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The FOMC in 1987: The Effects of a Falling Dollar and the Stock Market Collapse

AMONG the economic events that influenced the Federal Open Market Committee's (hereafter "Committee") determination of domestic monetary policy during 1987, the falling value of the dollar on foreign exchange markets and the collapse of stock prices on October 19 stand out.[1] During the year's first 10 months, the Committee looked on the declining dollar with guarded optimism. On one hand, the decline could be expected to lead to a reduction in the nation's burgeoning trade deficit, a reduction that many viewed as crucial in prolonging the economic expansion.[2] On the other hand, the dollar's depreciation would raise the price paid by U.S. residents for imported goods and could adversely impact the prices of competing goods produced domestically. That, together with a rebound in oil prices early in the year, could be detrimental to the success of the Committee's anti-inflationary policies.

While exchange rate developments played an important role in monetary policymaking during the first 10 months of 1987, the stock market crash of October 19 and the attendant uncertainty in domestic financial markets caused the Committee to focus its energies on the domestic economy's immediate liquidity needs. Indeed, the tremendous decrease in wealth following the market plunge raised the possibility that business and consumer spending would slow dramatically and lead to much weaker growth in economic activity.

This article examines the monetary policy decisions made by the Federal Open Market Committee in 1987. Because such decisions hinge on the policymakers' views with regard to the outlook for economic activity and prices, special emphasis will be placed on the changing economic environment in which the decisions were made.

NOTE: Citations referred to as "Record" are to the "Record of Policy Actions of the Federal Reserve Open Market Committee" found in various issues of the *Federal Reserve Bulletin*. Citations referred to as "Report" are to the "Monetary Policy Report to the Congress," also found in various issues of the *Bulletin*. Dates reported in parentheses refer to the *Bulletin*.

[1]For a description of the Committee's membership during 1987, see pages 6 and 7.

[2]A common reference found in the Record is "Improvement in the external sector was projected [by the staff] to provide substantial impetus for real growth as changes in the foreign exchange value of the dollar boosted U.S. exports and damped import growth." Record (January 1988), p. 42. Similarly, "the rise in net exports remained critical to sustaining growth [in real GNP]." Record (July 1987), p. 592.

Table 1
FOMC Long-Run Operating Ranges

Date of meeting	Target period	Ranges[1] M2	Ranges[1] M3
July 8–9, 1986	IV/1986-IV/1987	5.5 – 8.5%	5.5 – 8.5%
February 10–11, 1987	IV/1986-IV/1987	reaffirmed above ranges	
July 7, 1987	IV/1986-IV/1987	reaffirmed above ranges	
July 7, 1987[2]	IV/1987-IV/1988	5 – 8%	5 – 8%

[1]Ranges established at the July meetings for the following year are tentative.

[2]Ms. Seger dissented because she did not want to reduce at this time the tentative M2 and M3 ranges for 1988 below those established for this year. In her view the performance of key sectors of the domestic economy implied a relatively weak business expansion, and she did not anticipate enough offsetting support from gains in foreign trade. In the circumstances, inflationary pressures seemed likely to remain subdued, and she concluded that a policy consistent with monetary growth within this year's ranges would probably be needed to sustain the expansion in 1988. She recognized that the economic outlook was surrounded by a great deal of uncertainty, and she would be prepared to lower the M2 and M3 ranges early next year if intervening developments seemed to warrant such a reduction.

LONG-RUN POLICY OBJECTIVES

The Full Employment and Balanced Growth Act of 1978 (also known as the Humphrey-Hawkins Act) requires the Committee to report to Congress semiannually on the annual growth rate targets for the monetary and credit aggregates. The act also refers to broad objectives to be considered when forming policy, such as low unemployment, stable prices and output growth.

The Committee establishes the growth rate targets for the current year at its February meeting. In July, it reviews the progress in meeting growth rate objectives for the first half of the year and sets tentative growth rate targets for the following year. Annual targets are stated in terms of fourth quarter to fourth quarter growth rates.[3]

Annual Targets for M2 and M3

The Committee established 1987 growth ranges of 5.5 percent to 8.5 percent for both M2 and M3 at its February meeting, reaffirming the tentative ranges set at the July 1986 mid-year review (see table 1). It was decided that no range would be set for M1 (see shaded insert on opposite page). The 1987 target ranges reflect a one-half percentage-point reduction in the 1986 targets established at the February 1986 meeting and reaffirmed at the July meeting. Members argued that reducing the growth targets would be needed "if the economy is to achieve non-inflationary growth and external equilibrium."[4] The dramatic movements in interest rates in recent years were not anticipated for 1987. With more stable market rates, Committee members did not foresee any marked changes in the velocity of M2 or M3 during the year. Members therefore expected that growth rates for these two measures around the midpoints of their ranges would continue the progress toward the goal of non-inflationary growth.

By the time of the Committee's mid-year review, the growth rates of M2 and M3 were at or below the lower boundary of their ranges. M2 had increased at only a 4.4 percent rate during the first half of the year, while M3 had grown at a 5.5 percent rate. In the absence of further increases in market interest rates, both aggregates might increase at a faster pace during the remainder of the year. Moreover, several other factors mitigated any immediate response to restore the aggregates

[3]The use of fourth-quarter-to-fourth-quarter targets ostensibly reduces the problem of base drift, which occurs when the target range is established at each meeting, thus allowing the base to "drift" through the year. Use of fourth-quarter-to-fourth-quarter targets eliminates intra-year base drift but does not do away with inter-year drift.

[4]Report (April 1987), p. 241.

The Omission of an M1 Target

The Committee at its February meeting elected not to establish a specific target range for M1 growth in 1987. The reasons for omitting an M1 target were "uncertainties about its underlying relationship to the behavior of the economy and its sensitivity to a variety of economic and financial circumstances."[1]

The Committee viewed the uncertain relationship between M1 and economic activity to be attributable, in part, to the deregulation of deposit rates and attendant changes in M1's composition. Insufficient information was available to determine the "new" relationship.[2] Consequently, the usefulness of an M1 target range was suspect.

Although no specific ranges were set for M1 growth, the Committee's discussion reflects its acknowledgment of the narrow definition's potential usefulness in policy and economic analysis. As noted at the February meeting,

> while most members clearly wished to take account of changes in M1 in reaching policy judgments, they felt the meaning of fluctuations in M1 could only be appraised in the light of other economic developments.[3]

Some members argued for retaining an M1 target, stating that it would provide continuity in the event that the Committee should want to increase its policy emphasis on M1 growth in the future.[4] The use of the narrow M1 measure, some members argued, was useful in "underscoring the System's longer-run commitment to an anti-inflationary policy."[5] Moreover, some members "contemplated the possible desirability of reintroducing M1 explicitly during the year as a benchmark, along with the broader monetary aggregates, for making short-run operating decisions."[6]

By the time of the midyear review in July, the sharp slowing in M1 growth during the first half of the year indicated to the Committee that M1 behavior had become highly influenced by interest rate movements. Because of the uncertainty surrounding M1's future behavior, no specific growth ranges for M1 for the remainder of 1987 or for 1988 were established.

Also at the July meeting, the Committee discussed the recent behavior of M1A — M1 minus other checkable deposits — and the potential of this narrower measure in policy discussion. Although some evidence indicates that the relationship between M1A and the economy and prices may be more reliable than that of M1, the Committee saw no advantage in adopting M1A as an additional guide to policy.[7]

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[1] Record (April 1987), p. 241.

[2] The omission of an M1 target because of its uncertain relationship with economic activity and prices is not new. M1 targets were de-emphasized in 1982, relegated to a "monitored" status and rebased from the previous fourth quarter during 1983, re-established as a primary target in 1984, subject to rebasing in 1985 and targeted in 1986. For a discussion of these episodes, see Thornton (1983), Hafer (1985, 1986) and Nuetzel (1987).

[3] Record (June 1987), p. 447.

[4] Ibid., p. 448.

[5] Ibid.

[6] Ibid.

[7] One recent study arguing for the use of M1A is that of Darby, Marlow and Mascaro (1987). For earlier work, see the references cited therein.

within their specified ranges. First, with business activity showing a moderate rate of growth and the velocity of these aggregates increasing — largely due to rising interest rates — some members felt that the shortfall in the M2 aggregate's growth was acceptable. Second, an analysis by the Federal Reserve Board's economic staff suggested that "special factors" stemming from recent tax legislation may have depressed M2 growth. The Board's staff argued that, in addition to these special factors, M3 growth did not meet expectations because of "some unusual patterns in funding

Organization of the Committee in 1987

The Federal Open Market Committee (FOMC) consists of 12 members: the seven members of the Federal Reserve Board of Governors and five of the 12 Federal Reserve Bank presidents. The Chairman of the Board of Governors, by tradition, is elected Chairman of the Committee. The president of the New York Federal Reserve Bank, also by tradition, is elected its vice chairman. All Federal Reserve Bank presidents attend Committee meetings and present their views, but only those who are current members of the Committee may vote. Four memberships rotate among Bank presidents and are held for one-year terms beginning on March 1 of each year. The president of the New York Federal Reserve Bank is a permanent voting member of the Committee.

Members of the Board of Governors at the beginning of 1987 included Chairman Paul A. Volcker, Vice Chairman Manuel H. Johnson, Martha R. Seger, Wayne D. Angell and H. Robert Heller. One of the two vacant seats on the Board was filled by Edward W. Kelley, Jr., on May 26. Chairman Volcker resigned from the Board effective August 11. Alan Greenspan joined the Board as Chairman on that date.

The following Bank presidents voted at the meeting on February 10–11, 1987: E. Gerald Corrigan (New York), Roger Guffey (Kansas City), Karen N. Horn (Cleveland), Thomas C. Melzer (St. Louis) and Frank E. Morris (Boston).[1] In March, the Committee membership changed and the presidents' voting positions were filled by E. Gerald Corrigan (New York), Edward G. Boehne (Philadelphia), Robert H. Boykin (Dallas), Silas Keehn (Chicago) and Gary H. Stern (Minneapolis).

The Committee met eight times at regularly scheduled meetings during 1987 to discuss economic trends and decide the future course of open market operations.[2] As in previous years, telephone consultations were held occasionally between scheduled meetings. During each scheduled meeting, a directive was issued to the Federal Reserve Bank of New York. Each directive contained a short review of economic developments, the general economic goals sought by the Committee, its long-run monetary growth objectives and instructions to the Manager for Domestic Operations at the New York Bank for the conduct of open market operations. These instructions were stated in terms of the degree of pressure on reserve positions to be sought or maintained. They were deemed consistent with specific short-term growth rates for M2 and M3 which, in turn, were considered consistent with desired longer-run growth rates for these monetary aggregates. The Committee also specified intermeeting ranges in the federal funds rate. These ranges provided a mechanism for initiating consultations between meetings whenever it appeared that the constraint of the federal funds rate was inconsistent with the objectives for the behavior of the monetary aggregates.

The account manager has the major responsibility for formulating plans regarding the timing, types and amount of daily buying and selling of securities in fulfilling the Committee's directive. Each morning the manager and his staff plan the open market operations for that day. This plan is developed on the basis of the Committee's directive and the latest developments affecting money and credit market conditions, the growth of the monetary aggregates and bank reserve conditions. The manager also consults with the Board's staff. Present market conditions and open market operations that the manager proposes to execute are discussed each morning in a telephone conference call involving the staff at the New York Bank, one voting president at another Reserve Bank and staff at the Board. Other members of the Committee may participate and are informed of the daily plan by internal memo or wire.

The directives issued by the Committee and a summary of the discussion and reasons for Committee actions are published in the "Record of Policy Actions of the Federal Open Market Committee." The "Record" for each meeting is released a few days after the next Committee meeting. Soon after its release, it appears in the *Federal Reserve Bulletin*. In addition, "Records"

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[1] Mr. Keehn voted as an alternate for Mrs. Horn.

[2] No meetings were held in January, April, June or October.

for the entire year are published in the annual report of the Board of Governors. The record for each meeting in 1987 included:

(1) a staff summary of recent economic developments — such as changes in prices, employment, industrial production and components of the national income accounts — and projections of general price, output and employment developments for the year ahead;

(2) a summary of recent international financial developments and the U.S. foreign trade balance;

(3) a summary of open market operations, growth of the monetary aggregates and bank reserves and money market conditions since the previous meeting;

(4) a summary of the Committee's discussion of the current and prospective economic and financial conditions;

(5) a summary of the monetary policy discussion of the Committee;

(6) a policy directive issued by the Committee to the Federal Reserve Bank of New York;

(7) a list of the member's votes and any dissenting comments; and

(8) a description of any actions regarding the Committee's other authorizations and directives and reports on any actions that may have occurred between the regularly scheduled meetings.

Table 2

Actual and Expected Money Growth in 1987

Aggregate	Target range	Actual
M2	5.5 – 8.5%	4.1%
M3	5.5 – 8.5%	5.4

NOTE: The target period for M2 and M3 is IV/1986 to IV/1987.

asset expansion at depository institutions."[5] Third, and perhaps most important, it appeared that deposit interest rates failed to adjust as rapidly as rising market rates. Once these deposit rates began to catch up to market rates, the growth of M2 and M3 could be expected to strengthen over the remainder of the year.

Under these circumstances, the Committee voted to retain the 1987 growth ranges for M2 and M3 (table 1). In discussing the events thus far and the expectations for the remainder of the year, the Committee viewed growth of the aggregates around the lower boundary of the ranges as acceptable. It also established tentative ranges for 1988 at this meeting. As shown in table 1, the members voted (with one dissent) to lower tentatively the M2 and M3 ranges by one-half percentage point for 1988. Although there was some discussion of lowering the range for M2 by a full percentage point and widening the band, the majority agreed on the tentative ranges reported in table 1.

Actual Growth of M2 and M3

Table 2 reports the Committee's target ranges and actual growth rates for M2 and M3 in 1987. The data indicate that M2 grew at only a 4.1 percent rate in 1987, below the Committee's lower bound. The growth rate of M3, 5.4 percent, was right at the lower bound.

The annual rates reported in table 2 mask the intra-year growth patterns. For example, quarterly data reveal a pattern of sharply slowing M2 growth during II/1987 and a steady increase throughout the remainder of year. The actual quarterly growth rates for M2, from first quarter through fourth quarter are: 6.6 percent, 2.3 percent, 3.1 percent and 4.4 percent. The pattern of M3 growth is relatively more stable. Increasing at a 6.6 percent rate in I/1987, M3 growth slowed to a 4.3 percent rate in II/1987. For the second half of the year, M3 increased at 4.9 percent and 5.8 percent rates during III/1987 and IV/1987.

SHORT-RUN POLICY OBJECTIVES

The Committee held eight regularly scheduled meetings during 1987 to review economic conditions and determine changes in the implementation of short-run policy actions. At each meeting, a policy directive was issued by the Committee to guide the day-to-day implementation of monetary

[5]Record (October 1987), p. 793.

1987 in Review

The charts on the following page are intended to provide an overview of the U.S. economy as it evolved during 1987. In the ensuing discussion, an analysis of major economic developments will be provided.

Perhaps the most positive economic news for 1987 was the surge in real GNP growth (chart 1) relative to the sluggish growth of the last three quarters of 1986. Despite being over four years old, the economic expansion continued with real GNP increasing at a 3.8 percent rate in 1987.

A surge in oil prices accounted for the high inflation rate early in 1987. Monthly figures for the annualized rate of inflation in consumer prices are shown in chart 2. These data show fairly consistent price gains in the 4 percent to 5 percent range for the first half of 1987. During the second half of 1987, however, inflation slowed somewhat, averaging 3.4 percent.

The exchange rate exhibits several major movements throughout 1987 (chart 3). During the first four months, the exchange value of the dollar generally fell against the 10 major industrial currencies on a trade-weighted basis. Beginning in May, it rose for three months. By year's end, however, the dollar had fallen about 12 percent against these major currencies.

The Committee believed early in the year that, for the current expansion to continue, a surge in the external sector was necessary. As chart 4 indicates, the merchandise trade deficit showed little downward progress for much of the year, despite the generally favorable exchange rate situation. The trade deficit for 1987 was $171 billion, about 10 percent greater than 1986.

Interest rate behavior (chart 5) was varied across the year. Short-term rates, like the three-month Treasury bill rate, were roughly constant until mid-summer when they increased sharply. The onset of the stock market crash reversed these gains as rates fell dramatically, a decline that was partially offset in the final few weeks of the year. Long-term rates generally were stable through the first quarter, then increased during April and May. Long-term rates also reached annual highs preceding the stock market crash. Their decline, however, did not erase the previous 10-month advance. During 1987, the discount rate was raised once, from 5.5 percent to 6.0 percent, on September 4.

The year's amazing increase in stock prices ended on October 19 (chart 6). Beginning the year at 1895.95, the Dow-Jones average increased to a historic peak of 2722.42 on August 25. Although equity prices already had retreated from this record high, the 508-point tumble on October 19 erased much of the year's gain. By the end of the year, the Dow average stood at 1938.83, a gain of about 2 percent for the year.

policy during the intermeeting period. The Manager for Domestic Operations of the System Open Market Account is responsible for carrying out the directive's orders.

The directives during 1987, as in 1986, were stated in terms of the "degree of pressure on reserve positions." The Committee also indicated the growth rates of the monetary aggregates that it believed consistent with the desired reserve pressure. The following is a chronological discussion of the Committee's decisions and the factors that influenced them.

February 10–11 Meeting

The economic data reviewed at this meeting and the analysis presented by the staff suggested that real economic activity would continue to grow moderately. During the fourth quarter of 1986, industrial production had increased at a 3.25 percent annual rate. Several Committee members commented that the favorable year-end statistics "undoubtedly reflected tax-related spending that had been moved up from 1987 into late 1986."[6] The Committee cautiously viewed the January increase

[6]Record (June 1987), p. 446.

Chart 1

U.S. Real GNP Growth Rate

(Compounded annual rate of change)

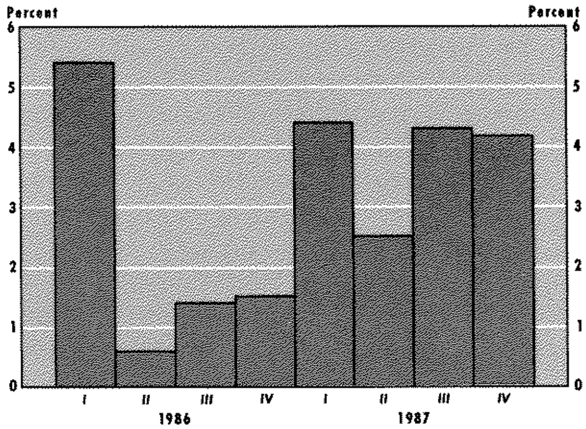


Chart 2

U.S. Inflation

(Compounded annual rate of change of the CPI)

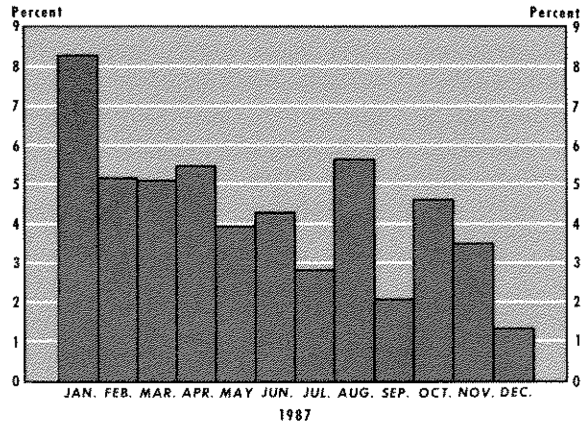


Chart 3

Trade-Weighted Exchange Rate

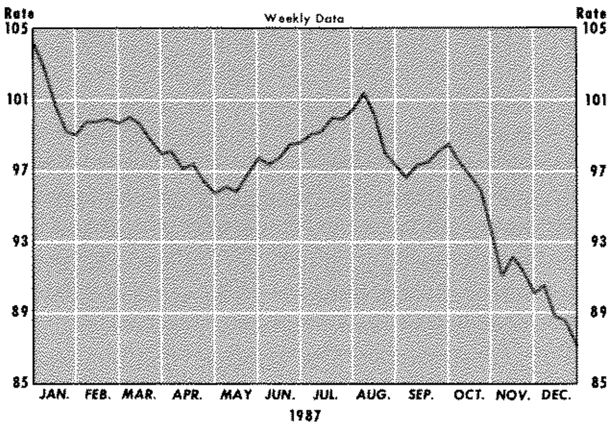
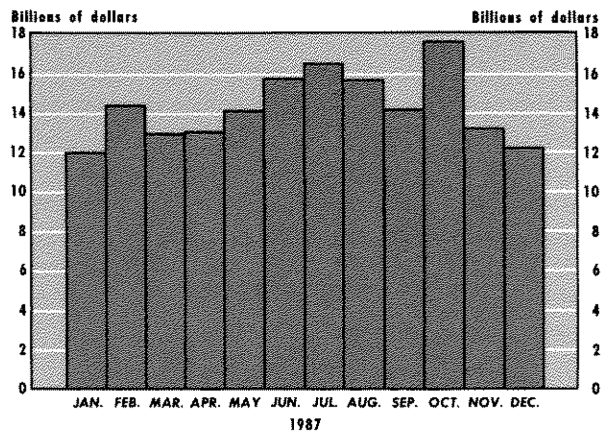


Chart 4

U.S. Trade Deficit



Source: Bureau of the Census.

Chart 5

Selected Interest Rates

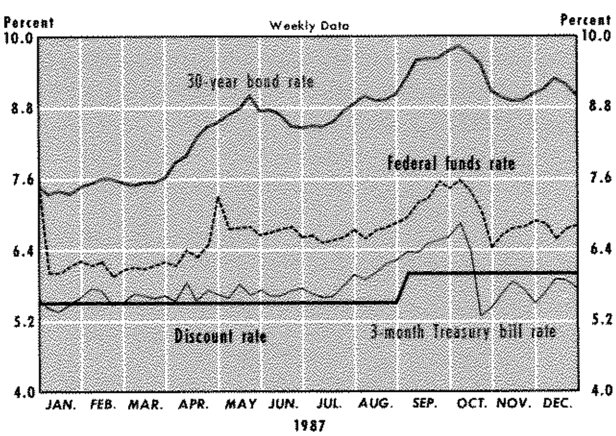
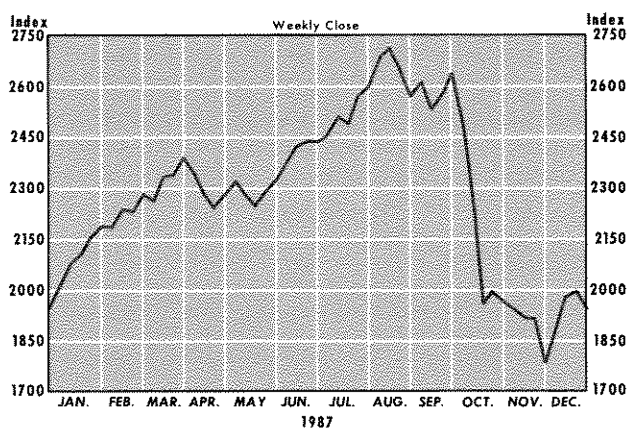


Chart 6

Dow Jones Industrial Average



in total nonfarm payroll employment of almost 500,000 workers as evidence of a stronger economy.

Committee members questioned the sustainability and breadth of the current expansion, however. One source of concern came from the so-called twin deficits: the domestic federal budget deficit and the balance of trade deficit. The persistence of these deficits led members to acknowledge "that there were appreciable risks that economic activity and prices might deviate significantly from current expectations."[7]

More so than in recent years, developments in international markets played an important role in shaping monetary policy. The extent of the importance stemmed from two opposing effects. One was the impact of a decline in the dollar's foreign exchange value on the demand for real net exports of goods and services. As noted at the February meeting, "a key element shaping the forecast [for real GNP] continued to be the prospects for an improvement in real net exports of goods and services."[8] The other factor was the effect of a declining dollar on domestic inflation. Committee members expressed the concern that a continuing fall in the dollar, along with recent increases in crude oil prices, ". . . would have a relatively large effect on consumer prices. The latter, because of their high visibility, could exacerbate inflationary expectations" and translate into increasing nominal interest rates.[9]

The Committee thus faced the problem of setting policy amid uncertainty about the dollar's behavior and its effect on the economy. It is clear from the Record that the inflationary effect of a lower dollar was of considerable concern. In keeping with its traditional role, the Committee sought to ward off potential inflation: "One indicator of the possibility of potential pressures on prices might be a further tendency for the dollar to weaken."[10]

In its directive, the Committee called for maintaining the existing degree of reserve pressure as shown in table 3. It believed that this action was consistent with growth rates of 6 percent to 7 percent for M2 and M3 for the January-to-March period. By establishing these ranges, the Committee hoped to slow the growth of the monetary aggregates, which in late 1986 had been growing at rates near the upper end of their target ranges.[11]

March 31 Meeting

Information reviewed at this meeting suggested that real economic activity was growing at a faster pace in I/1987 than in IV/1986.[12] Consumer prices had risen in January and February at annual rates of 8.3 percent and 5.2 percent, respectively, both considerably larger than the previous year's price increase of 1.3 percent (chart 2). Interest rates had remained fairly stable during the early part of 1987 (chart 5): the three-month Treasury bill rate fluctuated around 5.6 percent, the federal funds rate, after reaching its peak in late 1986, hovered around 6 percent; and the 30-year Treasury bond rate showed a slight increase during the first quarter of the year.

An extended discussion ensued at this meeting about the implications of a continuing strong downward pressure on the dollar. Since the first of the year, the dollar had fallen about 5 percent against major foreign currencies.[13] Some members commented that open market operations should be conducted in such a way to "minimize unintended market impacts at times when the dollar was under particular downward pressure."[14] Others noted that, if intervention into the foreign exchange market was ineffective in halting the slide of the dollar, monetary policy actions during the intermeeting period "might need to be adjusted to reduce reserve availability somewhat."[15]

The notion of reducing reserve availability to help stabilize the dollar's foreign exchange value

[7]Ibid., p. 445.

[8]Ibid.

[9]Ibid., p. 446.

[10]Ibid., p. 449.

[11]For example, M2 increased at about a 10 percent rate during the second half of 1986. Though not an official target, M1 also had shown rapid growth during this period, increasing at about a 20 percent rate.

[12]Later data would indicate that real GNP grew at a 4.4 percent rate in I/1987, compared with a 1.5 percent rate in IV/1986 (chart 1).

[13]The index used is the Federal Reserve Board's trade-weighted measure, based on the currencies of 10 industrial countries. The countries included in the G-10 index are Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland and the United Kingdom (chart 3).

[14]Record (July 1987), p. 594.

[15]Ibid.

Table 3

FOMC Short-Run Operating Ranges

Date of meeting	Target period	Expected growth rates M2	Expected growth rates M3	Degree of reserve pressure	Intermeeting federal funds range
February 10–11, 1987[1]	January-March	about 6 – 7%	about 6 – 7%	unchanged	4 – 8%
March 31, 1987	March-June	around 6% or less	around 6% or less	unchanged	4 – 8
May 19, 1987[2]	March–June	around 6% or less	around 6% or less	increased somewhat	4 – 8
July 7, 1987	June-September	around 5%	around 7.5%	unchanged	4 – 8
August 18, 1987	June-September	around 5%	around 5%	unchanged	4 – 8
September 22, 1987	August-December	around 4%	around 6%	maintained recent pressure	5 – 9
November 3, 1987	September-December	about 6 – 7%	about 6 – 7%	maintained recent pressure	4 – 8
December 15–16, 1987[3]	November-March	about 5%	about 6%	unchanged	4 – 8

Dissents:

[1]Mr. Melzer favored some tightening of reserve conditions. He noted the strong growth in bank loans in the November through January period and the firm federal funds rate that had prevailed despite the extraordinary pace of reserve growth. In addition, he cited the recent declines in the foreign exchange value of the dollar. Finally, looking ahead, he pointed out the potential for a further rise in inflationary expectations and, accordingly, he believed that prompt action toward restraint might avert the need for more substantial tightening later.

[2]Ms. Seger dissented because she did not want to lean on the side of any tightening of reserve conditions beyond the firming that had occurred since the March meeting. She was concerned that the degree of reserve pressure prevailing recently, which was somewhat greater than intended, represented a risk to an already weak economic expansion. She noted that the negative effects of recent increases in interest rates had not yet been felt in the economy. She also referred to recent indications of moderating growth in the monetary aggregates, and she did not expect inflationary pressures to persist in the context of excess production capacity and commodity surpluses worldwide.

[3]Mr. Johnson dissented because he believed that policy implementation should continue to focus on maintaining generally stable conditions in the money market, at least through the year-end, pending the emergence of more settled conditions in financial markets and a more predictable relationship between reserve objectives and money market conditions. He also preferred a directive that gave greater weight to the possibility for some easing, given potential developments during the intermeeting period.

Ms. Seger dissented because she favored some slight easing of reserve conditions in light of her concern about the downside risks in the economy, especially in the context of sluggish growth in reserves and the monetary aggregates over an extended period. She also wanted to continue to focus on money market conditions in System open market operations and in particular to counter upward pressures on short-term interest rates.

was viewed differently by different members. Some members viewed this policy as limiting the future increases in interest rates and inflation. For example, ". . . that approach would minimize the rise in domestic inflation and interest rates over time . . ." and "failure to arrest a considerable further decline in the dollar might result in substantial upward pressures on longer-term domestic interest rates."[16]

Given the economic environment and the concern voiced by some members over "the uncertainties surrounding the relationship between U.S. interest rates and the behavior of the dollar and also the negative impact that a firmer policy could have on a possibly fragile economic expansion," the Committee voted to maintain the existing degree of pressure on reserve positions.[17] This policy was believed consistent with growth in the M2 and M3 aggregates during the March-to-June period of around 6 percent or less.

May 19 Meeting

As shown in table 4, M2 and M3 increased at rates far below the Committee's expected ranges in the January-to-March period. Incoming data,

[16]Ibid.

[17]Ibid.

Table 4

Actual and Expected Money Growth

Period	M2 Expected	M2 Actual	M3 Expected	M3 Actual
January-March 1987	about 6 – 7%	0.6%	about 6 – 7%	1.4%
March-June 1987	around 6% or less	2.2	around 6% or less	5.8
June-September 1987	around 5%	4.9	around 5%	5.0
August-December 1987	around 4%	3.5	around 6%	4.9
September-December 1987	about 6 – 7%	2.8	about 6 – 7%	4.7

however, indicated a surge in the monetary aggregates during April: M1 increased at a 19 percent rate and M2 and M3 increased at a 5.8 percent rate. This faster money growth was not surprising as individuals increased their transaction balances to make tax payments. The outlook for real economic activity continued to suggest expansion at a moderate pace. Weakness in industrial production, however, renewed concern that the expansion was becoming sluggish, even though evidence from the labor market continued to indicate a brisk demand for labor.

The foreign exchange value of the dollar declined throughout much of the intermeeting period. On a trade-weighted basis, for example, the dollar fell about 1 percent against the G-10 currencies. Against the Japanese yen and the British pound, however, the dollar lost roughly 4 percent and 3.5 percent of its value, respectively (chart 3).

The dollar's continuing decline was being reflected in increased inflationary expectations and, hence, rising interest rates (chart 5). While the three-month Treasury bill rate remained relatively stable, other rates showed marked increases during the March-May intermeeting period. For instance, the 30-day commercial paper rate had increased about 55 basis points, the five-year Treasury securities rate had risen about 170 basis points and the corporate Aaa bond rate had jumped almost 90 basis points.

The discussion at this meeting turned to the darker side of the dollar's effects on the domestic economy. While the evidence suggested a continued, moderate economic expansion, there were signals that inflationary expectations were worsening, in part because of the dollar's continued slide. It was noted that:

> The prospective behavior of the dollar in foreign exchange markets was a key uncertainty bearing on the outlook for inflation and on that for overall business activity. [F]urther dollar depreciation, if it occurred, would add to further inflation pressures.[18]

This specter of higher future inflation caused most members to increase their attention toward reducing inflationary expectations. As the Committee's discussion reveals, it became a matter of weighing the relative risks of higher inflation or lower output growth:

> Most members saw a lesser and relatively limited risk to the expansion under current economic conditions and one that needed to be accepted given the pressures on the dollar and the potential for inflation.[19]

The Committee's directive called for an increase in the degree of reserve pressure (table 3). The directive stated that an increase in the degree of reserve pressure would be acceptable depending upon indications of inflationary pressures and developments in foreign exchange markets. As always, such actions were conditional on the state of the business expansion and the behavior of the monetary aggregates. Although the call for firmer reserve positions was actually a continuance of recent policy actions, including the Committee's recent response to tax-related conditions, the policy's thrust was to give greater emphasis to counteracting a potential increase in future inflation. Moreover, the Committee made it clear that an intermeeting adjustment of policy, if

[18]Record (September 1987), p. 713.

[19]Ibid., p. 714.

needed, would occur primarily in the event of a change in inflationary expectations — exhibited by rising interest rates — or a further decline in the dollar.[20]

July 7 Meeting

At the time of its midyear review meeting, the problems that plagued the Committee at the previous meeting had lessened. Economic data indicated that the expansion had continued to move forward with the most recent figure (May) on industrial production again registering positive growth (a 7.8 percent annual rate). More importantly, both producer and consumer price increases had slowed. For example, after increasing at about a 5 percent rate during the first four months of the year, producer prices increased at only a 2.5 percent rate in May. Similarly, consumer prices rose at a 4 percent rate in May, down appreciably from the 6 percent average rate of increase during the previous four months (chart 2).

The foreign exchange markets also provided some welcome news: The foreign exchange value of the dollar had strengthened since the May meeting, gaining 3.75 percent against the G-10 currencies (chart 3). More importantly, the dollar gained 7.75 percent against the Japanese yen and 3.75 percent against the deutsche mark. It thus appeared that the fears expressed at the May meeting had been alleviated.

One troublesome piece of news was the fact that M2 growth would be well below the Committee's March-June target. As shown in table 4, the Committee expected M2 to increase at a rate around 6 percent, but the actual figure turned out to be only 2.2 percent. In contrast, M3 growth for the period was 5.8 percent, basically the rate expected. The growth of M1, though not targeted, increased at a 3.9 percent rate during this period, up from the 1.5 percent rate of growth for the January-March period.

Under these more favorable economic conditions, the Committee adopted a directive that maintained the existing degree of pressure on reserve positions. As shown in table 3, this policy stance was expected to be associated with M2 growth around 5 percent and M3 growth around 7.5 percent for the June-to-September period.

Indications of easing inflationary pressures, a rising dollar and continuing growth in real economic activity prompted the Committee to choose a more eclectic view of intermeeting policy adjustments. At the May meeting, the Committee indicated that possible intermeeting adjustments in reserve pressure should depend especially on indications of inflationary pressure and stability of the dollar's foreign exchange value. The Committee stated at the July meeting, however, that any intermeeting change in the degree of reserve pressure would depend on "developments in the aggregates and the strength of the business expansion," as well as on inflationary pressure.[21]

August 18 Meeting

The cautious optimism evident at the July meeting resurfaced at the August meeting. Earlier concern of inflation due to a falling dollar had given way to the possible inflationary risks associated with increased economic activity. Indeed, the data seemed to support such a re-orientation: price increases continued to moderate from earlier months (chart 2), interest rates had shown no tendency to rise from current levels (chart 5), the unemployment rate continued its descent, reaching 6.0 percent in July, and the dollar's value in foreign exchange markets was, on net, basically unchanged during the intermeeting period (chart 3). Also, the preliminary data on real GNP showed the economy to be growing at a 2.6 percent rate in the second quarter (chart 1). With the weight of recent data behind them, several members noted that "the chances of any deviation from such expectations [about real growth] were on the side of faster economic growth with attendant risks of intensifying inflationary pressures."[22]

The economic data from the previous few months did not budge the Committee from its anti-inflation stance; the data did alter the Committee's focus on potential sources of inflationary pressures, however. The importance placed on changes in the dollar's foreign exchange value that might trigger an intermeeting policy adjustment

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[20]Specifically, ". . . the members generally agreed that both inflationary developments and the dollar should receive special emphasis. In particular, should inflation or inflationary expectations seem to be intensifying or the dollar come under renewed downward pressure, the Committee would be ready to see some prompt further firming of reserve conditions." Ibid.

[21]Record (October 1987), p. 796.

[22]Record (November 1987), p. 864.

was lower in this meeting than earlier. While the Committee "remained sensitive" to developments in the dollar, such developments "would need to be interpreted with particular care" and

> in this view a judgment would need to be made as to whether any weakness in the dollar related more to uncertainties about oil market developments than to fundamental concerns about underlying inflationary pressures on the economy.[23]

In light of this changing economic environment, the Committee voted for a directive that called for no change in reserve pressure. As table 3 shows, maintaining the present course was expected to produce M2 growth around 5 percent from June to September. For the same period, M3 growth also was expected to be around 5 percent, down from the 7.5 percent rate expected at the July meeting.

September 22 Meeting

Several pieces of economic news and actions by the Committee during the intermeeting period laid the foundation for the discussion at this meeting. In terms of positive news, the economy appeared to be expanding at a reasonable pace in the third quarter, with the industrial sector posting solid gains. Indeed, the actual growth rate of real GNP would turn out to be more than 4 percent (chart 1). Price increases continued to ease with consumer prices increasing at about a 4 percent rate during the previous few months, down from about a 6 percent rate earlier in the year (chart 2).

On the negative side, the trade-weighted value of the dollar resumed its decline, falling about 2.5 percent against the G-10 currencies immediately following the August meeting (chart 3). Preliminary data indicated that the reduction in the dollar's exchange value did not appreciably alter the trade deficit: although the July merchandise trade deficit was essentially unchanged from its June level, it was larger than its second-quarter average (chart 4). Also, interest rates across the maturity spectrum were beginning to show signs of upward movement following the last meeting (chart 5).

In light of these developments, the decision was made early in September to reduce marginally reserve availability. This action was taken because of "the potential for greater inflation, associated in part with weakness in the dollar."[24] On September 4, the Federal Reserve Board also announced a 50 basis-point increase in the discount rate to 6 percent.

Considerable uncertainty about the inflation outlook pervaded the discussion in the September 22 meeting. While some members noted that increased inflationary expectations had been evidenced in recent financial market developments, the available data showed no appreciable upturn in inflation. The uncertainty expressed by some members stemmed from the fact that the economy had reached a level of production and labor utilization associated with upward pressure on wages and prices. This belief, along with the recent fall of the dollar and the increase in M2 growth, led to a directive that called for maintaining the degree of reserve pressure sought in recent weeks. Moreover, for the first time since the July 8-9, 1986, meeting, the intermeeting federal funds rate range was changed, increasing from 4 percent to 8 percent to 5 percent to 9 percent (table 3). This action was viewed as a "technical adjustment," taken to center the intermeeting range more nearly around the existing federal funds rate.

The Committee expected these actions to be associated with slightly slower M2 growth during the last few months of the year. As shown in table 3, M2 growth for the August-to-December period was expected to be around 4 percent with M3 growth around 6 percent. The data in table 4 show that Committee expectations about M2 and M3 for the June-September period came quite close to the actual growth rates.

November 3 Meeting

To understand the discussion and decisions at this meeting, it is best to briefly identify the historic events of the intermeeting period. This is done by examining the period from September 22 to the stock market crash on October 19, then the period from October 19 to the date of the meeting.

September 22 to October 19 — Following the September 22 meeting, interest rates continued their upward climb (chart 5). Rising interest rates were accompanied by a continuing fall in the dollar's value in exchange markets (chart 3). Although the dollar edged down in early October, its decline quickened following the October 14 release of U.S. trade data, which indicated that the U.S. merchan-

[23]Ibid., p. 866.

[24]Record (January 1988), p. 41.

dise trade deficit for July-August was slightly greater than in the second quarter. Even though exports had risen sharply, a surge in oil imports had helped imports to increase relative to exports.[25]

Stock prices, measured by broad market indexes, had declined appreciably during the first half of October (chart 6). For instance, the Dow Jones average of 30 industrial stocks began the month of October at a level of 2639.20. The index declined from this point on, reaching 2246.74 on Friday, October 16. This decline and the increase in interest rates suggests changes in market perceptions about the possible tightening of monetary policy "in an environment of firmer policy abroad, concerns about the dollar, and pessimism about the prospects for domestic inflation."[26]

October 19 to November 3 — The Dow Jones industrial stock price index fell a record 508 points on Monday, October 19. This decline, a 22.6 percent plunge, took place amid frenzied trading that pushed the one-day trading volume to 604 million shares.[27] More importantly, it raised the fear of a recession.

The immediate impact of the market crash was to heighten uncertainty over the future course of interest rates, the value of the dollar and the economic expansion. Monetary policymakers responded by ensuring adequate liquidity to the financial market. The Committee conferred by telephone to review developments in domestic and foreign markets every business day from October 19 to 30. Members agreed "on the need to meet promptly any unusual liquidity requirements of the economic and financial system in this period," an approach whereby "reserves were provided generously on a daily basis, often at an atypically early hour."[28] Open market operations following the crash therefore were directed toward lessening the reserve pressure sought at the September 22 meeting.[29]

In response to the market crash and the easing of reserve availability, interest rates plummeted in the second half of October (chart 5). The three-month Treasury bill rate fell 184 basis points during the last two weeks of October. During this period, the rates on five-year and 30-year Treasury securities fell 135 and 108 basis points, respectively. These interest rate declines, the Committee thought, would partially offset some of the adverse effect on consumers and businesses of the sharply lower equity prices. Similarly, the continued fall in the dollar after some initial stability would buoy the economy. The possible inflationary consequences of lower interest rates and a lower dollar now took a back seat to the more immediate concern about the effect on economic activity from the stock market crash and related developments in financial markets. Indeed, projections made by the Committee's staff and professional forecasters generally indicated that the reduction in equity values would lead to much lower economic growth in 1988, with the major brunt of the effect appearing in the first half of the year.

The Actual Meeting — The discussion at the November 3 meeting focused on the economic implications of the stock market crash. The financial markets' turbulence increased the uncertainty about the effect of recent policies and the extent to which such policies should be continued. At this meeting, ensuring the viability of the financial system and offsetting the negative economic effects of the recent events remained paramount. The Committee agreed that policy would follow economic and financial developments on a relatively more timely basis, "giving more weight than usual to money market conditions in order to facilitate the return to a more normal functioning of financial markets."[30] A number of Committee members viewed the possible risks inherent in such policy — namely, the increased risk of a further decline in the dollar and its impact on the economy — as manageable.

The policy directive was approved unanimously and called for a maintenance of the reserve pressure sought in recent days. This policy was deemed consistent with September-to-December

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[25]It has been noted that these monthly trade statistics are subject to significant measurement problems, thus lessening the importance that one should place on their month-to-month changes. See, for example, Ott (1987).

[26]Record (February 1988), p. 113.

[27]For purposes of comparison, the average daily volume in September was 177 million shares.

[28]Record (February 1988), p. 114.

[29]Not only was reserve pressure lessened, but "the Federal Reserve assisted the Treasury market by relaxing some of the constraints on its collateralized lending of Treasury securities to primary dealers. Committee members agreed on a temporary suspension of the size limits imposed on loans of securities to individual dealers and the requirement that such loans not be related to short sales." Ibid. This temporary liberalization ended November 19, 1987.

[30]Ibid., p. 116.

growth rates of M2 and M3 of about 6 percent to 7 percent (table 3). Moreover, in light of recent developments and the recent thrust of policy, the intermeeting federal funds rate range was lowered from 5 percent to 9 percent to 4 percent to 8 percent. Thus, while cognizant that policy had become much easier relative to previous directives, most members of the Committee believed that

> in light of the uncertainties that continued to dominate financial markets and the risks that the recent developments could depress business activity . . . policy implementation should remain especially alert to developments that might call for somewhat easier reserve conditions.[31]

December 16 Meeting

At the final meeting of 1987, the Committee faced a reappearance of the major factors that had plagued policymakers throughout the year. Employment and industrial production posted strong gains over the October-November period. The Committee interpreted incoming data as suggesting that fourth-quarter growth would fall slightly below the third-quarter pace. More importantly, the data supported the notion that a recession, brought on by the recent stock market collapse, was not imminent. Meanwhile, financial markets continued to exhibit relatively large daily fluctuations, and the trade-weighted dollar fell considerably against the major industrial currencies following an unanticipated large merchandise trade deficit report for October (chart 4). Finally, consumer price information showed inflation running at about the same rate as early 1987, slightly above recent price level changes (chart 2).

Data on the monetary aggregates indicated that growth was re-established at rates comparable to those observed just before the financial market crisis. The surge in money growth following the stock market decline, thus, was a temporary response to the unusual financial market conditions and did not represent a shift toward prolonged easier money growth. This transitory increase is reflected in monthly M2 growth: 5.6 percent in September, 7.1 percent in October and -0.6 percent in November. More dramatic, the respective growth rates for M1 are 0.3 percent, 16.5 percent and -6.3 percent.

The Committee elected (with two dissents) to maintain the existing degree of pressure on reserve positions at the December meeting. With regard to the uncertainty in financial markets, the directive stated "the Committee recognizes that still sensitive conditions in financial markets and uncertainties in the economic outlook may continue to call for a special degree of flexibility in open market operations."[32] Although the directive explicitly declared maintaining reserve pressure as the policy objective, it also indicated a willingness to respond flexibly to new developments.

CONCLUSION

The falling value of the dollar played an increasingly important role in influencing monetary policy decisions during most of 1987. The dollar's fall was a mixed blessing: while its declining value abroad could have induced a turnaround in the trade deficit, it also could have raised prices on imports and increased inflation. The balancing of the risks of slowing the expansion or reigniting inflation was foremost in the Committee's discussion.

That focus changed with the historic events on Wall Street. The stock market collapse on October 19 shifted the Committee's concern away from foreign exchange to the liquidity demands of the domestic financial market. The Committee at the last meetings of the year sought to remain flexible in its policy stance, attune to the uncertainties that prevailed in financial markets and the risks of a downturn in economic activity.

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[31]Ibid., p. 117.

[32]Record (April 1988), p. 241.