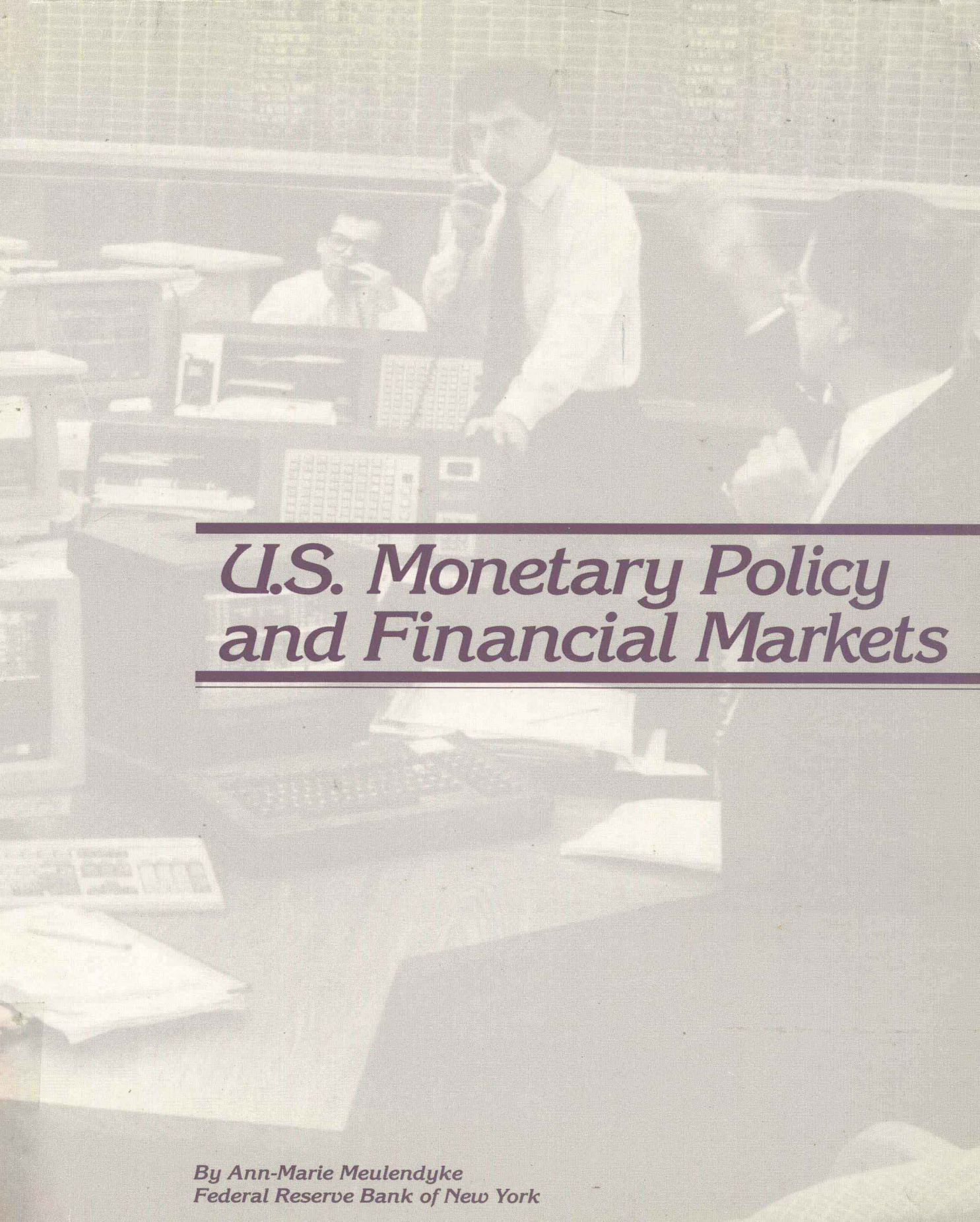

# U.S. Monetary Policy and Financial Markets

By Ann-Marie Meulendyke
Federal Reserve Bank of New York

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# *Forward*

From time to time officials at the Federal Reserve Bank of New York have prepared special works sharing with economists, market participants, and others their own personal perspective on the monetary policy process. Of particular note in this regard was Robert Roosa's 1956 essay entitled *Federal Reserve Operations in the Money and Government Securities Markets.* In 1982, Paul Meek, in *U.S. Monetary Policy and Financial Markets,* described a policy setting process that had changed considerably from that described by Bob Roosa. The nature and functioning of financial markets continued to change in subsequent years, and the conduct of monetary policy has evolved as well. Since Paul Meek's book was published, the procedures of policy implementation that he described as "new" have been transformed again.

In this volume, Ann-Marie Meulendyke, a manager and senior economist assigned to the Bank's domestic trading desk, has offered her personal perspective on the monetary policy process and financial markets of the 1980s. The new essay describes the recent evolution of Federal Reserve procedures and places them in the context of the longer historical sweep of Federal Reserve policy. This new essay should benefit students of the subject well into the 1990s.

E. Gerald Corrigan
President
Federal Reserve Bank of New York

New York City
December 1989

# Acknowledgements

Paul Meek wrote the first edition of *U.S. Monetary Policy and Financial Markets,* published in 1982. With its detailed descriptions of the policy process at the Federal Reserve, it proved to be a valuable and widely used resource for students and financial market participants in the United States and abroad. To date, the Federal Reserve Bank of New York has distributed around 55,000 copies. The book has also been translated into Japanese, Korean, and Portuguese.

During the years since the book was published, Federal Reserve policy procedures and U.S. financial markets and institutions have undergone substantial change. In order to maintain the usefulness of Paul Meek's volume, it seemed appropriate to offer a new version of the work. What has emerged is essentially a new book on similar themes rather than simply an update of the earlier book. Nonetheless, in doing the writing, I have been guided where possible by the structure of Paul Meek's book and have made significant use of material from it. I am deeply indebted to Paul not only for paving the way with his book but also for encouraging me in my work during the years that we both worked in the Open Market area at the New York Fed.

Special mention must go to Donald Vangel of the Open Market Function and to Christine Cumming of the International Capital Markets Group, who were primarily responsible for the preparation of Chapters 3 and 9, respectively. Don brought to the topic his knowledge of bank management and regulation and described some of the many changes that have been taking place in the banking industry in recent years. Chris drew upon her knowledge of international economic relationships to write about the international transmission of monetary policy, expanding on a topic that received only brief attention in 1982.

This book also owes a great deal to many other colleagues in the Federal Reserve System. Members of the Open Market Function patiently read drafts, and offered valuable suggestions. In addition, they graciously took over some of my normal responsibilities to give me extra time to work on the book. Many thanks to Peter Sternlight, Joan Lovett, Robert Dabbs, Kenneth Guentner, Sandra Krieger, Cheryl Edwards, and Jeremy Gluck, as well as Don Vangel. Jeremy, along with Lawrence Aiken, Deborah Perelmuter, and Mary Vitiello, deserves thanks for assisting in the preparation of the material on financial markets in Chapter 4.

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Ann-Marie Meulendyke
New York
December, 1989

# U.S. Monetary Policy and Financial Markets

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# 1

# Monetary Policy and the U.S. Economy

Few components of economic policymaking are as important to the nation's economic well-being as monetary policy. This book offers the reader information on monetary policy from the vantage point of the Federal Reserve's domestic trading desk, the area responsible for carrying out most monetary policy actions. It emphasizes the process of formulating and implementing policy.

As the central bank for the United States, the Federal Reserve has been entrusted by the Congress with the responsibility for conducting monetary policy. Monetary policy is concerned with the terms and conditions under which money and credit are provided to the economy. Money comprises currency and coin issued by the Federal Reserve or the U.S. Treasury and various kinds of deposits at commercial banks and other depository institutions. Credit encompasses loans made by depository institutions and by other types of financial or nonfinancial entities and includes loans evidenced by debt instruments such as notes or bonds.

Under the Full Employment and Balanced Growth Act of 1978, usually referred to as the Humphrey-Hawkins Act for its primary sponsors, the Federal Reserve must establish annual growth targets for the monetary aggregates and explain how these targets relate to goals for economic activity, employment, and prices. Monetary policy is carried out by the Federal Reserve through its regulations and techniques for the issuance of currency and its provision of reserve balances. The behavior of reserves can in turn influence deposit behavior since some classes of deposits are partially backed by them.[1] The Federal Reserve can influence the rates and other conditions of credit extension by its monetary policy actions, although it cannot directly control the quantity of credit or its price.[2]

In addition to having a mandate to carry out monetary policy in a way that promotes sustainable economic expansion and reasonable price stability, the Federal Reserve also has responsibilities for promoting the smooth functioning of the nation's financial system. It tries to accommodate the substantial short-run variations in the

1 *Currency outside the Federal Reserve, including cash in bank vaults, and total reserve holdings at the Federal Reserve constitute the monetary base, sometimes called "high-powered money" or "outside money." The monetary base is often singled out as a potential target variable. At least conceptually, the central bank has the power to control the issue of both components of the monetary base. Traditionally, the monetary base served as backing for other forms of money, although currently some of the items contained in the broader forms of money have little or no such direct backing.*

2 *The Federal Reserve does not set targets for credit growth, although it does announce annual monitoring ranges for a particular indicator of total credit behavior called nonfinancial debt, defined in Box A.*

demand for money and credit that inevitably arise in a complex market economy. The Federal Reserve monitors a wide variety of financial variables and responds when they seem to indicate that credit conditions are out of step with System policy goals. Determining the appropriate policy stance and balancing long- and short-run objectives in the execution of policy have proved to be very challenging. Decisions must be made as events are unfolding on the basis of data whose full significance is not yet clear. The policy actions themselves become part of the dynamic economic processes and may have effects that extend over considerable periods of time.

The next three sections of this chapter provide information on the role of money in the economy and examine the tools of policy. These sections serve as background for the discussion of the financial system and policy process in later chapters.

## *Money and the Economy*

Since money represents generalized purchasing power, it ought to be reasonably well linked over time with the nominal value of the total spending and output of goods and services in the nation's economic system. Individuals and companies choose to hold money because its use greatly simplifies a wide range of economic transactions. On the other hand, they limit their money balances because holding money has costs in the form of forgone opportunities for alternative investments in goods, services, or financial instruments. The amount of money that is consistent with the goals for prices and output depends upon the customs, practices, regulations, and political environment of the economy. If these are stable, the relationship between money and economic activity will tend to be stable as well. Monetary growth in excess of that needed to support sustainable growth in economic activity will be associated with generalized price increases.

The amount of money that people wish to hold will not, however, always bear a constant relationship to the level of economic activity. The demand for money will also depend upon expectations of future price changes. For instance, if rapid inflation is expected, people will seek to minimize holdings of those forms of money that do not provide a return sufficient to offset the expected loss of purchasing power caused by rising prices. On the other hand, if prices are expected to be steady, people will hold more money because of its convenience in conducting transactions. Another factor influencing the demand for money is the ease of

conversion between money and those nonmoney instruments that provide a greater return than money.

As underlying economic conditions or expectations shift, the behavior of money will also change. Usually these changes will be so gradual that they will not seriously interfere with short-term policymaking, but on occasion they may be rapid enough to complicate policy choices. Even when the underlying conditions are stable, demands for money will vary considerably from day to day and week to week in response to seasonal and institutional payment conventions. The Federal Reserve attempts to sort out these effects and to accommodate the short-run changes in money demand without compromising its ability to influence money over time to achieve long-term goals.

One factor complicating the process of determining the appropriate behavior of money is the absence of a good match between the conceptual definition of money—given in textbooks as a medium of exchange, a standard of value, a standard of deferred payments, and a store of wealth—and the actual financial instruments that exist in the United States.[3] Because financial instruments have varying degrees of "moneyness," the Federal Reserve has set forth several definitions of money, listed in Box A. The narrow measure of money, M1, comes closest to conforming to all the criteria of the textbook definition, but it omits items that have most of the characteristics of money and are often better stores of value than M1. The broader measures, M2 and M3, capture some of these close substitutes for M1.

## *Money and the Policy Process*

In the policy process, "money" has traditionally served as an intermediate target or indicator, standing between the Federal Reserve's ultimate goals of sustainable economic growth with price stability and the operating targets used for day-to-day policy implementation. Money occupies this position because its behavior is related both to the ultimate policy goals of the Federal Reserve, which cannot be controlled directly, and to the potential policy tools over which "the Fed" has direct control. Until the 1980s, empirical data supported the view that M1 growth was a reasonably predictable leading determinant of nominal economic activity. The Federal Reserve had only an imprecise ability to control M1, but over several quarters, it could come close to achieving

3 *See, for instance, Thomas Mayer, James S. Duesenberry, and Robert Z. Aliber,* Money, Banking, and the Economy, *3d ed. (New York: W.W. Norton and Company, 1987), p. 5.*

*Box: Money and Credit Definitions*

M1 consists of currency in circulation outside of the Treasury, Federal Reserve Banks, and depository institutions; travelers checks; demand deposits at all commercial banks other than those due to depository institutions, the U.S. government, and foreign banks and official institutions, less cash items in the process of collection and Federal Reserve float; other checkable deposits (OCD), including negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at depository institutions; credit union share draft accounts; and demand deposits at thrift institutions.

M2 consists of M1 plus overnight and continuing contract repurchase agreements (RPs) issued by all commercial banks; overnight Eurodollars issued to U.S. residents by foreign branches of U.S. banks worldwide; money market deposit accounts (MMDAs); savings and time deposits (including retail RPs) in amounts of less than $100,000; and all balances in general purpose and broker-dealer money market mutual funds. M2 excludes individual retirement accounts (IRAs) and Keogh (self-employed retirement) balances at depository institutions and in money market funds. Also excluded are all balances held by U.S. commercial banks, money market funds (general purpose and broker-dealer), foreign governments, foreign commercial banks, and the U.S. government.

M3 consists of M2 plus time deposits and term RP liabilities in amounts of $100,000 or more issued by commercial banks and thrift institutions; term Eurodollars held by U.S. residents at foreign branches of U.S. banks worldwide and at all banking offices in the United Kingdom and Canada; and all balances in institution-only money market mutual funds. M3 excludes amounts held by depository institutions, the U.S. government, money market funds, and foreign banks and official institutions. Also excluded is the estimated amount of overnight RPs and Eurodollars held by institution-only money market mutual funds.

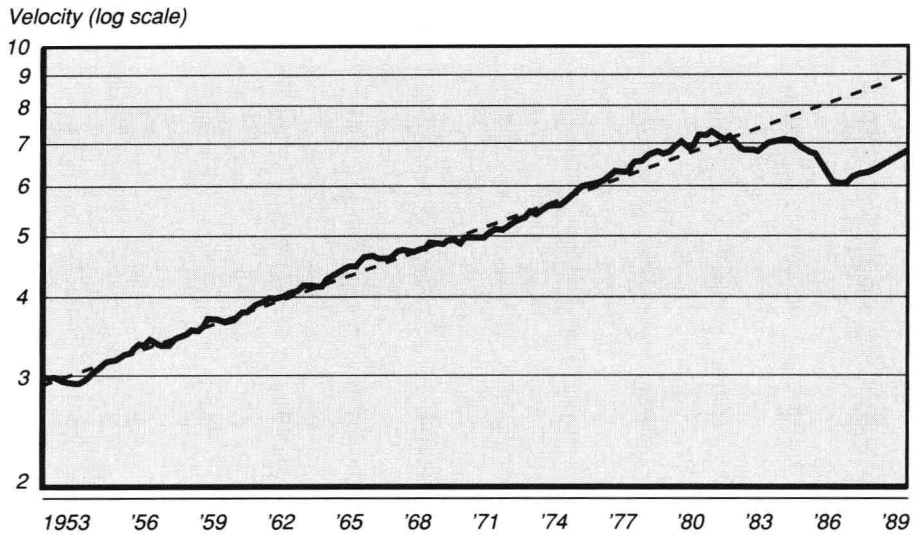
Total nonfinancial debt is defined as outstanding credit market debt of the U.S. government, state and local governments, and private domestic nonfinancial sectors. Private debt includes corporate bonds, mortgages, consumer credit (including bank loans), other bank loans, commercial paper, bankers' acceptances, and other debt instruments. The Federal Reserve Board's flow of funds accounts are the source of domestic nonfinancial debt data expressed as monthly averages.

a desired rate of money growth by adjusting either the levels of the banks' reserve balances or short-term interest rates. Similarly, the response of nominal gross national product (GNP) to changes in M1 showed seasonal and cyclical variation, but it was also reasonably predictable over the long run.

In the 1970s, the Federal Reserve sought to take advantage of the empirical regularities and to control money growth in order to reduce inflation. For most of the decade, it adjusted reserves to influence the interest rate on interbank transfers of reserves—the Federal funds rate—as a means of changing money growth. However, persistent overshooting of the money targets and other forces had pushed prices upward until, by 1979, inflation had reached wholly unacceptable levels. Eager to halt and wind down the inflationary process of the 1970s, the Federal Reserve adopted a reserve targeting approach to money control in October of that year. The technique met with considerable success if judged by its effect on average money growth and its impact on inflation. By 1982, the economy was in a deep recession and considerable progress had been made in overcoming inflation. Nonetheless, M1 was growing rapidly by recent standards. It appeared that the previous relationships between M1 growth and nominal economic activity were not standing up well. Consequently, the techniques of policy implementation were modified late in 1982 in a way that deemphasized the money growth targets, especially those for M1.

The causes of the shifts in money demand have gradually become better understood, although even at this writing many questions remain. For about three decades, the relationship between money and income had been reasonably stable and predictable. Nominal GNP had grown faster than M1, so the income velocity of M1, or its rate of turnover per income-generating transaction, had risen an average of 3 percent a year. But a series of factors combined to make people less reluctant to hold M1 balances, and income velocity declined during the first half of the 1980s (see Chart 1, page 7). The spread of interest-bearing NOW accounts made individuals more inclined to hold some of their savings in transactions form. Lower inflation made the loss in purchasing power from holding money balances smaller, an outcome which made holding money a more attractive option. When interest rates began falling, forgone interest from holding money balances also declined. Although the demand for money rose on average, it also became more sensitive to short-run interest rate movements. With components of M1 paying rates that were above zero but slow to

**Chart 1** *Trend of M1 Velocity*




*Velocity trend from 1953.1 to 1979.4 was 3.2 percent per year*

change, there were large swings in the relative relationship between market rates and rates on money balances. The trend velocities of M2 and M3 did not shift as much, but for M2, the variability of velocity increased (see Charts 2 and 3, page 8).

While reducing their reliance on the behavior of the monetary aggregates as policy indicators, policymakers placed greater emphasis on measures that might be termed intermediate indicators. These included commodity prices and monthly statistics on employment, production, and trade. Such measures are not directly controllable but, taken together, they ought to suggest at least the direction in which policy instruments should be adjusted to achieve the ultimate policy goals.

## *The Tools of Policy*

The Federal Reserve traditionally had three primary instruments of monetary policy: reserve requirements, the discount rate, and direct open market purchases and sales of U.S. government securities. Using these tools, the Federal Reserve could affect the cost and availability of reserves to commercial banks and other depository institutions.