Monetary Policy And Open Market Operations In 1983

Monetary policy in 1983 sought to provide for a sustained expansion in economic activity within a framework of continuing progress against inflation. Given the background of substantial economic and institutional change, this involved careful balancing of the need for sufficient liquidity to foster the moderate recovery which appeared to be emerging at the year's outset, along with the continuing need to maintain monetary discipline. The measurement of liquidity itself was difficult in the light of marked changes in the composition of M-1 and M-2 and uncertainty about their relationships to economic activity.

As the year progressed, the economic recovery surpassed expectations while the pace of inflation remained subdued. Wage increases continued to moderate, reducing cost pressures appreciably, while productivity continued the rebound that had begun in 1982. In this environment the Federal Reserve approached policy formulation and implementation flexibly, adjusting the pressure on bank reserves judgmentally. Open market operations stepped up that pressure from May to July, when money growth seemed unduly rapid and the vigor of the recovery became apparent. Overall, System policy and the continued decline in inflation contributed to greater interest rate stability than in other recent years.

The Committee in 1983 had to deal with institutional changes that affected the monetary aggregates and their relationships to ultimate economic variables to an uncertain degree. Already during 1982, income velocities had deviated substantially from past patterns. Ongoing financial innovation, deregulation, and economic change suggested that velocity patterns in 1983 were likely to continue to diverge significantly from past experience.

The Committee concluded that the relation between money and credit and the economy would have to remain under review in 1983. The Committee continued to specify growth ranges for money and credit as required by the Full Employment and Balanced Growth (Humphrey-Hawkins) Act. But it sought to achieve its objectives by setting reserve conditions judgmentally rather than allowing them to emerge semi-automatically in response to money behavior. The Committee chose reserve conditions during the year on the basis of its review of money growth relative to changing patterns of liquidity preference by the public, developments with respect to economic activity and prices, and conditions in domestic and international credit markets.

In shaping its instructions to the Trading Desk in New York, the Committee viewed the underlying relationship of the broader aggregates to ultimate economic objectives as likely to be less sharply altered than M-1 by continuing institutional and economic change. Hence, as in late 1982, the Committee placed less emphasis on M-1 in the implementation of policy.

In the event, all three of the money measures finished

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the year within their respective growth ranges—although, as described below, M-2 was measured from a February-March base, while M-3 was later (in early 1984) revised to show growth slightly above its range. The M-1 monitoring range was adjusted at midyear to accept unusually large growth in the first half of the year.

At the year's outset M-2 surged, reflecting a massive shifting of funds from outside M-2 into money market deposit accounts (MMDAs) at depository institutions. The Committee chose to accommodate this development since it represented a one-time shift in the public's holdings of liquid assets.[1] By April, M-2 growth had slowed, and this measure briefly dropped slightly below its target range. On balance, M-2 grew moderately over the remainder of the year, expanding from its February-March base to the fourth quarter at a 7.8 percent annual rate, in the lower half of its 7 to 10 percent target range (Chart 1).[2] M-3 growth was much more moderate early in the year as banks and thrifts allowed CDs to run off when inflows through MMDAs surged. M-3 grew by 9.2 percent over the year, compared to its 6½ to 9½ percent target range (Chart 2).

M-1 growth was very rapid early in the year, far exceeding its initial 4 to 8 percent range. At least a portion of the excess growth was attributed to distortions arising from institutional and economic change. By midyear there were indications that M-1 velocity behavior might be returning to more normal patterns. Hence, the Committee felt it would be appropriate to assess subsequent M-1 growth from a second quarter base in relation to a 5 to 9 percent monitoring range, which assumed some rebound in velocity but not necessarily to the extent common in earlier recoveries. M-1 decelerated appreciably in the second half of the year, expanding at a 5.5 percent annual rate from the second to fourth quarter, slightly above the lower end of its monitoring range over that interval (Chart 3).[3]

For the first time, an associated range had been estimated for total domestic nonfinancial debt. This broad measure of credit grew by 10.5 percent from December 1982 to December 1983, somewhat above the midpoint of its 8½ to 11½ percent range (Chart 4).

Interest rates fluctuated narrowly over the early and late parts of the year (Chart 5). Monetary policy early in the year was directed toward achieving a steady—and rather modest—degree of reserve restraint, which essentially accommodated the stronger-than-anticipated money growth believed to be stemming largely from institutional and business cycle developments.

Starting in the spring, evidence emerged of an acceleration in the rate of economic recovery and a movement toward more normal money velocity patterns for the broader aggregates. Meanwhile, M-1 growth was very strong over the first half of the year. In these circumstances, System policy increased the degree of reserve restraint in a series of modest steps to limit money and credit growth. Interest rates across the maturity spectrum generally worked higher over this interval with most reaching or coming close to their highest sustained levels for the year in August (Chart 6). The average Federal funds rate, for example, worked up from around 8½ percent in mid-May to roughly 9⅝ percent in August.

In September, the System adopted a slightly more accommodative stance as the monetary aggregates weakened and the recovery's momentum appeared to be moderating. While August saw the highs for most rates, the net change from August to year-end was modest, with some variation during the interval in response to changing perceptions of the economy's strength, recurrent concerns over heavy prospective Treasury supplies and technical supply developments related to Federal debt ceiling constraints. By the latter part of the year, with the Committee's intention to respond to money developments in timely but modest steps widely recognized and the money measures on track, significant rate movements in response to weekly money statistics abated.

[1]M-2's target range was specified in February as an annual rate of growth from the average level of M-2 outstanding in February-March to the fourth quarter of 1983. The February-March base was chosen, rather than the fourth quarter of 1982, so that growth of M-2 would be measured after the period of highly aggressive marketing of MMDAs had subsided. These accounts, introduced in mid-December 1982, rose to over $230 billion by early February, with a substantial amount of funds transferred into them from sources outside M-2, such as market instruments and large CDs. The 7 to 10 percent range for M-2 allowed for some residual shifting from market instruments and large CDs into MMDAs over the balance of the year.

[2]The text and charts of this report use the definitions of the aggregates as they applied in 1983, as well as the seasonal factors and benchmarks in place at that time. In February 1984, new benchmarks and seasonal factors were introduced. In addition, the definition of M-3 was broadened to include term Eurodollars held by U.S. residents in Canada and the United Kingdom, and at foreign branches of U.S. banks elsewhere. The inclusion of term Eurodollars raised the level of M-3 by about $90 billion but had a minimal effect on M-3 growth in 1983. For each of the money measures, the net effect of the benchmark and seasonal revisions was to raise the rate of growth over the respective 1983 growth range intervals. Revised M-2 growth from its February-March base was 8.3 percent, a touch below the midpoint of its range. Revised M-3 growth on a fourth-quarter to fourth-quarter basis was 9.7 percent, just above the 9.5 percent upper end of its range.

[3]After incorporating the new benchmark and seasonal revisions available in early 1984, M-1 was perceived as having grown at a 7.2 percent annual rate from the second to fourth quarters of 1983—about at the midpoint of its monitoring range. From the fourth quarter of 1982 to the second quarter of 1983 the revised M-1 growth was at a 12.4 percent annual rate compared to a 13.3 percent rate estimated earlier. For the full year—fourth quarter of 1982 to fourth quarter of 1983—latest available estimates place M-1 growth at 10.0 percent.

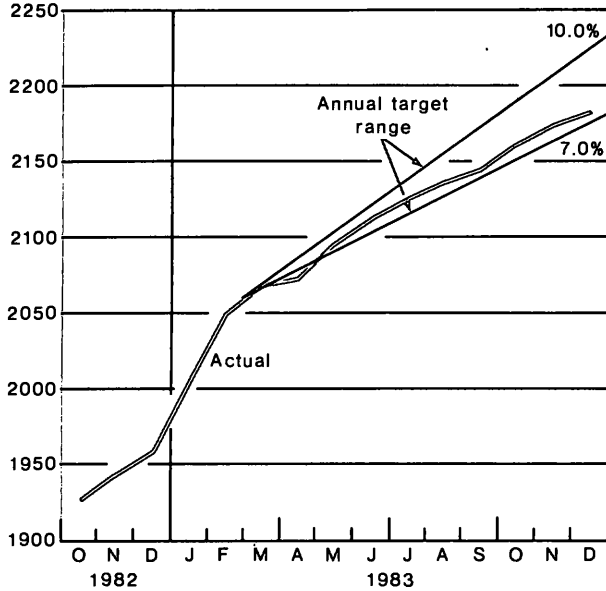


Chart 1
M-2: Levels and Targets
Billions of dollars
2250
2200
2150
2100
2050
2000
1950
1900
10.0%
7.0%
Annual target
range
Actual
O N D J F M A M J J A S O N D
1982
1983

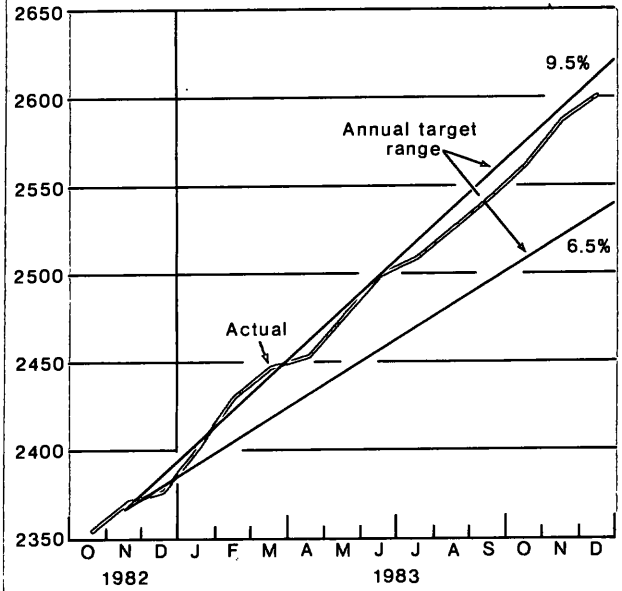


Chart 2
M-3: Levels and Targets
Billions of dollars
2650
2600
2550
2500
2450
2400
2350
9.5%
6.5%
Annual target
range
Actual
O N D J F M A M J J A S O N D
1982
1983

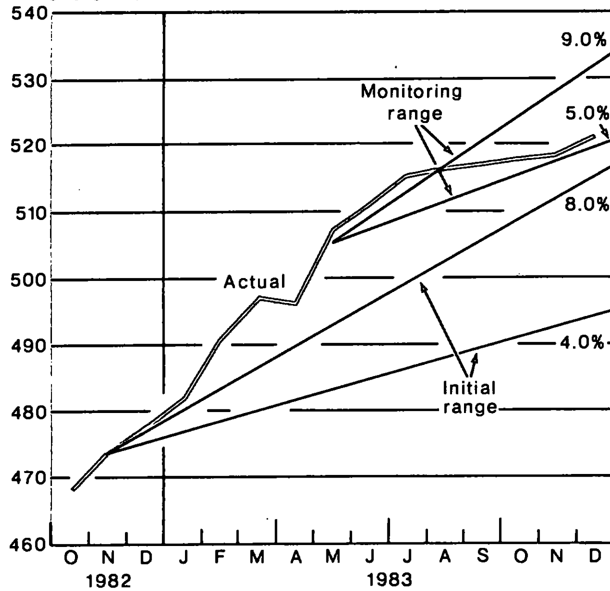


Chart 3
M-1: Levels and Ranges
Billions of dollars
540
530
520
510
500
490
480
470
460
9.0%
5.0%
8.0%
4.0%
Monitoring
range
Actual
Initial
range
O N D J F M A M J J A S O N D
1982
1983

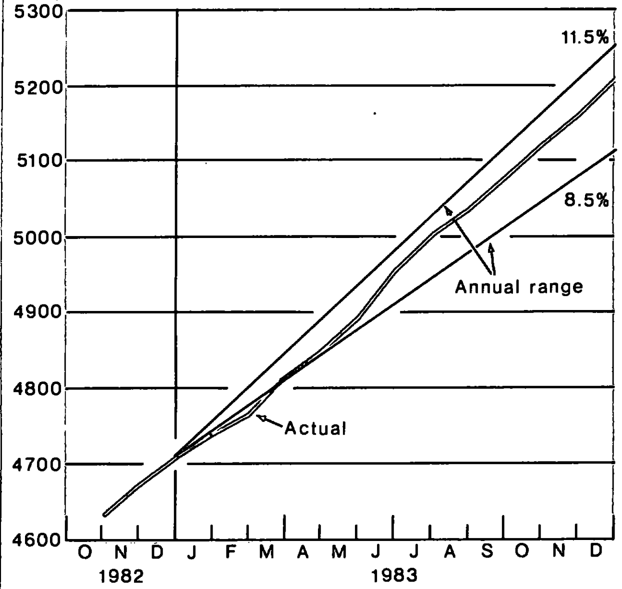
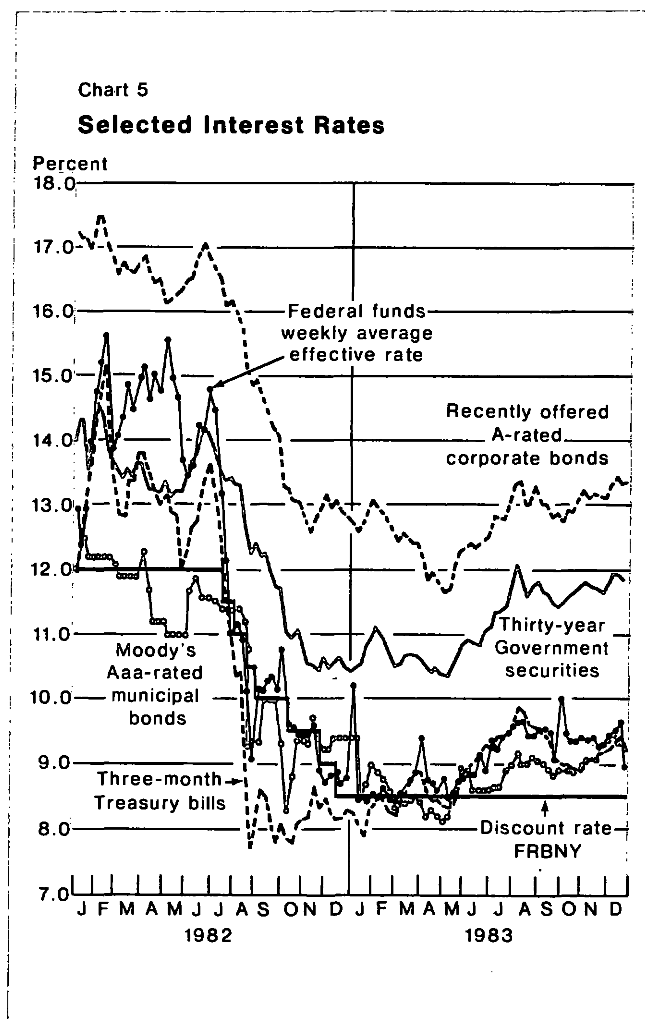


Chart 4
Total Domestic Nonfinancial Debt
Billions of dollars
5300
5200
5100
5000
4900
4800
4700
4600
11.5%
8.5%
Annual range
Actual
O N D J F M A M J J A S O N D
1982
1983



The Economy and Financial Markets

Economy

After a sluggish start, it became clear by the second quarter that a vigorous, broadly-based recovery was under way. The economy spurted ahead in the middle two quarters before showing some moderation toward the year-end. From the fourth quarter of 1982 to the fourth quarter of 1983, real GNP advanced by about 6 percent. While this was about in line with the average performance in the initial year of recent recoveries, it was considerably stronger than many had anticipated. Employment gains were significant during the year and the civilian unemployment rate dropped by well over two percentage points to finish the year at 8.2 percent.

Much of the recovery's initial momentum in 1983 emanated from the housing sector, which had begun its turnaround in 1982 with support from declining mortgage rates. A pickup in consumer spending, particularly in the second quarter, contributed to growth in the first half of the year.

Business fixed investment also revived during the year. Real expenditures on equipment surged after the first quarter while businesses began to replenish their sharply depleted inventories in the third quarter. Inventories still remained lean, however, suggesting that further expansion in final demand would stimulate increased production. Business spending on structures also began to grow significantly in the third quarter. Net exports were a drag on the economy, however, reflecting a dramatically appreciating dollar and much slower economic growth abroad than domestically. By the final months of the year the U.S. trade deficit had widened to record levels.

Prices advanced modestly in 1983 with most measures of inflation suggesting a pace as low as or lower than 1982. For example, the broad-based GNP implicit deflator rose by about 4 percent from the fourth quarter of 1982 to the fourth quarter of 1983. This was slightly lower than its pace over the previous year and its lowest rate of advance since 1967. The continued strength of the dollar in terms of other major currencies in 1983 helped to moderate price pressures by reducing the dollar cost of imports.

Other cost pressures also abated. On a fourth-quarter to fourth-quarter basis, unit labor costs in the private nonfarm sector rose by less than 1 percent, reflecting gains in labor productivity and appreciable moderation in wage increases. The producer price index for finished goods rose about 1 percent over the year, suggesting the potential for sustaining price moderation into 1984.

Financial Markets

During the first quarter both long- and short-term interest rates moved without a particular trend. While money growth was strong, it appeared primarily related to the huge flows into MMDAs at depository institutions and the continuing uncertainties about the state of the economy. Monetary policy maintained a stable stance, aiding financial flows that were promoting economic recovery. Interest rates briefly rose and fell within fairly narrow ranges as market currents shifted. Sentiment alternately improved or deteriorated on release of statistics indicating unexpected weakness or strength in money and economic activity. There was recurrent concern over large impending supplies of Treasury debt, especially whenever investor demand showed signs of faltering as Treasury auctions approached.

Short-term rates did pop up briefly around the end of the first quarter. Statement date churning coincided with a four-day Easter holiday weekend for some foreign banks and "window dressing" associated with the fiscal

year-end of Japanese banks. Short-term rates quickly fell back as pressures subsided. The yield spread between large CDs and Treasury bills, starting from very low levels at the year's outset, almost disappeared during much of the first half. Apprehension diminished over the international loan exposure of U.S. commercial banks. But the decline in CD yields also reflected the paydown of CDs by banks adapting to the massive intake of funds through MMDAs.

Corporate and tax-exempt borrowers sold bonds heavily during the first half of the year. Issuers waited for buoyant prices, usually touched off by favorable news, then rushed large volumes to market. Tax-exempt activity accelerated before a June 30 deadline for the sale of bearer bonds. There also was substantial advance refunding activity in that sector.

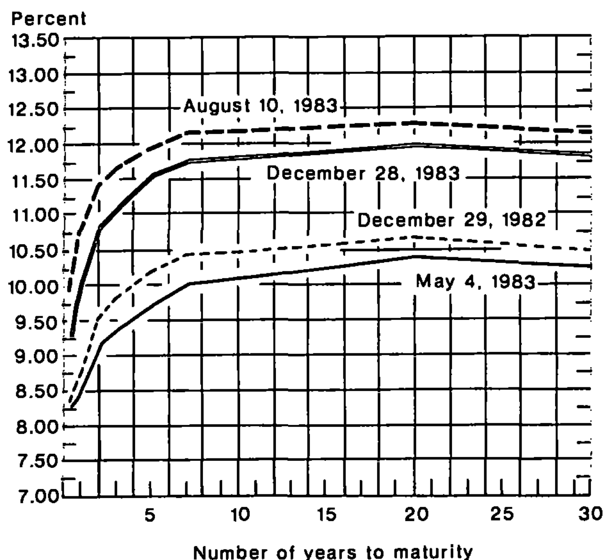
New issues frequently were concentrated in longer maturities and priced aggressively. Investors were active buyers so that yield spreads between corporate and Treasury issues narrowed while tax-exempt yields also fell somewhat relative to Treasury yields. The yield spreads between lower- and higher-quality corporate securities narrowed significantly over the interval, when investors reached for higher yields as their concern over credit risk waned. Corporations also took advantage of the booming stock market to raise new equity through stock sales during the first half. Both corporate debt and equity sales proceeded at about twice their respective paces over the first six months of 1982.

From mid-May to mid-August, interest rates broke out on the upside as the economy rebounded briskly, money grew, and the Federal Reserve increased pressure on the banking system. The fixed income markets began to be troubled by the strong growth in M-1 and reacted to signs of greater-than-expected strength in economic activity. A heavy supply of Treasury debt, which included the then record $15.75 billion August financing, frequently elicited disappointing investor demand, and dealers cut prices in an effort to keep inventories light. Tax-exempt new-issue activity gradually tapered off after April while corporate activity and the weighted average maturity of corporate issues dropped precipitously after May.

Moderate money growth for all three measures emerged in August and this, combined with indications that the recovery's momentum had slowed somewhat, restored a measure of confidence to the fixed income markets. Interest rates declined irregularly into early October, although heavy Treasury supplies moderated the decline of longer term yields. Over the balance of the year, the movement of all the money measures into their respective long-term growth ranges alleviated market concern over the near-term posture of System policy, at least with respect to concern over money

Chart 6

Yield Curves for Selected U.S. Treasury Obligations



growth. Still, interest rates edged higher on balance because of heavy Treasury supplies and reemerging signs of economic strength, including a sharp drop in the civilian unemployment rate. In late October and early November, rates responded to new supply as the Treasury was forced to alter its auction schedule repeatedly to avoid debt ceiling constraints. The postponement of its $16.0 billion November refunding package added to uncertainty and congestion late in the year.

The volume of debt sales by both corporate and municipal issuers declined appreciably in the second half, reflecting among other factors higher long-term rates and the competition of Treasury debt sales. Corporate equity sales also dropped as the stock market's mostly sideways movement reduced the appeal of equity funding. Nevertheless, for the year, corporate gross sales of debt and equity totaled about $67 billion and $52 billion, respectively. This compared with $54 billion and $31 billion in 1982. Sales of intermediate and long-term debt by state and local governments in 1983 set a new record of about $83 billion, up from a 1982 volume of $77 billion. Late in the year, tax-exempt mortgage bond financings accelerated to avoid the pending prohibition on the sale of such bonds in 1984.

Several major financial innovations attracted attention in 1983. The popularity of zero coupon investment vehicles based on long-term Treasury securities was

strong during the year, helping markets to absorb the record amounts of long-term Treasury securities auctioned. A number of securities dealers were active in sponsoring the sale of zero coupon custodial receipts, which evidence ownership of the corpus or coupon(s) of Treasury securities, and sales of physically stripped Treasury securities. These instruments are sold at a deep discount from face value as they provide no income prior to maturity. Offerings of zero coupon receipts varied widely in size but frequently involved substantial amounts of underlying Treasury securities. (In early 1984, an offering was based on $1 billion in face value of underlying Treasury securities.) Major buyers of these zero coupon investments included pension funds, insurance companies, individuals for use in IRAs, and various entities seeking to closely match the duration of assets and liabilities so as to insulate from market risk.

A second innovative financing device which proved popular in 1983 was a new type of mortgage-backed bond. This innovation was pioneered at midyear by the Federal Home Loan Mortgage Corporation (FHLMC) when it introduced collateralized mortgage obligations and was followed by a number of other bond issues with similar features. The major nonFHLMC bond issues were collateralized by Government National Mortgage Association (GNMA) pass-through certificates. The innovation common to the various issues during the year is that each is structured to provide retirement classes of different average maturities. All distributions of principal and prepayments from the underlying securities are used to retire first the nearest maturity and then to amortize in sequence the longer retirement classes. This device proved appealing to investors, expanding the market for mortgage-related securities and contributing to a significant contraction in GNMA-Treasury yield spreads over the second half of the year.

Monetary Policy—Formulation and Implementation

Background

Monetary policy makers in the latter part of 1982 downgraded the importance of M-1 as its relation to income deviated markedly from past patterns. During the four quarters of 1982 the income velocity of M-1—defined as the ratio of gross national product to the level of M-1—declined by the largest amount in any four-quarter span in the postwar period.[4] Moreover, it appeared that the atypical behavior of M-1 might well persist during 1983, while uncertainties also affected the relationships of broader aggregates and GNP. The FOMC, accordingly, opted for a substantial degree of flexibility in pursuit of its money and credit objectives.

The public's adjustment to significantly lower rates of inflation and market interest rates appeared to have a major effect on income velocity in late 1982 and the first half of 1983. By then a substantial proportion of M-1 consisted of regular NOW accounts paying a fixed rate of 5¼ percent. As interest rates declined, the differential fell between market rates and the NOW account rate, lowering the opportunity cost of holding M-1 balances. In relative terms, the fall in opportunity cost was markedly greater than the fall in market rates. As the public's demand for M-1 increased in relation to income, velocity declined.

More generally, the continuing process of financial innovation and deregulation resulted in an array of deposits and financial instruments which have attributes of both "transactions" and "savings" accounts in varying degrees. The growing importance of regular and Super NOW accounts included in M-1 has made it an increasingly attractive repository for longer term savings. To the extent that M-1 serves as a savings repository, its behavior becomes more subject to changing attitudes by the public toward saving and wealth. In consequence, the reliability of the link between M-1 and spending (economic activity) becomes more uncertain.

Target Ranges

The Committee determined that an unusual degree of judgement would be required as the year progressed in interpreting the monetary aggregates. It was recognized that the appropriateness of the target ranges would require reappraisal during the year taking into account economic conditions, including developments in domestic and international financial markets.

In view of the particular uncertainties associated with M-1, the Committee gave substantial weight in its deliberations to the broader aggregates. The Committee's target range for M-2 in 1983, established in February, specified growth of 7 to 10 percent at an annual rate from a February-March base. That base accommodated the explosive growth in M-2 in early 1983 generated by the shift to MMDAs from assets outside that measure. By increasing the 1982 target range by one percentage point, the Committee also allowed for modest additional asset shifts into M-2 after March. Abstracting from such shifts, the 1983 target range in practical effect was judged to be about the same as, or slightly lower than, its 1982 counterpart. M-3 was expected to be largely insulated from the shifts of funds occurring during the year. The Committee decided to

[4]As indicated in Footnote 2, this report describes the behavior of the monetary aggregates as measured prior to February 1984 seasonal factor and benchmark revisions. Taking those revisions into account does not substantially alter the pattern of M-1 velocity behavior in 1982 and 1983. It does, however, concentrate slightly more of the decline into the fourth quarter of 1982 and shows a bit less weakness in the first half of 1983.

retain M-3's 1982 growth range of 6½ to 9½ percent in 1983.

While M-1 was not targeted in the same sense as M-2 and M-3, its behavior was closely observed throughout the year, and its behavior affected policy judgments in some degree. The Committee allowed for uncertainty as to the appropriate growth of M-1—related to its evolving role as a savings vehicle—by widening its annual range to 4 to 8 percent. Growth in the lower end of the range was considered appropriate if velocity exhibited a normal strong cyclical rebound, while an outcome near the upper end of the range would have been appropriate if velocity stabilized at its then existing level. (Table 1 illustrates cyclical velocity patterns.) The Committee recognized that M-1 would require close monitoring during the year and that some adjustment in its growth range could prove appropriate.

In fact, M-1 expanded at about a 14 percent annual rate over the first six months of 1983, far above the range indicated early in the year. Velocity continued to drop sharply in the first quarter of the year but essentially stabilized in the second quarter (Chart 7). The lagged effects of interest rate declines and precautionary concerns, which had bolstered M-1 demand earlier, appeared to be abating somewhat. Moreover, the currency and demand deposit components of M-1 were beginning to show strength, implying greater transactions needs associated with the recovery in economic activity.

In July, the Committee adopted a new monitoring range for M-1 of 5 to 9 percent annualized over the second half of the year. The decision to rebase to the second quarter of 1983 served to emphasize that the rapid growth through midyear was related to special circumstances and that the Committee expected to see slower M-1 growth during the balance of the year. Primary emphasis continued to be placed on the broader aggregates, whose long-term ranges for growth were retained. M-1's role would continue to depend upon evidence that its velocity behavior was assuming a more predictable pattern.

In February, the Committee also chose for the first time an associated range for total domestic nonfinancial debt. Growth of 8½ to 11½ percent was chosen for the four quarters of 1983. The lower part of the range was about in line with that anticipated for nominal GNP, while the upper part encompassed somewhat faster growth. Long-term trends suggested the former development, but faster growth was viewed as possible because of the relatively rapid expansion foreseen for Federal debt. The Committee planned to monitor debt expansion, rather than target it directly, using it as an aid in assessing the growth of money and the impact of monetary policy.

Table 1

Annual Rates of Change of M-1 Income Velocity

In percent

Years	Recessions	Recoveries	First Year of Recoveries
1960-1969	−1.4	3.2	5.9
1970-1973	0.0	3.7	2.8
1974-1980-I	1.5	4.3	6.9
1980-II-1981-III	−0.6	6.8	6.8
1960-1981-III	0.2	3.8	5.6
1981-IV-1983-IV	−4.2	—	0.7

The annual rates of change of velocity are quarter-to-quarter annualized growth rates. The interval averages are quarterly averages of the annual rates of change of velocity for the indicated stage of the business cycle.

Implementation

Given the uncertainty over the relationship between M-1 and economic activity, policy implementation in late 1982 had already shifted away from the partially automatic response of reserve conditions to money supply deviations that had been initiated in October 1979. Beginning in the latter part of 1982, the System developed nonborrowed reserve paths linked essentially to desired M-2 growth, modifying paths to accommodate actual M-1 growth as it developed. This approach envisaged modest responses to M-2 deviations, but it quickly became impractical after the December meeting, when the explosive growth of MMDA accounts drew funds into M-2 from nonM-2 sources.[5]

The Committee felt flexibility was necessary given the uncertainties affecting money and its relationship to GNP. Directives to the Trading Desk thereafter typically were oriented toward achieving a desired degree of reserve restraint, one which was subject to modification over intermeeting periods, contingent upon a set of developments. The near-term pace of money growth (with emphasis placed on M-2 and M-3) relative to Committee preferences continued to play a role. However, alterations in the degree of reserve restraint from the initial level depended not only on significant deviations in money from expectations, but also on incoming evidence about the economy.

These adaptations of operating procedures, which tended to place considerable weight on judgements of

[5]See "Monetary Policy and Open Market Operations During 1982," this *Quarterly Review* (Spring 1983), pages 37-54.

monetary and economic developments between meetings, led to relatively modest adjustments to the reserve environment compared with the procedures adopted in October 1979. Deviations in money growth from short-run objectives generated changes in reserve pressures only when economic forces generally also supported a modification. In practice, this meant that weekly adjustments to the nonborrowed reserve paths were made routinely to allow for an anticipated amount of discount window borrowing.

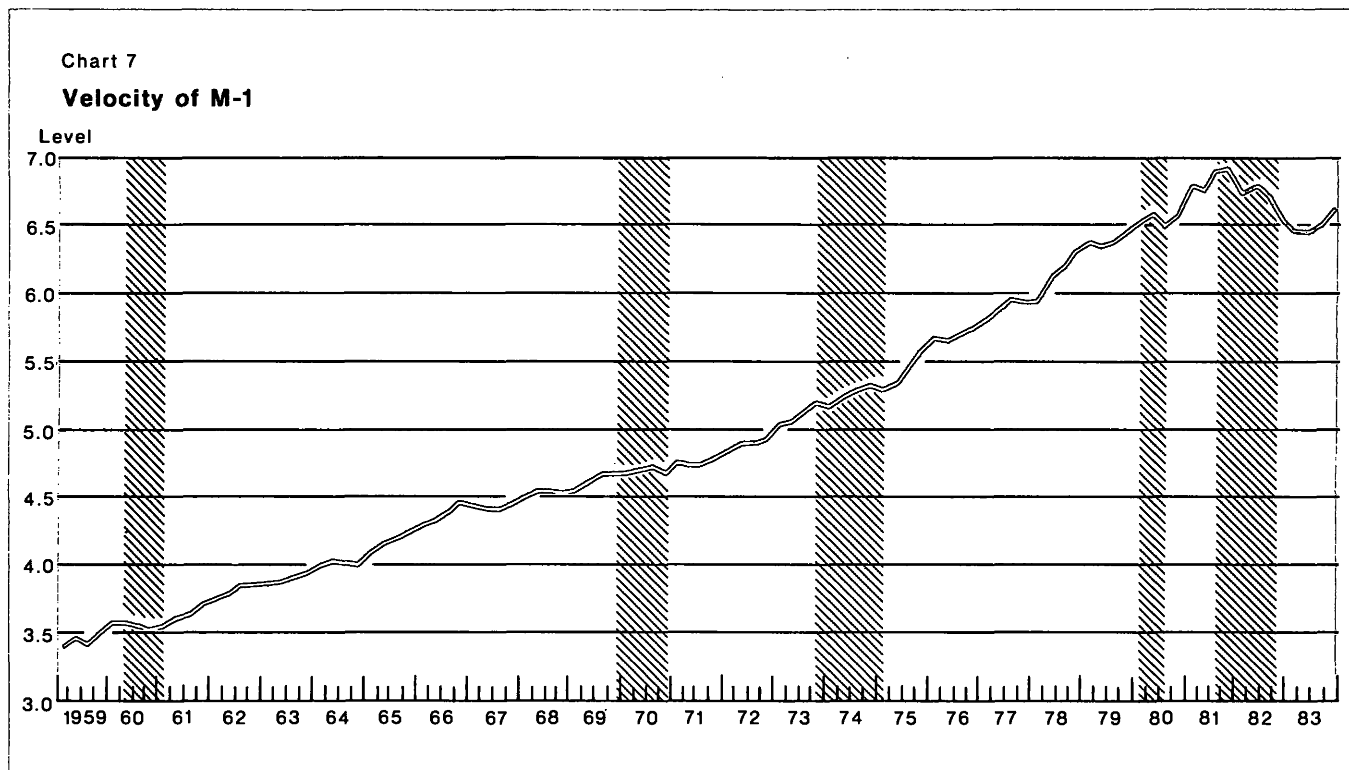
On a day-by-day basis, open market operations sought to maintain about the Committee's desired degree of reserve restraint. A total reserve path in any given week was constructed as the sum of the banking system's need for required reserves and an allowance for anticipated holdings of excess reserves in that week. The Desk's weekly nonborrowed reserve objective was then derived by deducting from the total reserve path a level of seasonal and adjustment borrowing at the discount window, which was associated with the Committee's preferred degree of reserve restraint. Each week the reserve paths were reviewed in the light of newly available information. The new total reserve path comprised the banking system's required and excess reserve needs for the new week in question, while the new nonborrowed reserve path was again derived by deducting the appropriate level of adjustment and seasonal borrowing.

Under the modified procedures, interest rates, including the Federal funds rate, continued to fluctuate in response to shifting expectations of policy intent and the economic outlook. Perceptions of the existing and likely posture of System policy, which often reflected emerging monetary and economic statistics, importantly affected bank reserve management strategies and the behavior of financial market participants. Consequently, market interest rates temporarily firmed or eased at times even though open market operations were directed at maintaining a steady degree of reserve availability. On other occasions, market reactions to changes in the stance of System policy were somewhat greater than justified by the modest policy actions employed during the year.

During most intermeeting periods, monetary and economic developments remained within limits satisfactory to the Committee, resulting in no change in the degree of reserve pressure initially chosen. Therefore, in contrast to other recent years, open market operations usually aimed steadily at nonborrowed reserves thought consistent with a given level of adjustment and seasonal borrowing during intermeeting periods. Modifications introduced on occasion during the intermeeting

Chart 7

Velocity of M-1



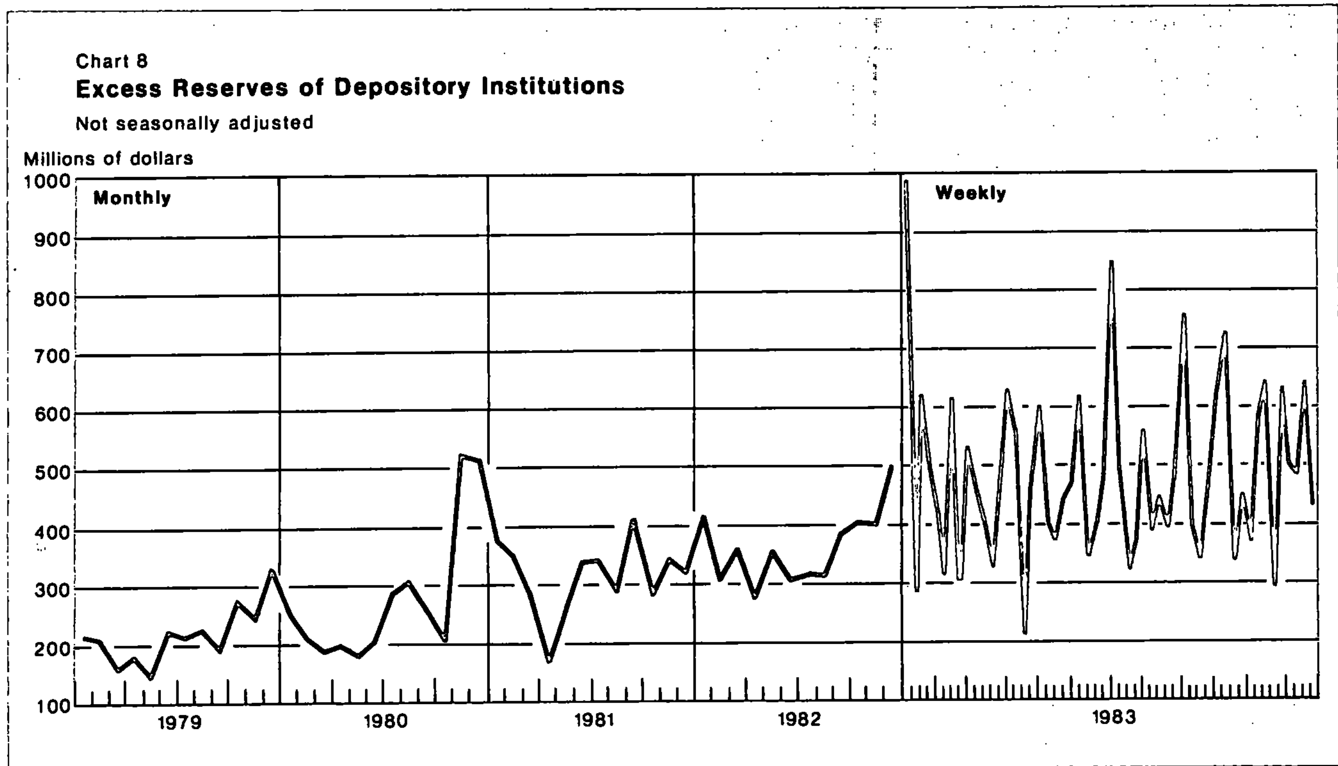
periods in line with Committee instructions were modest. In line with earlier procedures, path borrowing was modified on a few occasions when over- or underborrowing early in the week threatened sharp swings in reserve pressure.

Making an appropriate allowance for excess reserves in constructing the reserve paths was a persistent difficulty in 1983. Several legislation-based reductions in reserve requirements contributed to especially high excesses in the weeks when reductions occurred, as banks adjusted slowly to new requirements. Beyond these transitional adjustment difficulties, the precise magnitudes of which are difficult to anticipate, excesses often ran high relative to both historical experience (Chart 8) and path allowances. In some cases the higher need for excesses could be discerned as a statement week progressed, allowing for some accommodation of the need through the provision of additional nonborrowed reserves. At other times, the unanticipated accumulation of excesses contributed to greater borrowing than was built into the path.

Much of the increased holdings of excess reserves appeared to stem from implementation of the Monetary Control Act (MCA) of 1980. The step-up in excess reserve levels was attributable in large part to excesses held by nonmember depository institutions, which held no reserve balances prior to the MCA. The number of active nonmember reserve accounts continued to expand in 1983 because of MCA, in part to meet phase-ups of reserve requirements but more importantly as nonmember institutions opened clearing accounts to gain access to Reserve Bank services. Such institutions tended to hold excesses to reduce the likelihood of overdrafts or of being deficient with respect to reserve and clearing balance requirements.

For small member banks, the cumulative effects of phase-downs of member bank reserve requirements under MCA and the exemption of the first $2.1 million of reservable liabilities from reserve requirements under the Garn-St Germain Depository Institutions Act of 1982 appear to have bolstered excess reserve holdings. The opportunity costs of holding such excesses may be reasonable compared to the costs of closer monitoring of reserve balances which would become necessary if the banks trimmed the excesses resulting from these legislated developments.

The degree of weekly variation in reserve availability from market factors remained substantial in 1983. The mean absolute weekly change in nonborrowed reserves net of open market operations was $1.3 billion, unchanged from 1982. Projections of weekly nonborrowed reserve availability, while remaining subject to



significant error, were on average a bit closer to the mark than in other recent years. The mean absolute forecasting error was about $575 million at the beginning of the week, declining to about $90 million on the final day. The comparable beginning and end-of-week figures for 1982 had been $600 million and $130 million.

Given this weekly variability and still-substantial error factor, the Desk continued to rely heavily on transactions which temporarily add or drain reserves. Repurchase agreements involved both those arranged on behalf of the Federal Reserve System and those arranged in the market on behalf of foreign and international accounts. Together with matched sale-purchase transactions in the market, they totaled about $295 billion compared to about $310 billion in 1982. The number of market entries remained unchanged between the two years at 143. (There were 251 business days in 1983 and 249 in 1982.)

The Desk employed outright transactions to meet seasonal and secular reserve needs. Overall, the System's outright holdings of Treasury and Federally sponsored agency securities rose on a net basis by $16.4 billion, compared to $8.1 billion in 1982. Currency in circulation grew substantially during the year, rising by about $14 billion. Outright purchases of Treasury securities amounted to $22.5 billion, with slightly over one half bought from foreign accounts while the remainder was purchased in the market. Outright sales of securities (all Treasury bills) to foreign accounts totaled $3.4 billion; no outright securities sales were made in the market. Redemptions of maturing Treasury securities (mostly bills) came to $2.5 billion. There were no purchases or sales of agency securities during the year, but about $300 million of maturing issues was redeemed without replacement.

Conducting Open Market Operations

January-Late May

In early 1983, open market operations were conducted amid considerable uncertainty about the interpretation of the monetary aggregates in the face of major institutional changes. In late 1982, the nonborrowed reserve paths were built to be consistent with desired M-2 growth, retaining some of the automatic features adopted in October 1979. But nonborrowed reserve paths had been adjusted to accommodate deviations of M-1 from the levels assumed in building the path.[6] When it met on December 20-21, 1982, the Committee continued this approach, instructing the Trading Desk to seek nonborrowed reserves consistent with desired M-2 growth. The directive did allow for more growth in M-2 if there were greater-than-expected shifts of funds into the broader aggregates from market instruments. As January progressed, it became apparent that M-2 was being enlarged by transfers from nonM-2 sources to a much greater extent than had been allowed for in the path. The Committee then decided not to allow the more rapid growth in M-2 to lead automatically to further restraint.

At subsequent meetings, the Committee eschewed mechanical linkages between the behavior of the aggregates and reserve pressures. Instead, the operating paragraphs of the directives specified desired degrees of reserve restraint. Modification of reserve pressure between meetings was linked to a variety of indicators, primarily the behavior of the monetary aggregates and the state of the economy.

In December 1982, the Committee had specified December-March growth at a seasonally adjusted annual rate of 9½ percent for M-2, allowing for a modest net inflow of funds in conjunction with MMDAs. It set an 8 percent growth rate for M-3, expecting only minimal distortions in it from MMDAs. The initial level of adjustment and seasonal borrowing was set at $200 million. The consultative range for Federal funds was held at 6 to 10 percent, a range that was to remain unchanged through all of 1983. (Table 2 presents specifications of various operating guidelines and related measures.) The Committee did not specify an M-1 growth rate; it was not clear how MMDAs would influence the mix of MMDAs and transactions deposits. The introduction of Super NOW accounts in early January was expected to raise M-1 but by an indeterminate amount.

As noted above, M-2 grew at a pace far in excess of the 9½ percent path rate, as MMDAs drew a considerable volume of funds from nonM-2 sources. In a series of discussions, and a formal telephone meeting on January 28, the FOMC found acceptable the existing degree of reserve restraint, consistent with adjustment and seasonal borrowing of $200 million over the remaining weeks until the next meeting.

Open market operations during the period following the December meeting sought to meet weekly nonborrowed reserve objectives believed consistent with the initial borrowing assumption and an allowance for expected levels of excess reserves. Year-end distortions led to borrowing exceeding planned amounts—substantially so in the January 5 statement week. Excess reserves, too, exceeded the enlarged allowance made for them that week and continued to run above assumed levels in most other weeks of the period. Discount window borrowing ran above expected levels through mid-January, but then fell below them in the final three

[6] Because M-1 is subject to a higher reserve requirement than the broader aggregates, it was necessary to make estimates of M-1 behavior to build a path. The approach used in late 1982 is described in "Monetary Policy and Open Market Operations in 1982", *op. cit.*, pages 41-2 and 52-4.

weeks. Federal funds traded above the 8½ percent discount rate around the year-end but settled back near that rate once year-end pressures abated. Chart 9 shows the Federal funds rate and borrowed reserve patterns over the year.

Nonborrowed reserves were generally close to, or above, the weekly objectives during this period, which was dominated by a seasonal need to drain reserves. Outright sales of bills to foreign accounts, redemptions of maturing issues and one round of matched sale-purchase transactions in the market were employed. Repurchase agreements were used on several occasions to compensate for unexpected increases in the foreign RP pool and occasional uncertainties about float and other balance sheet items.

When the FOMC met on February 8 and 9, it faced the need to interpret the major forces buffeting the aggregates. In adopting 1983 objectives, it rebased M-2 to February-March and adopted a 7 to 10 percent range, thus accepting the ongoing bulge from the MMDA accounts but also anticipating a return to more normal behavior by the end of the first quarter. The staff suggested that the existing degree of reserve restraint was likely to be associated with rapid M-2 growth in the weeks ahead but an appreciable slowing in the other aggregates. Given the uncertainty, the operating paragraph of the directive was written without reference to specific short-run growth rates for the monetary aggregates. The Committee indicated that lesser restraint would be acceptable if, abstracting from the distortions introduced by the new deposits, the monetary aggregates seemed to be slowing appreciably to rates below the paths implied by the long-run ranges.

As the intermeeting period progressed, the existing degree of reserve pressure was retained. The monetary aggregates, and particularly M-1, were growing faster than had been expected, but distortions from the new deposits continued to cloud the significance of the behavior of the aggregates.

In practice, adjustment and seasonal borrowing in the period ran above the $200 million expected in most weeks, reflecting a mix of reserve shortfalls and higher-than-expected demand for excess reserves. Even so, Federal funds generally traded close to the 8½ percent discount rate, edging up to about 8¾ percent just before the March meeting as quarter-end pressures began to build. During the period, reserve requirement ratios were lowered for most member banks with a phase-in of the Monetary Control Act on March 3. A modest allowance was made for additional excess reserve demand in the week of the phase-in. Actual excess reserves, after revision, were close to the assumed level. On average over the period, excess reserves were modestly above the allowance made for them. The period's sizable reserve needs were met gradually through a mix of outright Treasury bill purchases, mostly from foreign accounts, and temporary repurchase agreements in the market.

When the Committee met again on March 28 and 29, there were signs that the bulk of the bulge in M-2 associated with the new MMDAs was over and that only a modest allowance was needed for the period ahead. Most members felt primary weight should still be placed on the broader aggregates. The unusually sharp decline in M-1 velocity continued to cast doubt on that aggregate as a principal guide for policy and, while an M-1 range was indicated, it was considered to be a monitoring range rather than a target.

The Committee weighed the strength in the aggregates against concerns that the recovery was still at an early stage and that upward pressure on interest rates might risk retarding or aborting the recovery. It opted to continue about the existing degree of reserve restraint, with anticipated borrowing initially $250 million, in line with the actual experience of recent preceding weeks. It was anticipated, and desired, that M-2 and M-3 would slow to seasonally adjusted annual rates of about 9 percent and 8 percent, respectively, over the period from March to June. The Committee expected that M-1 growth at about a 6 to 7 percent rate would be consistent with its specifications for the broader aggregates.

The Committee indicated that lesser restraint would be acceptable if there were a more pronounced slowing of the growth in the monetary aggregates or indications of a weakening in the pace of economic recovery. If money growth proved appreciably higher than expected without its being attributable to institutional changes, the Committee would consult about the desirability of any substantial further restraint on bank reserve positions.

In fact, the aggregates did weaken in April relative to expectations, but grew very rapidly in early May. The deviations in money growth from expected levels did not lead to any change in Desk objectives. Throughout the March-to-May intermeeting period the Desk sought nonborrowed reserves consistent with $250 million of seasonal and adjustment borrowing.

Borrowing at the discount window bulged above intended levels on a number of occasions, notably in the week that included the quarter-end statement day and the partial holiday of Good Friday. The quarter ended on Thursday, the first day of the statement week. Window dressing by corporations and banks led to high demands for reserves. The Federal funds rate rose that day, and banks turned to the discount window. Even with repeated reserve injections, the pressures in the money market subsided only gradually. The funds rate averaged 9.43 percent in that week, compared to 8.88 percent the week before.

Most of the borrowing bulges during the intermeeting period were accompanied by shortfalls in nonborrowed reserves relative to the objective. Greater-than-expected demand for excess reserves was at work in some weeks. The funds rate settled back to trade close to, or slightly above, the 8½ percent discount rate after the quarter-end week. It dipped briefly below the discount rate in early May when many participants expected a discount rate cut but moved back up once a resumption of M-1 expansion dashed those expectations.

Late May-Late August

During the late spring and into the summer evidence mounted that the recovery was well under way, and proceeding at a robust pace. M-2 and M-3 grew at rates that were generally close to, or modestly above, the paths set for them, but M-1 soared. While remaining skeptical about the information to be drawn from the aggregates, Committee members felt that some recognition of the persistent strength in M-1 was appropriate, especially given the emerging rapid expansion in economic activity. In this environment, the Committee increased in cautious, measured steps the extent of reserve restraint applied to the banking system.

The picture presented at the May 24 meeting was particularly difficult to interpret and led to a wide range of views. Some members saw a risk that the economy might be accelerating to a pace that could prove to be very rapid. The extremely high rate of growth of M-1 in early May, after a prolonged period of rapid growth, was viewed by a number of members as deserving some response. Others questioned the sustainability of the recovery given sluggish capital spending and exports. They noted that M-2 and M-3 were tracking slightly below the second quarter targets of 9 and 8 percent, respectively, and questioned the desirability of a response to M-1 growth.

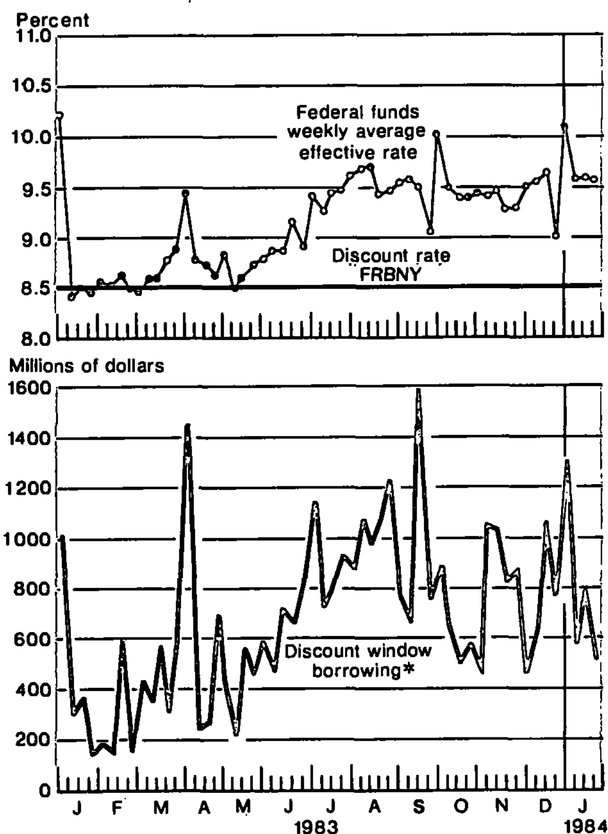
After consideration, the Committee voted to increase only slightly the degree of reserve restraint. It indicated that lesser restraint would be appropriate if the broader monetary aggregates slowed further relative to the paths implied by the long-term ranges and if M-1 decelerated, or if there were indications of a weakening in the pace of economic recovery.

After the meeting the Desk began to seek nonborrowed reserve levels consistent with adjustment and seasonal borrowing of $350 million, as discussed by the Committee. M-2 and M-3 actually came in stronger than had been expected at the time of the May meeting. They grew at close to, or slightly above, the desired growth rates for the March-June period. M-1, as expected, ran well above the 6 to 7 percent growth range discussed at the March meeting. Borrowing at the window persistently exceeded planned levels. Reserves at times fell short of projected levels while excess reserve demands often appeared to run above the allowances made for them in setting weekly reserve objectives.

Borrowing averaged close to $600 million in the first three weeks of the intermeeting period, but the increase in pressure resulted in only a modest rise in market rates. Banks were slow to respond to the increased reserve pressure as there was no conviction of a policy change. The Federal funds rate averaged 8.82 percent in those weeks compared with 8.60 percent in the preceding three weeks. Thereafter market perceptions and bank actions changed as the persistence of strong money growth worked on expectations, contributing to a rise in the funds rate to a 9.14 percent average a week later.

Chart 9

Money Market Conditions and Borrowed Reserves



* Excludes extended credit borrowing.

Against this background of additional strength in the aggregates and the economy and the tendency of borrowing to run to the high side, the Committee consulted on June 23 and agreed that a modest increase in planned reserve restraint was appropriate. Adjustment and seasonal borrowing in a range of $400 to $500 million was contemplated. However, borrowing continued to exceed the intended level, as pressures surrounding the quarter-end and the Independence Day holiday led to cautious bank reserve management. The Federal funds rate traded over a 5 to 25 percent range before the holiday weekend.

The extended credit borrowing by Seattle-First National Bank, which jumped up in mid-June, complicated reserve management. Extended credit borrowing is treated as nonborrowed reserves for the purpose of Desk operations, since the borrowing does not carry with it the normal Federal Reserve pressure on the bank to repay its advance quickly. With additional reserves being supplied by the discount window, fewer reserves needed to be supplied through open market operations. The purchase of the bank by BankAmerica Corporation ended the reserve injection from this source by the final week of the intermeeting period.

Substantial additions to reserves were required during the intermeeting period to deal with the seasonal outflow in currency and the runup in the Treasury's balance at the end of June. The Desk bought Treasury bills and coupon issues outright in the market and purchased bills from foreign accounts. It also arranged a number of rounds of repurchase agreements. When the extended credit borrowing built up, a round of matched sale-purchase agreements in the market was used to cut back reserve availability.

When the Committee met on July 12 and 13, members focused on the economy's strong forward momentum and prospects for continuing sizable gains in real GNP. M-2 and M-3 were growing at rates that were generally in line with the FOMC's objectives for both the second quarter and the year, although M-3 was around the upper limit of its annual range. M-1 had slowed somewhat in June from its extraordinary 26 percent rate of growth in May, but had still grown at a 14 percent annual rate over the first half of the year. Given continued evidence of abnormal behavior for M-1 velocity, the Committee established a monitoring range of 5 to 9 percent for M-1 growth from a new base in the second quarter to the fourth quarter of 1983.

In view of prospective economic strength and concerns about future money growth, the Committee directed the open market Desk to increase slightly further the degree of reserve restraint. Over the period from June to September, this action was expected to be associated with M-2 and M-3 growth at seasonally adjusted annual rates of 8½ and 8 percent respectively. It was anticipated that M-1 would grow at around a 7 percent rate over the same period. Depending on evidence about the strength of the economic recovery, lesser restraint would be acceptable in the context of a significant shortfall in growth of the broader aggregates. Somewhat greater restraint would be acceptable if those aggregates expanded more rapidly.

In carrying out policy, the Desk sought nonborrowed reserves consistent with adjustment and seasonal borrowing around the middle of the $600 to $800 million range discussed at the FOMC meeting. M-2 and M-3 ran a bit below planned growth, but a contributing cause was a decline in overnight RPs, perhaps in response to the temporary buildup of Treasury balances at the banks. The economy continued strong, as did M-1.

Borrowing at the window tended to rise higher than intended. Often borrowing was high over the weekend, making it difficult, if not impossible, for the weekly average to be consistent with the nonborrowed reserve objective. To communicate the intended increase in restraint, a shortfall in nonborrowed reserves was accepted on occasion rather than risk a buildup of excess reserves and an easing of money market conditions, contrary to the Committee's intent. Nonborrowed reserves came in modestly below path in several weeks. Most of the time excess reserves ran close to the allowance made for them—in the $300 to $400 million area discussed by the Committee—but they were significantly higher in two weeks. The Federal funds rate rose to the 9½ to 9¾ percent area, after having traded mostly between 8¾ and 9¼ percent in the previous period.

Large reserve injections often were called for during the period. The Desk purchased $2.1 billion of Treasury bills from foreign accounts. It also used temporary injections repeatedly through System and customer repurchase agreements in the market.

Late August to the year-end

The economic data received over the remainder of the year gave a more mixed picture than had been evident over the late spring and summer. By September, the previously steamy rate of expansion appeared to be moderating, although later in the period the extent of the slowdown seemed less clear. M-1 growth slowed markedly, while M-2 growth also slackened a bit. M-3's pace moderated slightly but left this aggregate high in its annual range.

While some Committee members thought that M-1 behavior was beginning to return to normal, a majority continued to stress M-2 and M-3 as primary objectives, with M-1 still in a monitoring status. In view of the slowdown in the growth of the aggregates and the

Table 2

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

Date of Meeting	M-2	M-3	M-1	Initial Assumption for Borrowings in Deriving Nonborrowed Reserve Path (millions of dollars)	Notes
	Short-Term Annualized Rate of Growth For Period Indicated (percent)				
		Specified Rate	Monitoring Range		
12/20-21/82	December to March 9½	8	—	200	The Committee's short-term objective for M-2 growth allowed for modest shifting into the new MMDAs from non-M-2 instruments; greater growth was acceptable if analysis of incoming data indicated that the MMDAs were generating more substantial shifts of funds into broader aggregates from market instruments.
2/8-9/83	Not specified			200	The Committee sought to maintain the existing degree of restraint on reserve positions. Lesser restraint would be acceptable in the context of appreciable slowing of growth in the monetary aggregates to or below the paths implied by the long-term ranges, taking account of the distortions relating to the introduction of the new accounts.
3/28-29/83	March to June 9	8	6-7	250	The Committee sought to maintain generally the existing degree of restraint on reserve positions. The Committee noted the same provisions agreed upon at the February meeting for adopting a lesser degree of reserve restraint and added indications of a weakening in the pace of the economic recovery.
5/24/83	March to June 9	8	(6-7)	350 6/23 400-500	The Committee sought to increase only slightly the degree of reserve restraint against a background of M-2 and M-3 estimates slightly below the rates specified in March for the second quarter, M-1 growing well above anticipated levels, and an acceleration in the business recovery. Lesser restraint would be appropriate in the context of less growth in the monetary aggregates or indications of weakening in the pace of economic recovery.

Table 2
Specifications from Directives of the Federal Open Market Committee and Related Information *(continued)*

Date of Meeting	M-2	Short-Term Annualized Rate of Growth For Period Indicated (percent) Specified Rate M-3	Monitoring Range M-1	Initial Assumption for Borrowings in Deriving Nonborrowed Reserve Path (millions of dollars)	Notes
7/12-13/83	8½	June to September 8	7	600-800	The Committee sought to increase slightly further the existing degree of reserve restaint. The Committee noted that lesser or greater restraint would be acceptable, depending on evidence about the strength of the economy and other factors bearing on the business and inflation outlook, and the growth of the aggregates.
8/23/83	8	June to September 8	7	700-900	The Committee sought to maintain the existing degree of reserve restraint. The Committee cited the same provisions agreed upon at the previous meeting for adopting a lesser or greater degree of reserve restraint.
10/4/83	8½	September to December 8½	7	650	The Committee sought to maintain the slightly lesser degree of reserve restraint that had been sought in recent weeks. The Committee noted the same provisions agreed upon at the previous meeting for adopting a lesser or greater degree of reserve restraint.
11/14-15/83	8½	September to December 8½	5-6	650	The Committee sought to maintain the existing degree of reserve restraint. The Committee noted the same provisions agreed upon at the previous meeting for adopting a lesser or greater degree of reserve restraint.
12/19-20/83	8	November to March 8	6	650	The Committee sought to maintain at least the existing degree of reserve restraint. The Committee noted that somewhat greater restraint would be acceptable depending on evidence about the strength of the economy and should the aggregates expand more rapidly.

Note: The discount rate remained at 8.5 percent for the entire year and the consultation range for Federal funds remained at 6 to 10 percent.

economy, the FOMC relaxed slightly the degree of reserve restraint in September. This stance continued through the rest of the year.

When the Committee met August 23, many signs suggested economic activity would moderate later in the year. Consumer spending, housing, and inventory building were expected to provide less impetus in the future. M-2 and M-3 growth had slowed substantially in July; M-1 began to slow in July and seemed to be decelerating further in August. These developments were viewed constructively, and the Committee voted to direct the Trading Desk to maintain the existing degree of reserve restraint. Depending upon evidence concerning the strength of the economy and other factors bearing on the business and inflation outlook, lesser restraint was considered appropriate if M-2 and M-3 showed a significant shortfall from the expected annual rate of growth of around 8 percent for June to September. Greater restraint would be acceptable should these aggregates expand more rapidly. Deceleration of M-1 to a rate of around 7 percent was expected to be consistent with the specifications for the broader measures.

The Desk initially sought to maintain restraint consistent with $800 million of adjustment and seasonal borrowing. As the aggregates weakened and the economic data suggested some abatement in the momentum of the recovery, the borrowing level used in developing the nonborrowed reserve objective was scaled back to $700 million for two weeks and then to $650 million in the final two weeks.

The period between the August and October meetings proved to be particularly challenging to open market operations, making it worthy of closer examination. Right after the August meeting, the Desk faced initial estimates of a small need to absorb reserves. Given its modest size relative to the usual uncertainties surrounding reserve forecasts (see discussion on page 47), the Desk normally would have deferred absorbing reserves. However, the Federal funds rate was well below recent levels, at 9 1/8 percent. Some market participants were concluding erroneously that the FOMC had voted to seek a more accommodative stance. Hence, the Desk withdrew reserves by arranging overnight matched sale-purchase agreements in the market. As the August 31 week progressed, float and other factors provided fewer reserves than expected. The Desk initiated customer and System repurchase agreements, but reserves still fell short. Discount window borrowing and excess reserves both exceeded anticipated levels.

In preparation for an expected need to drain reserves beginning in the September 7 week when required reserves were reduced by a phase-in under the Monetary Control Act, the Desk had run off maturing Treasury bills in the auction held August 29. It also had sold bills directly to foreign central bank customers during the August 31 statement week. Once again, revisions to market factors, and a sense that excess reserve demand was running very high, led the Desk to reverse direction, adding reserves through both customer and System repurchase agreements. Excess reserves turned out well above the higher than average allowance. A number of special factors apparently raised demand more than expected. These factors were the Labor Day holiday, the payment of Social Security checks, and the reserve effects of the Monetary Control Act, which released reserves at member banks and extended effective requirements to more nonmember institutions.

A different set of factors complicated reserve management in the September 14 week. Friday, September 9 was a holiday in California but not in the rest of the country. Whenever such a partial holiday occurs, the reserve transfers affecting the closed banks are put through when the banks reopen. The Federal Reserve gives credit subsequently on checks deposited by the banks for collection as if the banks had been open. However, it was customary that if a bank was not notified of its reserve credits until late in the week or in the next week, it could choose the week in which the reserve adjustment would be taken. In this case, it took a couple of weeks to sort out the amount and timing of the adjustments. A power failure at a large Los Angeles bank added to the problem. In consequence, the banks showed enlarged reserve needs in both the September 14 and 21 statement weeks pending effective receipt of the credit adjustments.

Beginning in the September 21 week, and continuing into October, a seasonal rise in Treasury deposits at Federal Reserve Banks drained reserves more rapidly than expected. Normally the Treasury seeks to maintain a reasonably steady balance at the Reserve Banks, usually at about $3 billion. It places additional cash in its note option accounts at commercial banks. Fluctuations in the note option accounts leave bank reserves unaffected, unlike changes in Treasury balances at the Federal Reserve which do have a reserve effect. However, because banks are required to pay interest to the Treasury on their notes and to hold collateral securing the notes, they limit the funds they will accept from the Treasury and remit excess funds to the Reserve Banks. When the balances exceed the aggregate limit, Treasury cash at the Federal Reserve builds up rapidly, draining reserves.

In preparation, the Desk began to add reserves just ahead of the mid-September tax date through Treasury bill purchases from foreign official accounts. It bought

bills in the market on September 15, and continued to purchase bills from foreign accounts during the week. However, the Treasury's balance at the Federal Reserve rose to $12.8 billion by week's end, far more than anticipated. The Desk added reserves through repurchase agreements, but its actions kept falling a bit short as the Treasury balance kept rising faster than expected. The major money market banks, enjoying the influx of Treasury funds, were willing to accumulate deficiencies so that the Federal funds rate fell during the week from a range of 9½ to 9⅝ percent to 9⅛ to 9⅜ percent. The Desk held back in meeting the estimated needs. When the shortage finally became apparent late Wednesday, September 21, Federal funds traded as high as 20 percent. Borrowing bulged to $6.3 billion on the day, lifting the average to $1.6 billion for the week. Excess reserves averaged $345 million, close to the allowance.

Treasury balances were expected to remain at unusually high levels until Social Security payments went out in October and to be moderately high for a while thereafter. The Desk, facing a need to replace the maturing repurchase agreements, announced its intentions on Wednesday, September 21, and arranged a record $14.1 billion of 4- and 7-day repurchase contracts the next day. On Friday, the Trading Desk replaced a portion of the repurchase contracts that were withdrawn, making customer-related repurchase agreements in the market. For a change, the Treasury balance fell short of expectations, and reserves turned out more plentiful than expected. With borrowing at the window also on the high side, the Federal funds rate declined sharply. The Desk then had to reverse course by arranging matched sale-purchase transactions in the market Wednesday, September 28 to absorb the redundant reserves. Over the week the Federal funds rate averaged only around 9 percent. Although discount window borrowing dropped sharply after the weekend, it still ran above the anticipated amount for the week. Excess reserves were modestly above the expected level.

The Desk faced another large reserve shortage in the October 5 week. It replaced a portion of the maturing repurchase agreements early in the week, ahead of the expected drop in Treasury balances associated with the Social Security payments on Monday, October 3. Banks, however, scrambled to build up excess reserves over the quarter-end and the money market remained on the firm side after the weekend; the average effective Federal funds rate was 10.00 percent.

At the FOMC meeting held October 4, the economic indicators suggested that the economic expansion was continuing, although it had slowed somewhat from the exceptionally rapid second quarter pace. The Committee decided to maintain the reduced degree of reserve restraint that had been attained in September. It expected that such a stance would be consistent with M-2 and M-3 growth at an annual rate of 8½ percent from September to December. Depending on the strength of the economic recovery, lesser or greater restraint would be acceptable should these aggregates experience a significant shortfall or show more rapid growth than anticipated. M-1 growth at around a 7 percent annual rate was expected to be consistent with the objectives for the broader aggregates.

The broad aggregates generally were close to the objectives during the period, with M-2 slightly above and M-3 a touch below the 8½ percent growth rate in October. M-1, however, was much weaker than anticipated. Indicators suggested that the economic expansion was proceeding at a pace in line with expectations. In these circumstances, the Desk continued to provide for nonborrowed reserves consistent with adjustment and seasonal borrowing of $650 million.

During the first three weeks, through October 26, the Desk continued to face sizable needs to add reserves as the Treasury balance persistently held at abnormally high levels (though well below those of late September). Banks seemed reluctant to borrow at the discount window after borrowing relatively large amounts in the preceding few weeks. Adjustment and seasonal borrowing ran well below expected levels even though the Federal funds rate hung close to 9½ percent in the first week, the week ended October 12. Also in that week, the Columbus Day holiday contributed to high excess reserve demands, and the Desk allowed nonborrowed reserves to overshoot.

In the October 19 through November 2 weeks, nonborrowed reserves were modestly above path while excess reserve demand, for a change, tended to run below expectations. Banks borrowed a bit less than the planned amounts. Late in the period, the size of the foreign account repurchase agreement pool and the Treasury balance, as well as wire transfer difficulties, contributed to a net reserve shortfall and complicated reserve management. Furthermore, excess reserve demand once more rose above expected levels, and discount window borrowing rose sharply. Federal funds generally traded in the 9⅜ percent area after the first week of the intermeeting period despite the swings in borrowing.

At its November 14-15 meeting, the Committee noted that the broader aggregates were expanding at rates in line with the desired 8½ percent fourth quarter pace. Economic expansion appeared to have moderated from the very rapid second and third quarter pace, although the economy still seemed to be growing relatively rapidly. Some members saw the strength of the economy

as disturbing, for it seemed to point to inflation and other imbalances in the future. Other members were more concerned with pockets of weakness, particularly in the export related sectors. The sharp deceleration in M-1 growth over recent months, following earlier rapid growth, was viewed as a desirable offset by some members but as a source of concern by others who saw such a slowdown as a possible precursor of economic weakness.

On balance, the Committee decided to retain the existing degree of reserve restraint. The directive provided for either greater or lesser reserve restraint depending on the behavior of the broad aggregates with attention to economic and financial developments. Given the relatively slow growth of M-1 in October, the annual rate of growth for the September-to-December period expected to be consistent with the broader measures was lowered to 5 to 6 percent.

As the period progressed, M-2 stayed essentially on track. M-3 growth was higher than desired, but some of the expansion was attributed to the replacement by banks of Treasury cash holdings with large CDs and term RPs. M-1 again came in well short of expectations making November the fourth consecutive month in which the measure showed very little expansion.

Against this background the Desk continued to provide for nonborrowed reserves consistent with $650 million of adjustment and seasonal borrowing. A reserve shortfall in the week before Thanksgiving pushed borrowing up sharply on Wednesday. The high level automatically carried over the holiday into the next statement week contributing to an overrun in borrowing in both weeks. (Nonborrowed reserves were close to track in the second week.) Borrowing fell short and nonborrowed reserves came out higher than planned in the next two weeks.

Ironically, in the first two weeks the Federal funds rate fell below recent levels, trading mostly in a 9 1/8 to 9 3/8 percent range, while discount window borrowings were high. The rate jumped to a 9 3/8 to 9 5/8 percent range in the next two weeks despite the lower borrowing levels. A mix of changing expectations and variations in actual and desired reserve balances early in the statement weeks contributed to the perverse relationships, but to some extent they remain a mystery. In the final week, borrowing ran substantially above the path level, reflecting high borrowing over the weekend amid pressures related to the December tax date. The high borrowing contributed to high excess reserves as nonborrowed reserves came in close to planned levels.

At the meeting held December 19-20, the Committee noted that the economy seemed to be growing at a rapid pace, although the rate of expansion had moderated from that of the middle two quarters. Prospects were for continued expansion in 1984, although at a reduced pace from that experienced in 1983. M-2 and M-3 were close to, or slightly above, their desired September-December growth paths. M-1 growth remained sluggish through November, but was showing signs of picking up in early December.

Committee members had somewhat mixed views about the strength of the expansion and the prospects for inflation. There was agreement that risks of increasing inflationary expectations were such that at least the existing degree of reserve restraint should be maintained. Depending on developments in the economy, the Committee indicated that somewhat greater restraint would be acceptable if M-2 and M-3 expansion should be more rapid than the 8 percent growth rate expected for the November 1983-March 1984 interval. The Committee anticipated that growth in M-1 at around a 6 percent rate over that interval would be consistent with the expected behavior of the broader aggregates.

The Desk continued to seek reserve conditions consistent with adjustment and seasonal borrowing of $650 million. Economic data received right after the meeting suggested more slackening in the pace of growth than had been expected. The broad aggregates appeared to be tracking just below the Committee's desired growth paths, while M-1 growth was picking up a bit more than had been expected. Taken together, these factors did not suggest any reason for changing the reserve stance.

Reserve management during the late-December holiday period was complicated by year-end developments. Estimates of reserve availability were revised frequently, reflecting a weather-related bulge in float and unexpected variations in the size of the foreign repurchase pool. Reserve demands also were variable amid holiday and year-end publishing date distortions. In this environment, the Federal funds rate traded over unusually wide ranges during the two holiday weeks around the year-end. It tended to the low side—often below 9 percent—before Christmas and to the high side—often above 10 percent—around the year-end. Discount window borrowing ran modestly above the expected level in Christmas week and far above that level in the week that spanned the year-end. Nonborrowed reserves fell short of the objectives in both weeks, while excess reserves ran above the enlarged allowance in the latter week. Once the year-end pressures subsided in January, borrowing fell back to a range around the anticipated level and the Federal funds rate traded mostly around 9 1/2 percent.