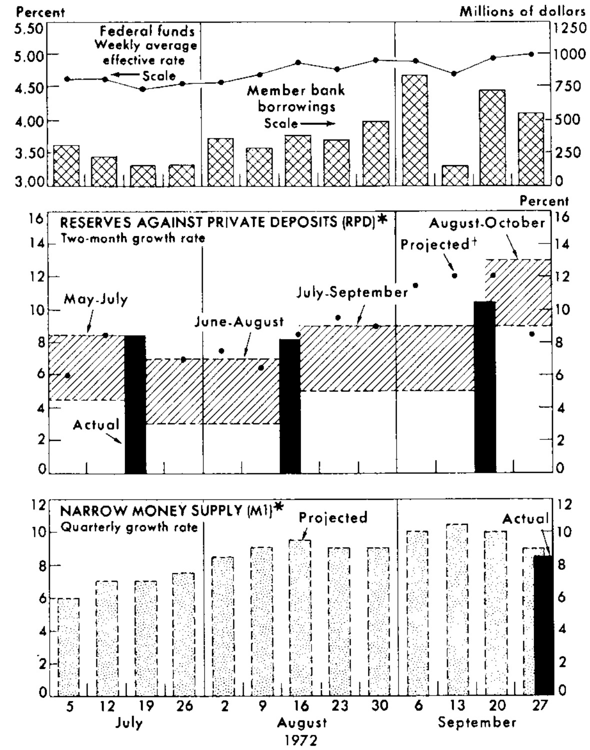
Soon after the meeting, RPD estimates rose to near the top of the range (after allowance for deposit distribution) and the monetary aggregates continued strong. Accordingly, moderate additional pressure was put on the banking system, with Federal funds expected to move up to around 5 percent. Extraordinary bank demands for excess reserves prior to the Labor Day weekend pushed the Federal funds rate well above this level despite large reserve injections by the Desk.

Against a background of announced Treasury borrowing in the bill market and expectations of a strong economic advance, a substantial reaction developed in the credit markets. The three-month Treasury bill rate increased from below 4 percent in mid-August to 4¾ percent by mid-September. Three- to five-year Government issues were up by almost 40 basis points in yield over the same interval. To avoid disruption in the credit markets, the Manager had to temper any further adjustments of weekly reserve targets. The task of reserve management was further complicated by a sharp rundown in the Treasury's balances at the Reserve Banks before the September 15 corporate tax date. The credit markets gradually stabilized at higher interest rate levels.

When the Committee met on September 19, it appeared that RPD would be about at the upper end of the Committee's 5-9 percent range for July to September, after allowance for deposit shifts and excess reserve levels. M_1 growth appeared likely to be considerably faster for the third quarter than the Committee had originally envisioned. The FOMC agreed that slower growth in the aggregates would be appropriate in the coming months. Such growth, staff analysis suggested, would involve an expansion rate of 9.5-13.5 percent for RPD from August through October. The FOMC decided to seek RPD growth

Chart VI

MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF RPD AND M1 GROWTH



*Seasonally adjusted annual rates.

† As of two days after end of statement week shown.

Sources: Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York.

preferably in the lower part of that range, unless disturbances arose in financial markets or growth in the aggregates fell far short of expectations. In view of the sensitive state of financial markets and the uncertainties associated with prospective changes in Regulations D and J, the Committee also decided that the Manager should give more than customary attention to money market conditions while avoiding marked changes in such conditions.

The Account Management's initial goal was to achieve reserve conditions consistent with a Federal funds rate of around 5⅛ percent and with member bank borrowings at the discount window of $450 million. During the period, incoming deposit data indicated that growth in the aggregates was moderating considerably, with M_1 growing only half as fast in September as had been previously projected by the Board staff. A little later RPD growth was expected to be just below the Committee's tolerance range. Since the slower growth in the aggregates and RPD was seen as broadly consistent with the Committee's longer term objectives, the Desk did not strive to make up for the shortfalls. It sought instead to foster the moderating trend by maintaining reserves only a touch more plentiful than at the beginning of the interval.

OCTOBER-DECEMBER. At the October 17 meeting, the FOMC modified its general approach to reserve targeting to distinguish more clearly between the Committee's targets and the staff's projections. It focused in a more formal fashion on the long-term targets for the monetary and credit aggregates that it believed were appropriate to the current economic outlook. Consistent with these longer term objectives, it would specify tolerance ranges for the growth not only of RPD but also of M_1 and M_2 over a two-month interval. It was agreed that the Desk should continue to put primary emphasis on RPD and to make allowance for unanticipated changes in excess reserves and the reserve-deposit multiplier. Attention should also continue to be given to the other aggregates. As for the tolerance range specified for the Federal funds rate, the Committee clarified its view that the Desk should shade the funds rate slightly higher (or lower) if the aggregates appeared to be close to the upper (lower) limits of their ranges. If the aggregates should be outside the range of tolerance, the Desk should move with greater vigor. The Committee agreed further that, if its various operating constraints appeared significantly inconsistent, the Manager should notify the Chairman who would decide whether the situation called for special supplementary instruction by the FOMC.

There was also some change in the Committee's approach to the menu of alternative policy courses presented to it by its staff. In preparing these, the staff seeks to develop two or three mutually consistent sets of relationships among RPD, M_1, M_2, the credit proxy, and short-term interest rates over a six-month period. This longer horizon allows adequate time for changes in nonborrowed reserves and interest rates to exert a substantial effect on M_1 despite the lags found by System research. The two-month operational horizon used in giving instructions to the Desk is too short for much feedback from operations to M_1. Accordingly, the near-term projections of the aggregates are more heavily influenced by staff judgments of other factors currently affecting them than by the impact of System operations within the next four to five weeks.

At the October meeting the Committee reduced the lower end of the two-month ranges for the aggregates that the staff had suggested were consistent with the FOMC's long-term objectives. For the September to November interval, it specified a growth rate of 6-11 percent for RPD. Over the longer term the Committee envisioned growth objectives that were appreciably more moderate than the growth rates experienced in the third quarter.

In the event, RPD and the aggregates remained within the Committee's tolerance ranges during the next five weeks.[5] Slower than anticipated growth in demand deposits at member banks kept RPD growth near the bottom of its range, and M_1 growth was also acceptable. Growth in consumer-type time and savings deposits led to moderate strength in M_2, and the credit proxy remained quite strong. Against this background, the Trading Desk's weekly nonborrowed reserve targets continued to be chosen to produce member bank borrowings at the discount window of about $450 million with the expectation that Federal funds would trade at 5 percent or a shade above.

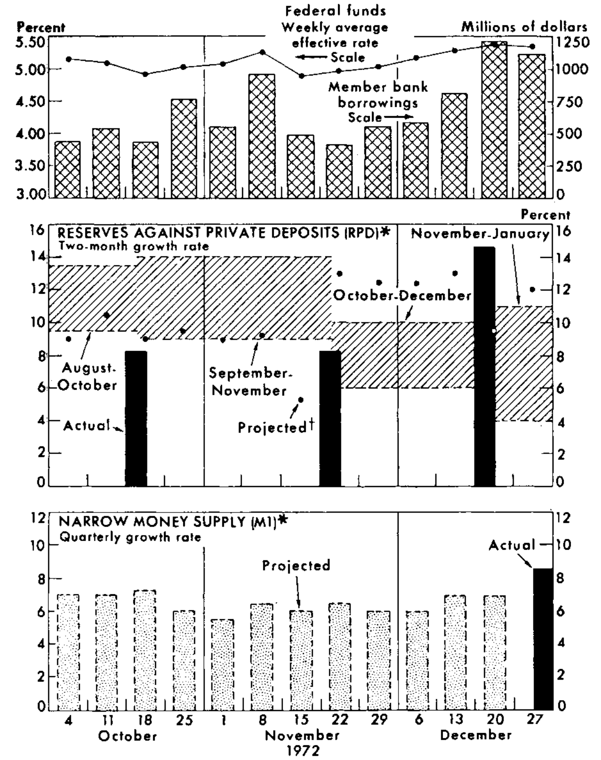
At its November 21 meeting, the Committee shaped its instructions to call for a prompt Desk response should M_1 and M_2 growth begin to pick up. The RPD growth range was set at 6-10 percent for October to December, a rate intended to support more moderate growth than the annual rates of about 8.5 percent for M_1 and 9.5 percent for M_2 recorded over the third quarter.

In the next four weeks the growth of deposits and RPD did accelerate, and the Desk became progressively more

[5] Following the Board's decision on October 24 to implement the amendments to Regulations D and J as of November 9, 1972, the range of tolerance for the RPD growth rate was modified to 9-14 percent as a technical adjustment to the regulatory changes. (see Chart VII).

Chart VII

MONEY MARKET CONDITIONS AND WEEKLY FORECASTS OF RPD AND M1 GROWTH



*Seasonally adjusted annual rates.

† As of two days after end of statement week shown.

Sources: Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York.

grudging in its management of nonborrowed reserves. By December 15, RPD was expected to grow at 12½-13 percent over the interval, although deposit shifts toward banks with higher reserve requirements accounted for much of the excess above the FOMC's 6-10 percent range. For the two months, M_1 and M_2 were expected to grow faster than the tolerance ranges selected by the FOMC. The Desk responded by choosing weekly nonborrowed reserve targets to produce successively higher levels of member bank borrowings at the discount window, in the process allowing the Federal funds rate to rise to about 5½ percent. By December 15, the borrowing objective had been lifted from $450 million at the beginning of the period to $650 million (including a $50 million allowance for transitional borrowing associated with the changes in Regulations D and J).

The Desk's operations during the interval were complicated by the difficulty of projecting market factors affecting reserves in the wake of the changes in Regulations D and J. In such circumstances, more reliance than usual had to be placed on the Federal funds market for indications of reserve availability, but member banks reacted initially to the increased pressure on their reserve positions by rather heavy recourse to the discount window. Such borrowing rose, in consequence, more than desired, averaging $1,223 million in the statement week ended December 20. The Federal funds rate gradually rose from around 5 percent to average 5.38 percent in the week ended December 20.

The Committee at its December meeting based its operational instructions to the Desk concerning RPD, M_1, and M_2 on the more restrictive of the options presented by the staff. On this occasion, the staff expected fairly rapid growth in RPD and M_1 from November to January, given the strength already indicated for the first two weeks in December. The Committee, in consequence, reduced the lower end of the staff's proposed tolerance range, making clear that it did not want any relaxation of pressure on the banks unless the aggregates were to turn very weak indeed. The two-month RPD range was set at 4-11 percent. It was understood that the Treasury's forthcoming sale of a long-term bond might well constrain the Manager's ability to respond to incoming information on the money and credit aggregates.

After the meeting, new data on both M_1 and M_2 suggested that both were turning out near the upper end of their respective tolerance ranges. Thus, the reins were tightened a bit further on nonborrowed reserves. But member banks, confronted with the special uncertainties that typically affect reserves during the holiday season, turned to the discount window heavily. This relieved the demands made on the Federal funds market so that the Federal funds rate averaged 5.34 percent in the December 27 week, little changed from the previous week. Pressures mounted in the following week and the rate averaged 5.61 percent, about as intended.

CONCLUDING COMMENTS

As it functioned in 1972, reserve targeting proved a workable means of providing operational instructions to the Manager for conducting System open market operations. The FOMC established in advance the direction and magnitude of the Manager's response to future developments in RPD and the aggregates. Its tolerance ranges for the aggregates and Federal funds rate constraints worked to produce a smooth System response to the strength that developed in M_1 and the other aggregates during the year. The Federal funds rate was no more volatile on a week-to-week basis than in other recent years. The new procedures caused no special problems for financial markets. They also continued to generate clear signals of the System's response to the behavior of the aggregates, and to foster thereby the portfolio adjustments consistent with the System's long-term objective of holding growth in them to moderate rates.

As experience with the reserve-targeting procedures accumulated, it became clearer that the Desk's actions could not keep RPD within its tolerance ranges if deposits behaved quite differently than the staff had expected. The tolerance ranges served as an important means of prescribing the Desk's response to new information. The Committee's emphasis on the distinction between its tolerance ranges and the staff's projections gave a clearer definition to the response expected from the Manager. There was widening recognition that the fairly long lags between operations and the aggregates called for the specification of desired growth rates six months or so in advance. At the same time, skepticism continued about the System's ability to specify precisely either the reserve or money market conditions presently needed to achieve the longer term objectives. Accordingly, the Committee relied to a large extent on tolerance ranges to trigger Desk responses to undesired behavior on the part of the aggregates.

There was growing appreciation during the year that this approach also involved important problems. Specifying appropriate tolerance ranges implies an ability to discriminate in advance between the underlying trend and the exogenous disturbances that appear to have a large influence on monthly movements in private demand deposits, in particular. At first glance, the use of a two-month interval should help wash out some of the random variation. However, the two-month growth rate still depends primarily on the forecast of the single month following the FOMC meeting. The average absolute error in staff estimates of M_1 for the following month over the past three years was about 3¾ percentage points. Against this background, the Committee's decision on occasion to base its RPD, M_1, and M_2 tolerance ranges on the more restrictive of the alternatives developed by the staff seemed a useful way to help guard against cumulative overruns in the aggregates. There remains, of course, the possibility that exogenous influences will override for a time the fundamental behavior of the aggregates and cause an inappropriate System response.

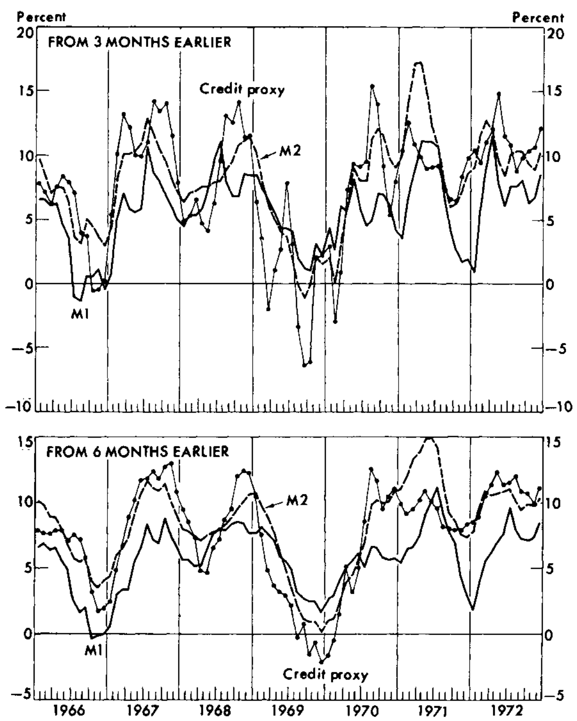
More fundamentally, the 1972 experience again cast doubt on whether M_1 alone was performing adequately as an indicator of the thrust of monetary policy. Nonborrowed reserves, of course, serve as the System's point of entry for influencing the dynamic portfolio adjustments of both banks and the public. But these adjustments have an impact on various components of bank balance sheets unevenly over time. The three aggregates—M_1, M_2, and the credit proxy—frequently provide different signals to open market operations for a number of months.

In 1972 the problem with M_1 was that its growth was quite lumpy, with big surges in February-March, July, and December. Even changes over three- and six-month intervals showed considerable instability over the past two years (see Chart VIII). This variability of M_1 has probably tended to strengthen the Committee's concern about the predictability of the relationships among System-controlled variables, the economy, and the aggregates over a longer time horizon. But bimonthly tolerance ranges do not provide an escape from this handicap. Given the erratic monthly behavior of M_1, the probability of detecting a deviation from the desired long-term growth rate during the intermeeting period is likely to be low unless the deviation is quite large. Even then, such bulges are likely

Chart VIII

GROWTH RATES OF THE MONETARY AND CREDIT AGGREGATES

Seasonally adjusted annual rates



Source: Board of Governors of the Federal Reserve System.

to be considered unusual events and generate hopes that they will be reversed quickly.

Growth in the broad money supply, M_2, was a bit more even over 1972 than that of M_1, reflecting the greater stability of time deposit growth relative to demand deposit behavior. In the latter part of 1971 and early 1972, M_2 showed little of the extraordinary weakness shown by M_1, which prompted aggressive System provision of nonborrowed reserves. M_2's first-half growth rate of 10.8 percent suggested considerable monetary stimulus. Over the year as a whole, M_2's growth of 10.8 percent was strong, compared with the 1971 growth of 11.4 percent.

The expansion of the bank credit proxy remained consistently strong throughout most of 1972. This measure of member bank liabilities rose at an 11.6 percent rate over the year, compared with a 9.4 percent increase in 1971. In an environment of strengthening demand for loans, banks were able to compensate for the temporary slowing of other deposit inflows by issuing negotiable CDs. During the second quarter, for example, when demand and other time deposit inflows slackened noticeably, a \$3.7 billion increase in CDs kept proxy growth at above the 11 percent first-quarter rate.

The diverse behavior of M_1, M_2, and the credit proxy in 1972, as in 1971, provided the Committee with different signals at different times concerning the current thrust of monetary policy. What is really needed, of course, is a satisfactory specification of the interrelationship among nonborrowed reserves, these aggregates, and the real economy. While this work goes forward, the Committee is likely to continue relying on recent behavior of these aggregates to indicate departures from desired rates of growth. On a monthly basis, M_2 and the credit proxy are about as erratic as M_1, so that it is probably as difficult to specify meaningful two-month tolerance ranges for them as for M_1. However, both have been more stable over the three- and six-month intervals than M_1 in the past two years, and they may give off better signals of undesired behavior over these somewhat longer time periods. This possibility deserves further study in the System's on-going efforts to improve its control over the monetary and credit aggregates.

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The Business Situation

Economic activity has continued to exhibit powerful upward momentum in recent months. Real gross national product (GNP) climbed at an annual rate of nearly 8 percent in the first quarter, bringing real growth over the past four quarters to this same very rapid pace. Personal consumption expenditures grew more rapidly in real terms than at any other time in the past twenty-one years, except for the first quarter of 1971 when spending was rebounding from an automotive strike. Business fixed investment continued very strong, and the latest private survey of investment intentions indicates that business firms plan further large outlays for plant and equipment during the remainder of the year. It is also likely that firms will attempt to step up the rate of inventory accumulation in coming months. Total civilian employment leveled off in April following a large first-quarter increase, but employment in manufacturing as well as the average workweek and overtime in that sector continued to rise.

The price situation has deteriorated seriously in recent months. The fixed-weight price index for GNP increased at a 7.5 percent annual rate in the first quarter, nearly twice the rate of advance experienced over the year 1972. Wholesale prices of farm and food products soared during the first quarter, on the heels of an already very rapid fourth-quarter advance. Although these prices finally leveled off in April, recent widespread storm and flood conditions may reduce supplies and thus cause further upward price pressures. Consumer food prices have already reflected the runup of wholesale farm prices, climbing sharply over the first three months of the year. Moreover, shortages of a wide variety of industrial commodities have begun to materialize, and prices of some such products have risen markedly at the wholesale level in recent months. These increases will undoubtedly be reflected in prices of consumer and other finished goods in the months to come.

GROSS NATIONAL PRODUCT AND RELATED DEVELOPMENTS

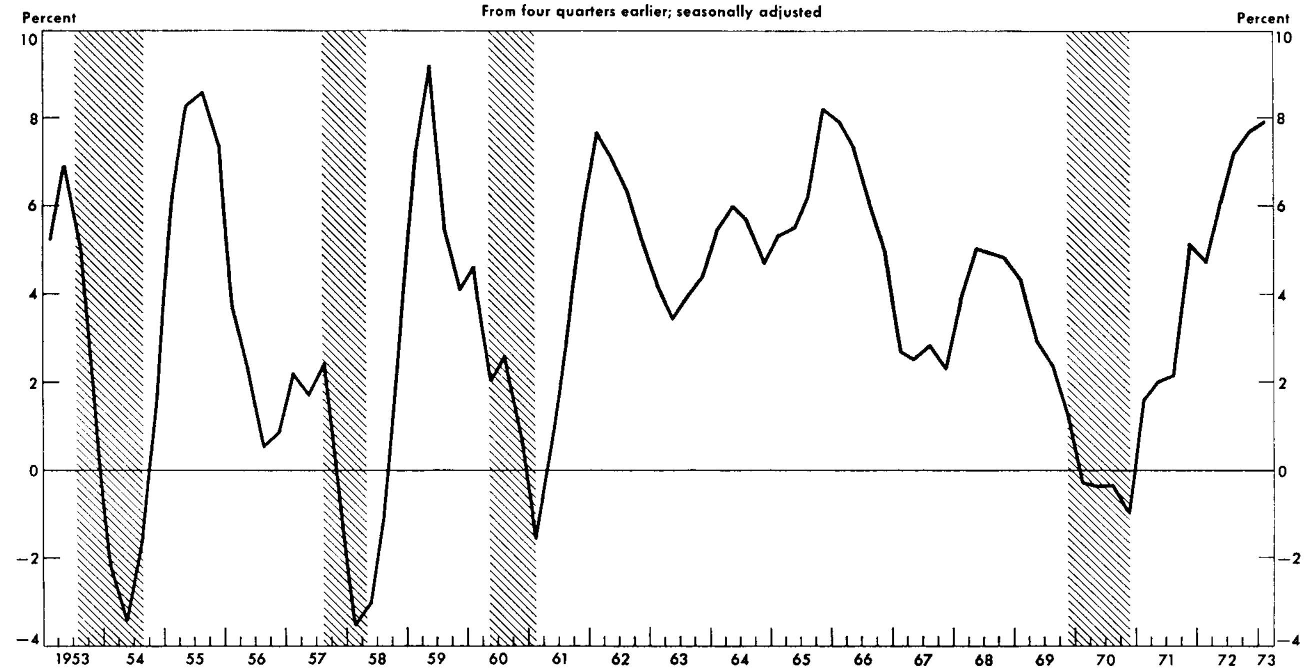
Preliminary estimates prepared by the Department of Commerce indicate that the total market value of the nation's output of goods and services rose $40.6 billion in the first quarter, a 14.3 percent seasonally adjusted annual rate of gain. While a substantial part of this growth was accounted for by price increases, real GNP expanded strongly at a 7.9 percent annual rate during the first quarter, following a similar advance in the preceding quarter. Indeed, since the first quarter of 1972, real output increased by 7.9 percent, the most robust four-quarter advance in seven years (see Chart I).

The rapid growth of GNP in the first quarter was accompanied by an apparent slackening in the rate of inventory accumulation. Based on incomplete data, inventory investment in GNP terms is estimated to have been at a seasonally adjusted annual rate of $7.9 billion in the January-March period, $2.4 billion below the rate of the preceding quarter. To a considerable extent this slowing may have been unintentional—the result of exceptionally strong sales. In any event, the ratio of the book value of inventories to sales for the trade and manufacturing sectors remained at a very low level in February (the most recent month for which data are available), suggesting that further advances in inventory spending are likely in coming quarters.

The first-quarter increase in current-dollar final expenditures—GNP net of inventory accumulation—amounted to a very strong $43 billion (see Chart II), or 15.3 percent at an annual rate. In real terms, final spending rose at a 9.1 percent annual rate, somewhat above the gain in the preceding quarter. The growth in final spending was particularly strong in personal consumption expenditures and business fixed investment. Outlays for new residential construction and government expenditures also contributed to the growth in final expenditures.

Personal consumption expenditures rose $28 billion in the first quarter. In real terms, the percentage growth in consumption expenditures was the largest in the past two decades, except for a similar rate of advance in the first quarter of 1971, when such spending was buoyed by the upsurge in economic activity associated with the end of an automotive strike. Outlays for both durable and nondurable goods surged ahead vigorously during the first quarter (see Chart II). Consumer spending in the current

Chart I
PERCENTAGE CHANGES IN REAL GROSS NATIONAL PRODUCT
From four quarters earlier; seasonally adjusted



Note: Shaded areas represent recession periods, according to the National Bureau of Economic Research chronology.
The dates of the 1969-70 recession are tentative.
Source: United States Department of Commerce, Bureau of Economic Analysis.

quarter may be bolstered by the substantial volume of tax refunds resulting from the overwithholding of personal income taxes last year. On the other hand, the outlook for further sizable gains in spending is clouded by an apparent deterioration in consumer confidence found by recent surveys. These surveys indicate a resurgence of fears of inflation as well as increased concern over the outlook for business conditions and employment.

The rapid advance in consumer spending was accompanied by a healthy $19.3 billion increase in personal income. It would have been about $5 billion larger had it not been for an increase in the rate of social security contributions at the beginning of the year. The primary source of the advance in personal income was the rise in wage and salary disbursements which, in turn, reflected large gains in employment. At the same time, the rate of savings out of disposable income fell to 6.7 percent from 7.6 percent in the fourth quarter. Notwithstanding this decline, the first-quarter savings rate remained above its levels of the second and third quarters of 1972.

Business fixed investment climbed by $6.2 billion in the January-March period, reflecting strong advances in outlays for both producers' durable equipment and structures. Nevertheless, the Federal Reserve Board's index of capacity utilization rose again for the fifth consecutive quarter. The indicated reduction in the margin of idle productive capacity, together with rising new orders for durable manufactured goods and a mounting backlog of unfilled orders, suggests that investment expenditures are likely to remain robust for some time to come. This conclusion is also supported by the substantial upward revision in planned capital spending reported in the most recent survey of investment intentions. According to the latest McGraw-Hill survey, business firms plan to raise their outlays for plant and equipment in 1973 by 19 percent. If realized, this would be the largest increase in capital spending since 1956.

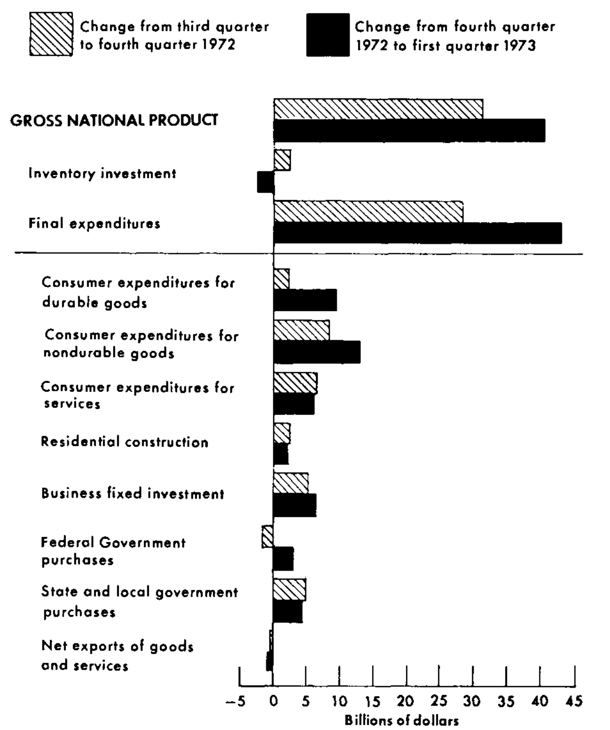
The prolonged expansion in residential construction persisted in the first quarter, as such expenditures increased by $2.2 billion over the fourth-quarter level. Housing starts held at a high annual rate of 2.4 million units in the January-March interval, the same as in the preceding three-month period. Nevertheless, there are tentative signs that housing activity is beginning to taper off. In March, starts fell to their lowest level in eight months, and newly issued building permits declined in each month of the first quarter. Moreover, the ratio of unsold new homes to sales of new one-family homes continued to climb during the first two months of the year (the latest data available), suggesting the possibility of some overbuilding.

Government purchases of goods and services contributed $7.5 billion to the first-quarter GNP advance. Federal spending increased by $3 billion, rebounding after two quarters of decline. At the state and local levels, spending rose $4.6 billion, slightly below the fourth-quarter increase.

Chart II

RECENT CHANGES IN GROSS NATIONAL PRODUCT AND ITS COMPONENTS

Seasonally adjusted



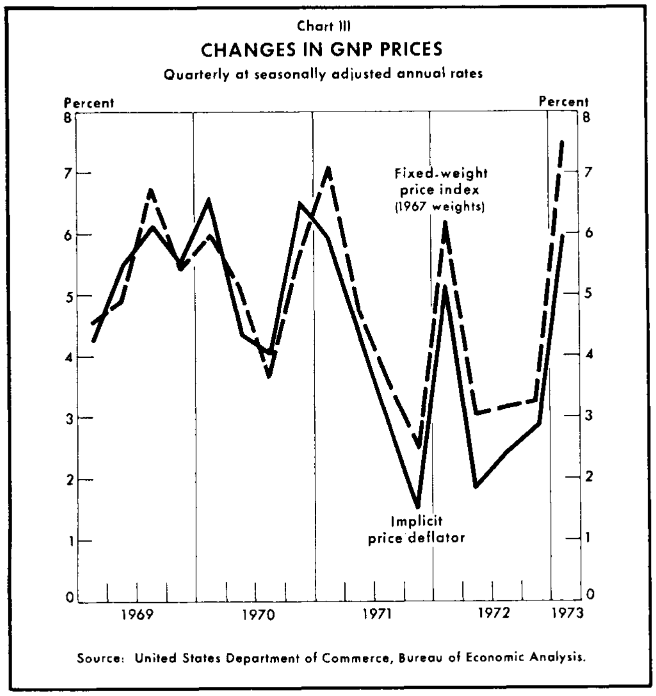
Source: United States Department of Commerce, Bureau of Economic Analysis.

PRICE DEVELOPMENTS

The price situation has deteriorated markedly in recent months. The first-quarter price data probably exaggerate underlying inflationary pressures, since some increases that might otherwise have been distributed over time were bunched together in the transition from Phase Two to Phase Three price and wage controls. Nevertheless, a serious inflationary problem is clearly evident. The largest recent price increases have taken place in sectors experiencing obvious demand pressures, such as fuel, or in highly competitive industries where prices tend to reflect current demand conditions sensitively. Examples of the latter include agriculture, lumber, many nonferrous metals, and textiles. These factors, together with increasing reports of shortages and lengthening delivery times, make it apparent that demand pressures are once again contributing significantly to inflation. On May 2, the Administration announced that corporations whose annual sales exceed $250 million would be required to notify the Cost of Living Council thirty days in advance of price increases that would raise their average weighted prices more than 1.5 percent above the January 10 levels.

The most familiar comprehensive measure of price behavior, the implicit GNP price deflator, advanced at a 6 percent seasonally adjusted annual rate in the first quarter (see Chart III). This rise was more than double that registered in the preceding three-month interval and represented a marked acceleration from the rate of increase in the last three quarters of 1972. The implicit price deflator, however, is affected by shifts in the composition of output among different goods and services. Therefore, the Department of Commerce also computes a fixed-weight price index based on the composition of spending in 1967. This index has consistently shown higher rates of inflation than has the implicit GNP deflator since the beginning of 1971, largely because declining Federal employment has reduced the weight of Federal Government employee compensation in total GNP. Since the deflator for Federal employee compensation is high relative to the average deflator for total GNP, the decrease in the weight of this item has tended to hold down the overall deflator. In the first quarter of 1973, moreover, the composition of spending shifted in favor of some items whose prices have risen less than the overall price level since the base year 1967. These include automobiles, trucks, appliances, and furniture. The fixed-weight GNP price index rose in the first quarter at a 7.5 percent annual rate, which was also more than double the rate of the previous quarter.

Consumer prices rose at a seasonally adjusted annual rate of 10 percent in March, with food continuing to be in



the forefront. Over the first quarter, consumer prices increased at an annual rate of 8.8 percent, compared with 3.2 percent in the preceding quarter. During the January-March period, prices of nonfood commodities moved ahead at a 3.4 percent annual rate, well above the increase in the two preceding quarters. Food prices, however, shot upward at an annual rate of nearly 30 percent, compared with 5.2 percent in the fourth quarter of 1972.

Wholesale prices of industrial commodities advanced very rapidly in April at a 17 percent seasonally adjusted annual rate, following a first-quarter increase at a 10.3 percent rate. April marked the fourth successive month in which the rate of increase of such prices had accelerated. The advances in industrial prices during these months were broadly based among a variety of commodities. Prices of farm products and processed foods and feeds leveled off in April after an extraordinary 53 percent seasonally adjusted annual rate of increase in the first quarter.

WAGES, PRODUCTIVITY, COLLECTIVE BARGAINING AGREEMENTS, AND EMPLOYMENT

In the first three months of 1973, compensation per hour of work in the private economy is estimated to have increased at an 11.8 percent annual rate, well above the 6.6 percent rate of advance for 1972 as a whole. Much of the increase in first-quarter compensation growth over the pace of the fourth quarter was attributable to increases in social security taxes paid by employers. Both the tax rate and the wage base were increased in January. Average hourly earnings of production and nonsupervisory workers rose only moderately during the first two months of the year but more rapidly in March and April.

Productivity continued to advance strongly in the first quarter. Reflecting an especially large gain in agricultural productivity, output per hour worked in the private economy increased at a 4.6 percent annual rate in the first quarter. This was very close to the average gain in 1972 as a whole and was well above the longer run annual increase of 3 percent averaged over the past two decades. The first-quarter improvement in productivity in the private nonfarm sector was somewhat less impressive. The 3.9 percent annual rate of gain in output per hour worked in that sector fell short of the 5.2 percent increase in 1972 but nevertheless remained well above the longer run average. With the very rapid increase in compensation per hour, labor costs per unit of output in the private economy climbed at a 6.8 percent annual rate, the fastest quarterly rise in over two years.

The latest Bureau of Labor Statistics survey reveals further moderation in the rate of increase in wages and benefits under major collective bargaining agreements during the first quarter. Over all industries, settlements approved during the first three months of this year provided for mean life-of-contract wage and benefit increases of 5.5 percent, down from 7.3 percent for all of 1972. The bargaining schedule in the first quarter was rather light, however, with major collective bargaining settlements (those involving at least 5,000 workers) covering only about 600,000 workers. Larger wage increases may well emerge from the heavy schedule of collective bargaining agreements to be negotiated in coming months.

Civilian employment leveled off in April following a large first-quarter gain of 1.1 million workers, seasonally adjusted, according to the Department of Labor's survey of households. Similarly, the civilian labor force changed little in April following a large increase in the first quarter. Consequently, the rate of unemployment in April remained at the first-quarter average of 5 percent. The separate survey of establishments indicated a continued rise in nonagricultural payroll employment in April, with the advance centered primarily in manufacturing. The average workweek in manufacturing climbed further in April by 0.2 hour to 41.1 hours, the highest in over six years. Average overtime in manufacturing rose an additional 0.2 hour to 4.1 hours, also the highest since 1966.

Monetary and Bank Credit Developments in the First Quarter

During the first quarter of 1973, the growth of the narrowly defined money supply (M_1) slowed substantially from that of the two preceding quarters. This slowdown brought M_1 growth over the twelve-month period that ended in March to 6.3 percent, compared with 8.3 percent over the twelve months ended December 1972. The broad money supply (M_2) also advanced less rapidly than in previous quarters. In contrast to the slowing of the monetary aggregates, the bank credit proxy expanded vigorously in the first quarter, as banks aggressively marketed large-denomination certificates of deposit (CDs) to meet heavy loan demand. Although reserves available to support private nonbank deposits (RPD) maintained a high growth rate, these reserves were required primarily because of the rapid growth of large CDs. Furthermore, the expansion of RPD in the first quarter was accomplished solely through the increase in borrowings at the discount window as Federal Reserve open market operations held a close rein on nonborrowed reserves. Both borrowed reserves and the Federal funds rate rose sharply.

Total bank credit advanced very rapidly in the first quarter as loan demand from businesses surged and continued strong in almost all other categories. The burgeoning demand for business loans stemmed from the short-term financing requirements imposed by very strong national economic growth, the desire for funds with which to hedge against dollar devaluation in the international currency crisis, and the relatively low bank prime lending rate compared with the costs of alternative sources of funds such as commercial paper. In addition to acquiring funds by issuing CDs, banks liquidated securities to meet the heavy loan demand.

The rapid advance of short-term interest rates during the quarter led to increases in the Federal Reserve discount rate and placed upward pressure on bond yields. Long-term rates rose during the quarter, though less rapidly than short-term rates, amid growing concern about the outlook for inflation. Rising short-term rates also have reduced deposit flows to the thrift institutions. Residential mortgage growth remained strong, however, and mortgage interest rates rose only slightly.

THE MONETARY AGGREGATES

M_1—private demand deposits adjusted plus currency outside commercial banks—increased slowly at a 1.7 percent seasonally adjusted annual rate in the first quarter of 1973 (see Chart I). This restrained growth contrasted markedly with the rapid 8.6 percent rate of advance in the final quarter of last year. In the twelve months ended in March, M_1 expanded by 6.3 percent, well below the 8.3 percent increase during 1972 but above the 5.5 percent compound annual growth rate during the years 1966 through 1971. Demand deposits included in M_1 showed virtually no change on a seasonally adjusted basis during the first quarter, while the currency component climbed at a 7.7 percent seasonally adjusted annual rate.

M_2—which adds to M_1 savings deposits and time deposits other than large denomination CDs at commercial banks—advanced at a seasonally adjusted rate of 5.7 percent in the first three months of 1973, substantially slower than the 10.2 percent rate of increase in the previous quarter. During the twelve months ended in March, M_2 increased by 8.9 percent. The growth of consumer-type savings deposits included in M_2 slowed somewhat to a 9.5 percent rate in the first quarter from 11.6 percent in the fourth quarter of last year. In contrast, large CDs rose sharply at a 108 percent annual rate in the January-March interval, the highest quarterly rate of advance since the third quarter of 1970 when banks were faced with substantial loan demands diverted from the commercial paper market in the wake of the Penn Central insolvency. Indeed, commercial bank demand for CD funds was so great that by the end of March the banks were bidding rates as high as 7⅞ percent on 89-day CDs. New takings were largely restricted to the short maturity area because market rates rose above the Regulation Q ceilings of 6¾ percent for 90- to 179-day maturities and 7 percent for 180- to 365-day maturities. Posted rates on CDs of longer than one year maturity, however, remained below the 7½ percent ceiling for that category. Because of the heavy issuance of CDs in the under-90-day maturity range, the average maturity of outstanding CDs at weekly reporting banks dropped to 2.6 months in March, compared with 2.9 months in December and 3.3 months in March 1972.

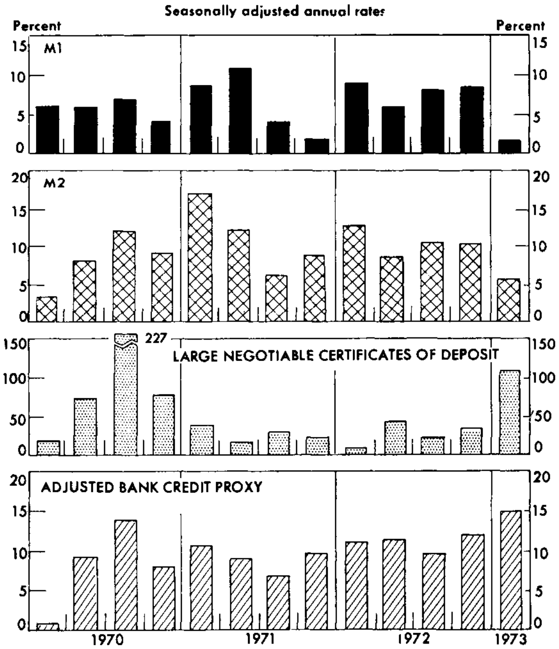
The surge in CDs contributed significantly to the first quarter's rapid 15 percent seasonally adjusted annual growth rate of the adjusted bank credit proxy. This measure of total member bank deposits subject to reserve requirements plus liabilities to foreign branches and bank-related commercial paper had expanded at a 12.1 percent rate in the previous quarter and by 12.6 percent over the twelve months ended in March. Substantial increases in United States Treasury deposits and in commercial paper issued by bank holding companies also added to the credit proxy during the January-March interval.

RPD continued to display the strength exhibited in the second half of last year, increasing at a 10.5 percent annual rate in the first quarter (see Chart II). The Federal Reserve maintained restraint on the provision of nonborrowed reserves to the banking system. Consequently, member banks borrowed very much larger amounts at the

Chart I

CHANGES IN MONETARY AND CREDIT AGGREGATES

Seasonally adjusted annual rates



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

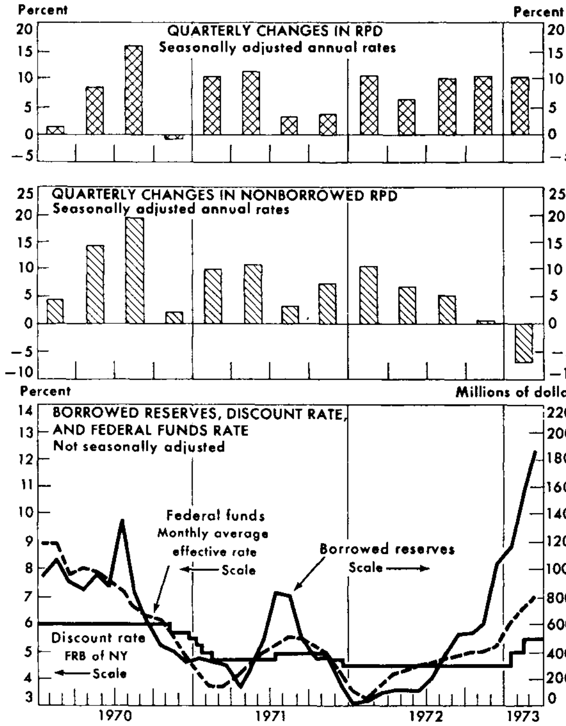
M2 = M1 plus commercial bank savings and time deposits held by the public, less negotiable certificates of deposit issued in denominations of $100,000 or more.

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.

Chart II

RESERVES AVAILABLE TO SUPPORT PRIVATE NONBANK DEPOSITS AND RELATED INTEREST RATES



Note: Reserve requirements on time deposits over $5 million were lowered from 6 percent to 5 percent on October 1, 1970.

RPD = Total member bank reserves less those required to support United States Government and interbank deposits.

Sources: Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York.

Federal Reserve Bank discount windows. The increase in borrowed reserves more than accounted for the growth in RPD, as nonborrowed RPD fell at a 6.8 percent annual rate in the January-March interval. With virtually no change in member bank demand deposit liabilities, the first-quarter rise in RPD provided reserves primarily against the large increase in CDs outstanding. Reflecting the banks' tight reserve positions, the Federal funds rate rose from an average of 5.33 percent in December to 7.09 percent in March.

BANK CREDIT, INTEREST RATES, AND THE CAPITAL MARKETS

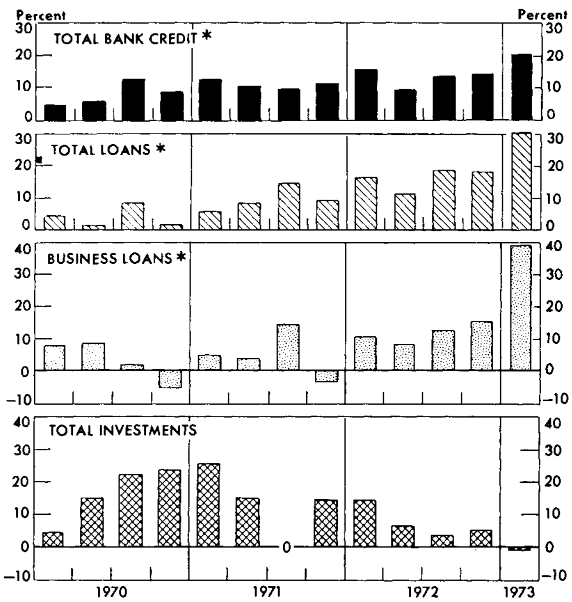
Total bank credit advanced very rapidly in the first quarter of 1973, as loan demand continued strong in almost all categories. Adjusted to include net loan sales to affiliates, bank credit grew at a 20.3 percent seasonally adjusted annual rate in the first quarter, up substantially from 14.4 percent in the fourth quarter of 1972 (see Chart III). Business loans, real estate and agricultural loans, and loans to consumers and nonbank financial institutions continued to expand vigorously, though securities loans were reduced. The powerful economic expansion of the first quarter was probably the most important factor encouraging commercial and industrial credit demands, which were broadly based among industries. Business loans advanced at a 39.1 percent annual rate, compared with 15.2 percent in the previous quarter. Business lending was especially strong at large banks which have ready access to the CD market.

Another source of business borrowing was the demand for funds with which to purchase foreign currencies for the purpose of hedging against dollar devaluation losses. Moreover, a significant part of the nearly explosive climb in business loans resulted from substitution out of the commercial paper market as outstanding nonbank dealer-placed commercial paper declined by an estimated $4 billion on a seasonally adjusted basis in the January-March interval. Corporations took advantage of the relatively low level of bank prime lending rates, compared with other short-term sources of funds, to shift demands for credit to the commercial banks. After discussions in March, the Committee on Interest and Dividends in April approved a dual prime rate system (see page 123) which may lessen the tendency of business borrowers to shift their credit demands to the banks.

Chart III

CHANGES IN BANK CREDIT AND ITS COMPONENTS

Seasonally adjusted annual rates



* Adjusted for loans sold to affiliates.

Source: Board of Governors of the Federal Reserve System.

These combined business loan demands, well in excess of the growth of deposit sources, have pushed the banks' loan-deposit ratio sharply upward. Furthermore, in order to raise funds to meet loan demand in the face of the restraint on nonborrowed reserves exercised by the Federal Reserve System, banks made net sales of securities from their investment portfolios. The sale of short-term United States Government securities contributed to the upward pressure on Treasury bill interest rates. By the end of the period, the three-month bill rate had risen to 6.40 percent from 5.14 percent three months earlier.

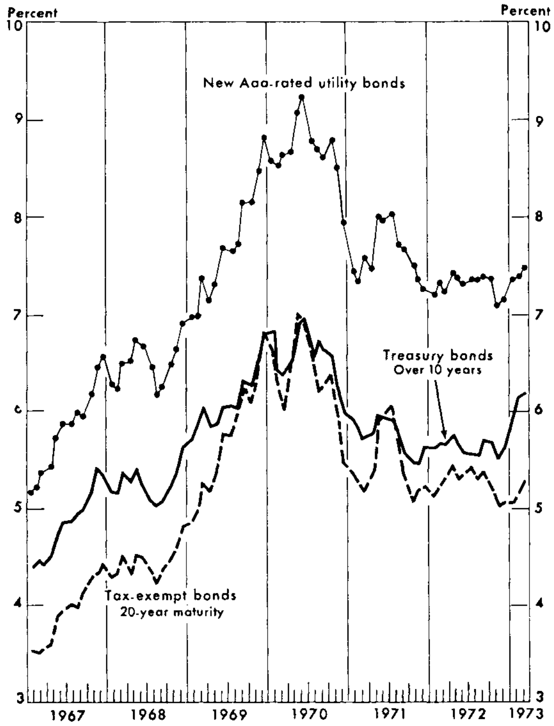
As short-term interest rates rose, the Federal Reserve increased the discount rate ½ percentage point in January and another ½ percentage point in February. The discount rate at most of the Reserve Banks was raised ¼ percentage point in late April. The Federal Reserve Bank of New York took similar action in early May, thereby establishing a uniform discount rate of 5¾ percent throughout the System.

Rising short-term rates and fears of resurging inflation placed upward pressure on long-term interest rates during the first quarter. These pressures were moderated, however, by a light new-issue calendar of corporate bonds. In the corporate bond market, total public and private placements were $4.4 billion in the first quarter of 1973, almost 40 percent less than in the same quarter of 1972. State and local government bond issues totaled $5.5 billion in the first three months of this year, somewhat below the $5.9 billion sold during the corresponding period in 1972. During the first quarter, the Federal Reserve Board's index of yields on newly issued utility bonds adjusted to an Aaa basis rose gradually from 7.15 percent in December to 7.49 percent in March (see Chart IV). Yields in the municipal bond market also moved upward from 5.05 percent in December to 5.29 percent in March, as measured by The Bond Buyer index of twenty tax-exempt bonds.

On the other hand, Federal agency offerings maturing in one year or more were a substantial $5.1 billion in the January-March 1973 interval, compared with $3.1 billion in the same period last year. United States Treasury financing requirements have been reduced by the improved tax receipts of the expanding economy and by the purchase of nonmarketable Treasury debt by foreign central banks

Chart IV

LONG-TERM INTEREST RATES



Note: Yields on the long-term Treasury bonds are monthly averages of daily figures. Yields on Aaa-rated utility and twenty-year tax-exempt bonds are monthly averages of weekly figures.

Sources: Board of Governors of the Federal Reserve System and The Bond Buyer.

with the dollars accumulated in defending fixed foreign exchange rates during the quarter. The average yield on Treasury bonds maturing in ten years or more rose from 5.71 percent at the end of December to 6.19 percent at the end of March.

THRIFT INSTITUTIONS

Deposit flows to savings and loan associations and mutual savings banks continued to slacken in the first quarter, as they paralleled the slowdown in the growth of consumer-type savings deposits at commercial banks. The decline in the ratio of savings to personal disposable income, as well as the higher interest rates available on alternative short-term investments, contributed to the tapering of deposit flows to the thrift institutions.

Although deposit flows slowed, thrift institutions continued to increase their mortgage holdings substantially during the first quarter. Their commitments to make mortgage loans in the future, moreover, remained high. To support the expansion of mortgage lending, the savings and loan associations increased their borrowing from the Federal Home Loan Banks. Furthermore, the Government National Mortgage Association and the Federal National Mortgage Association have been very active in packaging Government agency-insured mortgage loans for institutional and other long-term investors. Mortgage financing and strong housing demand have been further encouraged by the 95 percent loan-to-value ratio mortgages now available to some home buyers through the use of private mortgage insurance.

As mortgage demand continued strong, mortgage rates tended very gradually upward. For example, secondary-market yields on mortgages insured by the Federal Housing Administration ended the first quarter of 1973 at 7.63 percent, up only 7 basis points since December and 18 basis points since March of last year.

The Money and Bond Markets in April

An atmosphere of uncertainty pervaded the money and bond markets during most of April as investors were concerned about the implications of the resurgence of inflation during recent months. There was considerable speculation early in the month that some major new control effort would be undertaken. After the Congress turned down attempts to legislate a price and interest rollback, expectations of immediate action faded. While the indications of accelerating inflation encouraged higher interest rates, the strong technical positions and limited supplies of new debt instruments in almost all of the credit markets served to mitigate the pressure for higher rates. The result was an uneven pattern of interest rate movements. Generally, rates fell early in April but climbed again before the month was over.

Two well-publicized administered rates were increased during the month. Most major commercial banks raised their prime business loan rate for large borrowers ¼ percentage point during the third week of April to 6¾ percent. This increase was made following action by the Committee on Interest and Dividends to remove restrictions gradually from the lending rate charged large borrowers. Rates charged small businesses will continue to be scrutinized. Subsequently, the Federal Reserve discount rate was raised ¼ percentage point to 5¾ percent.

The adjusted bank credit proxy continued to expand more rapidly than the monetary aggregates, although somewhat less rapidly than in the first quarter. On the other hand, M_1—adjusted private demand deposits plus currency outside banks—advanced strongly again after rising only modestly in the first quarter.

BANK RESERVES AND THE MONEY MARKET

Money market conditions remained firm in April with the effective rate on Federal funds averaging 7.12 percent, compared with the 7.09 percent average established in March. The funds rate became somewhat firmer during the latter part of April. The Board of Governors of the Federal Reserve System announced on April 20 that it had approved a ¼ percentage point increase in the discount rate to 5¾ percent at seven of the Reserve Banks, effective April 23. Similar increases at four other Reserve Banks were approved before the end of the month. Effective May 4, the Federal Reserve Bank of New York, with the approval of the Board of Governors, increased its discount rate of 5¾ percent, thereby restoring a uniform discount rate throughout the System. Member bank borrowings from the Reserve Banks remained quite large in April, averaging $1,685 million in the four weeks ended April 25 (see Table I), about $150 million below the average of the four preceding weeks.

Most short-term interest rates changed little over the month. Rates on bankers' acceptances dipped in mid-April but ended unchanged on balance for the month. Rates offered on 89-day negotiable certificates of deposit (CDs) remained around 7⅜ percent during most of April. The rate on 90- to 119-day dealer-placed commercial paper was increased from 7 percent to 7⅛ percent on April 2, and remained at the higher level throughout the month (see Chart I). Very little commercial paper is being issued at these yields, since the commercial bank prime business loan rate has been below the commercial paper rate for several months. With the cost of borrowing from banks relatively attractive, an unusually large share of business credit demand has been channeled through the banking system.

On April 16, the Committee on Interest and Dividends established new criteria for determining interest rate changes by banks. Under these new guidelines the "large business prime rate" is to be allowed to respond flexibly to changes in money market conditions as long as changes are made gradually. The "small business prime rate"—to be applied to firms whose total nonmortgage borrowings over the preceding twelve months did not exceed $350,000 and whose assets do not exceed $1 million—should remain at levels no higher than those prevailing in mid-April unless an increase can be fully justified by higher costs. In any case, increases should be decidedly smaller and less frequent than changes in the rate charged large firms. Increases in loan rates must not raise a bank's profit margin on domestic operations above the average of the best two

Table I

FACTORS TENDING TO INCREASE OR DECREASE MEMBER BANK RESERVES, APRIL 1973

In millions of dollars; (+) denotes increase (—) decrease in excess reserves

Factors	Changes in daily averages— week ended				Net changes
	April 4	April 11	April 18	April 25	
"Market" factors					
Member bank required reserves	— 504	+ 237	— 552	+ 333	— 486
Operating transactions (subtotal)	+ 286	— 66	— 276	— 356	— 412
Federal Reserve float	+ 71	+ 494	— 23	+ 534	+1,076
Treasury operations*	+ 494	— 315	+ 341	— 536	— 16
Gold and foreign account	— 14	+ 39	+ 7	+ 14	+ 46
Currency outside banks	— 133	— 323	— 676	— 294	—1,426
Other Federal Reserve liabilities and capital	— 132	+ 39	+ 75	— 74	— 92
Total "market" factors	— 218	+ 171	— 828	— 23	— 898
Direct Federal Reserve credit transactions					
Open market operations (subtotal)	+ 998	— 572	+ 743	+ 266	+1,435
Outright holdings:					
Treasury securities	+ 515	+ 186	+ 284	+ 41	+1,026
Bankers' acceptances	—	—	+ 2	+ 4	+ 6
Federal agency obligations	—	— 4	— 4	—	— 8
Repurchase agreements:					
Treasury securities	+ 422	— 689	+ 406	+ 169	+ 308
Bankers' acceptances	+ 33	— 49	+ 21	+ 28	+ 33
Federal agency obligations	+ 28	— 16	+ 34	+ 24	+ 70
Member bank borrowings	— 259	— 252	+ 346	— 211	— 376
Seasonal borrowings†	—	—	—	+ 9	+ 9
Other Federal Reserve assets‡	+ 29	+ 30	+ 57	+ 115	+ 231
Total§	+ 662	— 794	+1,146	+ 179	+1,193
Excess reserves‡	+ 444	— 623	+ 318	+ 156	+ 295

	Daily average levels				Monthly averages
Member bank:					
Total reserves, including vault cash‡	32,619	31,759	32,629	32,452	32,365‖
Required reserves	32,082	31,845	32,397	32,064	32,097‖
Excess reserves§	537	— 86	232	388	268‖
Total borrowings	1,755	1,502	1,848	1,637	1,685‖
Seasonal borrowings†	—	—	—	9	2‖
Nonborrowed reserves	30,864	30,257	30,781	30,815	30,680‖
Net carry-over, excess or deficit (—)**	29	268	36	154	122‖

Note: Because of rounding, figures do not necessarily add to totals.

* Includes changes in Treasury currency and cash.

† Included in total member bank borrowings.

‡ Includes assets denominated in foreign currencies.

§ Adjusted to include $172 million of certain reserve deficiencies on which penalties can be waived for a transition period in connection with bank adaptation to Regulation J as amended effective November 9, 1972. The adjustment amounted to $450 million from November 9 through December 27, 1972 and $279 million from December 28, 1972 through March 28, 1973.

‖ Average for four weeks ended April 25.

** Not reflected in data above.

years in the four preceding calendar years.

Following the announcement of the new loan rate criteria, most major banks increased their large business prime rate to 6¾ percent from 6½ percent. Early in May, a number of major banks increased their large business prime rate by another ¼ percentage point to 7 percent.

On April 5, the Board of Governors announced a revision of Regulation A which covers discount operations, establishing a seasonal borrowing privilege. Traditionally, the privilege of borrowing at the Federal Reserve discount window was designed primarily to help banks adjust to temporary requirements for funds, to cushion more persistent outflows, and to aid banks in emergencies or other unusual situations. Borrowing by an individual bank for an extended period of time is normally discouraged. The seasonal borrowing privilege, on the other hand, is intended to be used to meet stringencies that recur at about the same time each year and persist for at least eight consecutive weeks. It is designed primarily to help the smaller banks that do not have direct access to the national money markets to meet the seasonal borrowing needs of their communities. To use the privilege, the bank must apply in advance of the period of need. In determining its qualification for seasonal credit, the Reserve Bank will review the bank's deposit and loan figures over the preceding five years. The borrowing bank would be expected to finance that part of its seasonal need equal to 5 percent of the preceding year's average deposit level.

In the statement week ended April 25, the first week that the seasonal borrowing privilege was operational, only a few banks took advantage of the privilege, borrowing $9 million. In Table I seasonal borrowings are included with other borrowings and are also listed separately. Free or net borrowed reserves have been dropped from the table, but may be calculated by simply subtracting total borrowings from excess reserves. Alternatively, for some purposes it may be desirable to add back in seasonal borrowings inasmuch as they do not entail the same pressure for repayment as do traditional borrowings.

According to preliminary data that are subject to revision, the growth of the narrowly defined money supply (M_1) is estimated to have accelerated in April to a seasonally adjusted annual rate of approximately 7 percent. Over the three months ended in April, M_1 is estimated to have grown at an annual rate of about 4¼ percent. Over the year ended in April, M_1 rose about 6¼ percent (see Chart II). Savings and time deposits other than large CDs rose at an annual rate of about 9 percent in April, according to preliminary estimates. M_2—which adds these deposits to M_1—is estimated to have increased in April at an annual rate of approximately 8 percent. This brought the growth rates of M_2 during the three and twelve months ended in April to about 6¼ percent and 9 percent, respectively.

The adjusted bank credit proxy decelerated somewhat from the 15 percent seasonally adjusted annual pace established in the first quarter but continued to grow faster than the monetary aggregates. Current estimates indicate a growth rate of about 13¼ percent in April. The first-quarter expansion in the proxy reflected the strong demand for bank credit which led to an explosive increase in large CDs combined with the rising level of deposits in Treasury Tax and Loan Accounts. In April, the Treasury began to run down its deposits, but CDs continued to increase at a rapid pace despite a large decline in the week that included the income tax date. Banks have been offering high rates on CDs with an initial maturity of thirty to eighty-nine days because Regulation Q ceilings on these deposits have been suspended. Reserves available to support private nonbank deposits (RPD) expanded at an estimated seasonally adjusted annual rate of 10 percent in April.

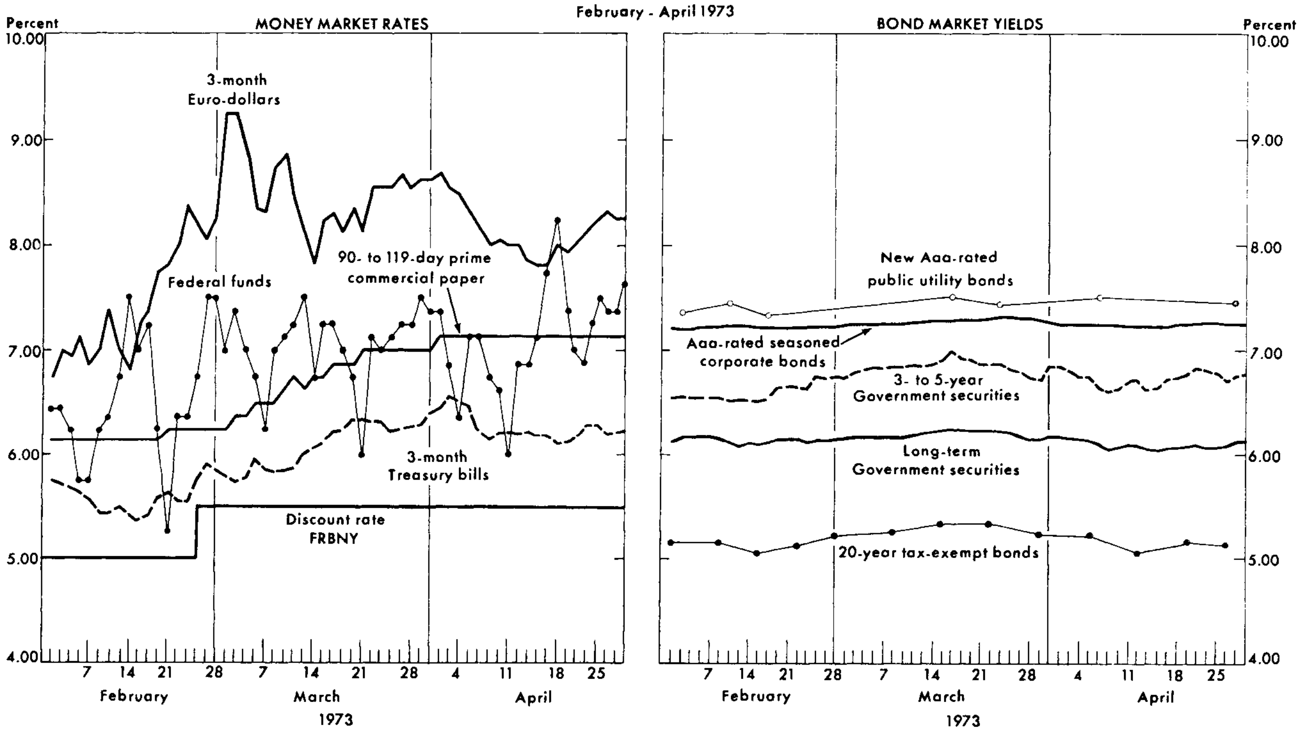
THE GOVERNMENT SECURITIES MARKET

A number of factors combined to produce relatively large swings in yields on Treasury securities during April. A sense of gloom pervaded the markets when the month began, as market participants worried about the signs of accelerating inflation. Yields on Treasury securities had al-

Chart I

SELECTED INTEREST RATES

February - April 1973



Note: Data are shown for business days only.

MONEY MARKET RATES QUOTED: Bid rates for three-month Euro-dollars in London; offering rates (quoted in terms of rate of discount) on 90- to 119-day prime commercial paper quoted by three of the five dealers that report their rates, or the midpoint of the range quoted if no consensus is available; the effective rate on Federal funds (the rate most representative of the transactions executed); closing bid rates (quoted in terms of rate of discount) on newest outstanding three-month Treasury bills.

BOND MARKET YIELDS QUOTED: Yields on new Aaa-rated public utility bonds are based on prices asked by underwriting syndicates, adjusted to make them equivalent to a standard Aaa bond of at least twenty years' maturity; daily averages of yields on seasoned Aaa-rated corporate bonds; daily averages of yields on long-term Government securities (bonds due or callable in ten years or more) and on Government securities due in three to five years, computed on the basis of closing bid prices; Thursday averages of yields on twenty seasoned twenty-year tax-exempt bonds (carrying Moody's ratings of Aaa, Aa, A, and Baa).

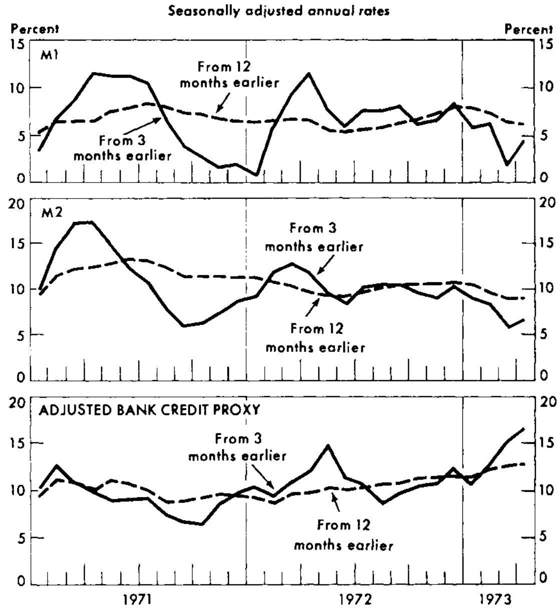
Sources: Federal Reserve Bank of New York, Board of Governors of the Federal Reserve System, Moody's Investors Service, Inc., and The Bond Buyer.

ready risen sharply in March and appeared headed for further increases in April. Then quite suddenly market sentiment changed and rates dropped dramatically at the end of the week. The announcement of a soaring increase in the wholesale price index on Thursday, April 5, might have been expected to extend the apprehensiveness about inflation even further. Instead it apparently lent credence to the rumors that some major new measures would be taken to fight inflation. On April 16, the House of Representatives rejected a bid for price rollbacks and ceilings and passed a bill extending the President's wage-price authority for another year. This action, along with statements by Administration spokesmen about the disadvantages of stricter controls, tended to dampen rumors of immediate action in that area and rates started to move upward again. The announcement of the very large increase in gross national product during the first quarter further contributed to investor caution.

Chart II

CHANGES IN MONETARY AND CREDIT AGGREGATES

Seasonally adjusted annual rates



Note: Data for April 1973 are preliminary.
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.
Sources: Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York.

Treasury bill rates declined dramatically on April 6, reflecting a thin market supply as well as the improved market sentiment. In line with the declines in yields on outstanding bills, average issuing rates on three- and six-month bills fell about 34 and 55 basis points, respectively, between the April 2 and April 9 bill auctions (see Table II). Subsequent trading activity tended to favor the shorter maturities, while interest in the six-month bill proved limited at the lower levels. By the April 30 auction, the yield spread had increased to about 30 basis points after having fallen to 8 basis points at the April 9 auction. Nevertheless, both rates remained slightly below the yield set at the beginning of April. In the monthly auction of 52-week bills held April 24, the average issuing rate was 6.598 percent, slightly below the rate established in the previous month's auction. For the month as a whole, rates on most outstanding issues declined about ⅛ to ¼ percentage point.

The Treasury coupon market also experienced a rally at the end of the first week of April, but gradual price erosion set in a few days later as expectations of price ceilings and hopes for less restrictive Federal Reserve policy faded. Small floating supplies served to restrain the volume of trading and limited price declines.

There has been a relatively skimpy supply of Treasury securities available in the markets for some weeks. This occurred because of heavy purchases of marketable debt by foreign central banks early in the year and because the only new cash raised by the Treasury in the domestic market since mid-January has come from $100 million additions to the monthly bill auctions. Instead, the Treasury satisfied most of its needs for cash through the issue of almost $8 billion of special securities to foreign official institutions in February and March. Although the floating of most exchange rates has ended the speculation that led the foreign central banks to make large securities purchases, no major redemptions of these securities have as yet taken place.

The Treasury decided to use part of its comfortable cash position to pay off about $1.65 billion of the $4.3 billion of publicly held notes maturing May 15, 1973. On April 25, the Treasury announced that it would auction to the public up to $2 billion of seven-year 6⅞ percent notes and up to $650 million of 25-year 7 percent bonds payable either in cash or in maturing notes. The 25-year bonds have the longest maturity of any Treasury debt issued since 1965. For the bond auction, the Treasury employed the technique, which was used in a sale of bonds in January, of awarding all of the bonds at the price of the lowest accepted bid. The notes were sold at an average issuing yield of 7.01 percent, and the bonds were issued at a yield of 7.11 per-

Table II

AVERAGE ISSUING RATES*
AT REGULAR TREASURY BILL AUCTIONS

In percent

Maturities	Weekly auction dates—April 1973				
	April 2	April 9	April 16	April 23	April 30
Three-month	6.531	6.187	6.187	6.251	6.278
Six-month	6.814	6.268	6.389	6.630	6.575

	Monthly auction dates—February-April 1973		
	February 22	March 27	April 24
Fifty-two weeks	6.051	6.615	6.598

*Interest rates on bills are quoted in terms of a 360-day year, with the discounts from par as the return on the face amount of the bills payable at maturity. Bond yield equivalents, related to the amount actually invested, would be slightly higher.

cent. Additional amounts of the notes and bonds were allotted to Government accounts and the Federal Reserve Banks, which hold $5.3 billion of the maturing notes.

Most of the offerings by Federal agencies in April were well received. On April 4, the Federal Land Banks raised $555.6 million of new money with a $988.6 million three-part issue. The 9½-year bonds yielded 7.30 percent. On April 26, a five-year note offered by the Farmers Home Administration sold out quickly at a 7.20 percent yield but a fifteen-year bond yielding 7.52 percent sold slowly.

OTHER SECURITIES MARKETS

Prices in the corporate and municipal bond markets generally advanced early in the month and fell back later on. The rally late in the first week of April aided sales of the two major bond offerings marketed April 5. Strong demand was evident for $50 million of Aa-rated thirty-year public utility bonds offered competitively and priced to yield 7.58 percent. The $125 million of A-rated thirty-year debentures of the Province of Quebec sold quickly at a yield of 7.90 percent.

There was very little new-issue activity in the taxable bond sector again until the last full week of April. A $150 million offering of Aaa-rated 25-year Tennessee Valley Authority (TVA) bonds on April 17 was priced to yield 7.35 percent. These bonds generally sell at rates that are slightly below those offered on utility bonds of a private company with an Aaa rating. The yield offered on the TVA bonds was lower than market expectations and the bonds sold poorly. When the bonds were released from syndicate price restrictions on the following Monday, the yield rose to 7.46 percent.

In contrast, a $125 million issue of Aaa-rated forty-year telephone company debentures sold well on April 24 at a yield of 7.53 percent. The return on the debentures was somewhat below the 7.625 percent yield offered initially on similar debentures sold March 20. The success of the new issue was at least partially attributable to the strong technical position of the market. Prices on older corporate securities were buoyed by the good reception given the telephone securities. A companion issue of seven-year notes, however, sold slowly at a 7.07 percent yield.

Demand was relatively strong in the tax-exempt sector and most new issues sold out quickly. The largest offering of the month consisted of $285.4 million of New York City various-purpose bonds issued April 11. The bonds, which are rated A by Moody's and BBB by Standard and Poor's, were priced to yield from 4.25 percent for 1974 to 6.20 percent for those due 1996-2013, about 70 basis points above the yields on New York City bonds sold last December. Sales benefited from the relative scarcity of tax-exempt debt available. The Blue List of dealer inventories fell to $511 million on April 6, the lowest level this year. Inventories rose later in the month but remained relatively comfortable, closing at $633 million.

Yields on outstanding issues declined at first, with The Bond Buyer index of twenty tax-exempt bonds dropping from 5.26 percent on March 29 to 5.07 percent on April 12, the lowest level in two months. Reflecting the increases in yields in other sectors, the index advanced again the following week and ended the month at 5.14 percent.