

FIFTH EDITION

**MONEY,
BANKING,
AND THE
UNITED
STATES
ECONOMY**

Harry D. Hutchinson



5th edition ✓

**MONEY, BANKING,
AND
THE UNITED STATES
ECONOMY**

Harry D. Hutchinson

University of Delaware

PRENTICE-HALL, INC., Englewood Cliffs, New Jersey 07632

Library of Congress Cataloging in Publication Data

Hutchinson, Harry D.

Money, banking, and the United States economy.

Includes bibliographical references and index.

1. Banks and banking—United States. 2. Money.
3. International finance. 4. Monetary policy—United States. I. Title.

HG2491.H8 1984 332.1'0973 83-11052
ISBN 0-13-600262-5

Editorial/production supervision and interior design: Barbara Grasso

Cover design: Lundgren Graphics, Ltd.

Manufacturing buyer: Ed O'Dougherty

© 1984, 1980, 1975, 1971, 1967 by Prentice-Hall, Inc.,
Englewood Cliffs, New Jersey 07632

All rights reserved. No part of this book may be
reproduced, in any form or by any means,
without permission in writing from the publisher.

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

ISBN 0-13-600262-5

Prentice-Hall International, Inc., *London*
Prentice-Hall of Australia Pty. Limited, *Sydney*
Editora Prentice-Hall do Brasil, Ltda., *Rio de Janeiro*
Prentice-Hall Canada Inc., *Toronto*
Prentice-Hall of India Private Limited, *New Delhi*
Prentice-Hall of Japan, Inc., *Tokyo*
Prentice-Hall of Southeast Asia Pte. Ltd., *Singapore*
Whitehall Books Limited, *Wellington, New Zealand*

Preface

This book is intended for use in undergraduate or survey M.B.A. courses in the economics of money and banking. Its scope and approach are more or less traditional. Part I, consisting of twelve chapters, is primarily institutional and historical in content. It deals with the definition and determinants of the money supply, an overview of the nation's financial system including financial markets and the activities of nonbank financial institutions, an in-depth discussion of commercial banking and the banking system, and a complete coverage of the structure and functions of the Federal Reserve System.

Part II, consisting of Chapters 13 through 19, is devoted to a consideration of monetary theory beginning with the early (pre-1930s) version of the quantity theory, progressing through a four-chapter development of an essentially Keynesian income-expenditure model, continuing with a discussion of the views of the modern monetarists, and concluding with a chapter on the stagflation problems of the 1970s and 1980s including some of the theoretical devices that have been developed to explain them.

Part III includes only two chapters. The first, Chapter 20, deals with the transmission mechanisms connecting the money supply with economic activity as well as with a number of alleged weaknesses of monetary policy. Chapter 21, then, deals with the prime alternatives to monetary policy, fiscal policy, debt management, and incomes policies.

Part IV, Chapters 22 through 24, covers international finance, possible alternative international monetary systems, the structure and history of the International Monetary Fund, and the enormous changes that have affected international monetary affairs in the 1970s and 1980s.

Every textbook writer claims that his book is "written for the student." I can think of no way to vary this familiar theme. Throughout, I have assigned the highest priority to keeping the discussion as clear and simple as the subject and my expository ability permit. Whether this effort will be a success, of course, only

the student can judge. I simply attest that clarity has been my most important objective.

All teachers labor under certain preconceptions regarding the needs of their students. Mine include the belief that repetition of many fundamental principles already covered in the standard introductory course is a desirable and, indeed, necessary technique. For those students who really learned these basic tools in their first course, the cost involved in reviewing them once again is slight. For those (who I believe constitute the majority) who got through their principles course satisfactorily, but didn't quite fully grasp (or have already forgotten) such concepts as multiple credit expansion, the multiplier, or the balance of payments, repetition at this level is absolutely essential. Basically, I have tried to start "from scratch" in all areas, first recapitulating what is normally taught in the introductory course and then superimposing more advanced material on that base.

This edition includes substantial revision in a number of areas. Perhaps most fundamental is the incorporation of the wide ranging and extremely important provisions of the Depository Institutions Deregulation and Monetary Control Act of 1980 as well as those of the Depository Institutions Act of 1982. Another area of substantive change is that of financial innovation, its causes, and its effects on the definition of money. In addition, the section on monetary targets and the process of monetary policy formulation has been completely rewritten to incorporate very significant changes since the last edition. An entirely new chapter on the purposes and characteristics of financial markets has been added to strengthen that aspect of the discussion. Throughout the book, of course, every effort has been made to bring data, theory, and policy discussions up to date.

It has always been difficult to cover all of the topics one might like to consider in a single semester. The financial innovation, new legislation, and theoretical developments of recent years have simply made this problem even more intense. For those instructors for whom semester or quarter time constraints make coverage of the entire book impossible, I would suggest the following as a "core" that can easily be used without loss of continuity:

Chapters 1, 2, 3, the last half of 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17 (omitting the section on IS-LM curves and the appendix), 18 and 19.

I am indebted to many people for support, encouragement, and valuable suggestions for improvements. Especially helpful have been two old friends, Professor Harold Wolf of the University of Texas at Austin and Professor Bill Reher of the University of Texas at Arlington. *Ite Caerulei*. In addition, Professor Dale F. Kuntz has offered a number of extremely useful comments and suggestions. As always, my colleagues at Delaware in both economics and finance have been extremely generous with their time and expertise. To all of them, as well as to Prentice-Hall's Barbara Grasso, who, with exceptional efficiency and professional competence, handled the production, I am very grateful.

Though all these people have contributed much to the book, since I did not, in all cases, accept their advice, I must absolve them from any responsibility for its errors of omission and commission. For those, I alone am responsible.

Contents

Preface vii

Part One

FINANCIAL INSTITUTIONS, BANKING, AND THE MONEY SUPPLY

- 1 What Is Money? 1**
How Money Contributes to the Economy / The Current Official Definition of Money in the United States / Recent Money Supply Data
- 2 Finance and Nonbank Financial Institutions 17**
The Circular Flow Diagram / What the Financial Sector Does / Direct Finance via Sale of "Primary Securities" from Deficit Spending Units to Surplus Income Units / The Need for Financial Intermediaries / An Overview of the Financial System
- 3 The Purposes and Characteristics of Financial Markets 30**
Capital Market / Money Market
- 4 Problems and Characteristics of Selected Nonbank Financial Institutions 40**
The Thrift Institutions / Some Other Important Financial Institutions
- 5 Early U.S. Banking Legislation and the Commercial Banking Business 60**
History of U.S. Commercial Banking Legislation Prior to the Federal Reserve Act / The Balance Sheet of a "Typical" Commercial Bank / The Use of the T-account / The Business of Commercial Banking

- 6 The Structure and Regulation of the U.S. Commercial Banking System** 79
A Dual Banking System / A Unit Banking System / Regulation of Commercial Banks
- 7 The Federal Reserve System—Structure and Functions** 98
The Evolution of the Federal Reserve System / The Structure of the Federal Reserve System Today / Functions and Objectives of the Federal Reserve System
- 8 Check Collection and Reserve Requirements** 117
Check Collection / Federal Reserve System Reserve Requirements
- 9 The Creation and Destruction of Money by Commercial Banks Under Simplified Conditions** 133
The Fundamental Nature and Origin of Demand Deposits as Money / How Banks Create and Destroy Money / The Limits to Commercial Bank Money Creation, Assuming No Cash Drain, Time Deposits, or Desired Excess Reserves / Commercial Bank Adjustment to Reserve Deficiencies / Summary
- 10 The Determinants of the Money Supply** 151
The Money Creation Capacity of the Banking System Under More Realistic Conditions / The Money Multiplier and the Monetary Base / Summary
- 11 The Major Monetary Policy Tools** 165
General versus Selective Controls / General Credit Controls / Selective Credit Controls / Moral Suasion / The Process of Monetary Policy Formulation
- 12 Other Determinants of the Money Supply** 194
Effects of Treasury Activities / Defensive versus Dynamic Monetary Policy / Summary—Sources and Uses of Bank Reserves and the Monetary Base
- Appendix: Derivation of the “Factors Affecting Bank Reserves” Statement** 210

Part Two

MONETARY AND INCOME THEORY

- 13 Early Attempts to Explain the Value of Money—The “Old” Quantity Theory** 214
The Commodity Theory / The Basis of Money's Acceptability / The “Old” Quantity Theory
- 14 The Simplified Theory of Income Determination** 230
Introduction: The Classical Backdrop and Its Overthrow / The General Approach / Conditions for Stable, Rising, and Falling Production / The Determinants of

Consumption and the Consumption Schedule / Changes in the Equilibrium Level of Production: The Multiplier Concept

Appendix: Computing Equilibrium Income Levels Under More Realistic Assumptions 266

15 Investment Spending 274

Introduction / The Determinants of the Level of Investment Spending / The Investment Decision—The Variables Involved / The Marginal Efficiency of Investment / The Marginal Efficiency of Investment Schedule for the Economy as a Whole / Determinants of the Level of the MEI Curve of the Economy / The Significance of the Slope (or Elasticity) of the MEI Curve / Summary

16 The Rate of Interest 290

Limitations to the Area of Discussion / The Loanable Funds Theory of Interest / The Liquidity Preference Theory of Interest / The Demand for Money, the Supply of Money, and the Equilibrium Rate of Interest

17 Review and Use of the Theory—The Post-Keynesian Model 319

Summary of the Parts and Development of the Whole / The Four-Diagram Model / Examples of Use of the Complete Theory Using the Four-Diagram Approach / An Alternative Geometric Approach—IS and IM Curves / Conclusion

Appendix: Algebraic Presentation 353

18 The Modern Quantity Theory and the Monetarist–Post-Keynesian Debate 359

The Keynesian Position—A Variable Velocity and a Role for Fiscal Policy / The Theoretical Foundation of the Modern Quantity Theory / The Essence of the Monetarist Position / The Policy Prescriptions of the Monetarists / The Views of the Opposition / Where Do We Stand Now in the Monetarist–Post-Keynesian Debate?

19 Recent Experience and Theoretical Developments Regarding Inflation and Employment 392

Introduction / The Pre-1970s View of the Business Cycle and the Role for Stabilization Policies / Unemployment-Inflation Relationships Since 1965 / Attempts to Explain the Unemployment-Inflation Experience of the 1970s and 1980s / Conclusion

Part Three

MONETARY POLICY: WEAKNESSES AND ALTERNATIVES

20 The Channels of Monetary Policy and Some Alleged Weaknesses 416

Introduction / The Channels of Monetary Policy / Problems with Monetary Policy

- 21 Alternatives to Monetary Policy for Economic Stabilization** 439
Fiscal Policy / Debt Management / Incomes Policies

Part Four

INTERNATIONAL FINANCE

- 22 Introduction to International Finance** 462
The Case for Free Trade / The U.S. Role in International Trade and the Importance of International Transactions to the U.S. Economy / Methods of Making International Payments / The Balance of Payments / The U.S. Balance of Payments for 1982 / Attitudes Toward International Deficits and Surpluses
- Appendix: The Official U.S. Balance-of-Payments Report** 485
- 23 International Payments System and Their Functions** 488
What Is the Function of an "Ideal" International Monetary System? / Three Alternative International Monetary Systems / Discretionary Government Policy Measures to Deal with International Payments Deficits
- 24 Recent History and Current Problems in International Finance** 509
The Past—Midnineteenth Century Through World War II / The Bretton Woods System and the "Gold Exchange" Standard: 1945–1971 / The Transition to a New Exchange Rate System: 1971–1973 / Efforts at Reform Since 1973 / How Well Has the "Managed Floating" System Worked?
- Index** 529

1

What Is Money?

This is a book about money. Accordingly, logical order and the dictates of tradition require that we begin our discussion by defining the subject. *What, precisely, is money?*

On its face, the question may seem to be an absurdity and, indeed, something of an insult to the intelligence of the reader. “Surely,” as one of my more outspoken students informed me recently, “everyone knows what money is. Is it really necessary to waste valuable class time discussing the obvious?”

The question is, of course, rhetorical. It is never necessary to “discuss the obvious.” But that which appears obvious to some may not be so clear-cut to others. It is not a fact that “everyone knows what money is.” For even if no one else had any doubts about it, monetary economists have been struggling for a number of years now to arrive at some consensus on the definition of money.

The problems show up at two levels. On the one hand, there are long-standing philosophical differences as to what constitutes the true “essence” of money. One group—undoubtedly the majority—argues that the distinguishing characteristic of money is its capacity to serve as a “generally accepted medium of exchange.” Another group, however, sees the essential feature of money as its ability to serve as a “temporary abode of purchasing power—in which sellers of goods, services, or financial assets hold the proceeds in the interim between sale and subsequent purchase of other goods, services or assets.”¹ This difference of opinion has never really been settled, but it has been neatly side-stepped by the monetary authorities who regularly collect and publish several different money supply series (labeled M1, M2, etc.), each aimed at satisfying the members of one of the two groups.

¹*Improving the Monetary Aggregates*, report of the Advisory Committee on Monetary Statistics (Washington, D.C.: Board of Governors of the Federal Reserve System, 1976), p. 9.

The other problem—recently a much more vexing one—is that of deciding precisely where to draw the line separating those financial instruments that are money and those that are not. This task would be difficult enough to undertake in a static economy without change. But the unprecedented rate of financial innovation in the last decade has so severely magnified the problem that one high Federal Reserve official was led recently to observe, “I have concluded, most reluctantly, that we can no longer measure the money supply with any precision.”²

In light of all this, we must recognize at the outset that defining money and agreeing on the financial assets that shall be “counted” as money is a complex and challenging task. Yet if we are to speak of “the money supply,” as indeed we must, meaningful communication requires that we agree on a single definition. The remainder of this chapter is aimed at that objective.

How Money Contributes to the Economy

Despite their many differences, virtually all economists agree that money must be defined functionally. That is, items that are to be considered money should be selected on the basis of the functions they perform rather than on such alternative characteristics as the identity of the issuer or the commodity of which they are made. We need, then, to consider carefully the particular functions that money does perform. Before doing so, however, it should be revealing to consider the difficulties inherent in an economy without money.

The Problems with Barter

If no money at all existed, each income recipient would necessarily have to be paid “in kind”—that is, in the form of his or her share of the actual goods that he or she had helped produce. If, for instance, one worked for a brewery, one’s weekly paycheck might consist of 50 cases of beer.

Sounds great, you say? Don’t be so sure. After the first couple of six-packs were consumed, most people would find it necessary to start bartering their remaining beer to others who happened to possess the food, clothing, and fuel and myriad other goods and services most of us choose to consume on a regular basis. The process of barter without money to serve as a common medium for which anything can be bought or sold would surely turn out to be a nightmare.

The problems encountered would be enormous. Not only would our beer peddler have to search out others who wished to trade off the things he or she wanted, but for a direct deal to be struck, these people would have to be people who desired to trade what they had for beer. To put it in the terms most commonly employed, **exchange under barter conditions would require a double coincidence**

²Frank E. Morris, “Do the Monetary Aggregates Have a Future as Targets of Federal Reserve Policy,” *New England Economic Review*, Federal Reserve Bank of Boston, March–April, 1982, p. 5.

of wants. Not only must we find people who want our beer, but these same people must possess the things we want to trade for. Even if some sort of downtown marketing system were arranged to facilitate such exchanges, one can easily imagine the trading process taking as much of one's time as earning the beer in the first place.

But that is not the end of it by any means. In a money economy, we tend to take for granted the role that money plays as a *numeraire*—a measuring device in terms of which the market worth of all goods and services is evaluated and can be compared. If there is no money to serve this function, the exchange value of every good or service must be expressed in terms of a certain number of units of every other one. If, for example, there were 1,000 different goods and services on the market, instead of 1,000 dollar prices being available to measure their relative market worth, 499,500 exchange ratios would be required! Such a system would not only be a consumer's and accountant's nightmare—it would make efficient use of an economy's scarce resources a near impossibility.

It is fruitless to continue beating a dead horse. The inefficiency of an economy without money is probably quite obvious. To put the whole issue in a more positive vein, what are the social *merits* of money? In a phrase, an efficiently operating money system is a *sine qua non* for economic development and high living standards. It underlies and facilitates both specialization and capital formation—two essential ingredients of economic growth.

More than two centuries ago, Adam Smith emphasized the contribution that specialization can make to production levels. But specialization is the antithesis of self-sufficiency. As such, it makes *exchange* essential. Each specialist becomes dependent, not only upon all other specialist-producers, but upon the system that facilitates exchanging goods and services among them. Therefore, in a very real sense, money is an essential prerequisite to extensive specialization.

Capital formation, the process whereby new capital goods are produced, also depends heavily on a money system. Fundamentally, capital formation requires saving to release productive resources from the production of consumer goods and transference of those released resources to the building of plants, equipment, and other capital goods. All this could, conceptually, be accomplished without money, but it would be extremely difficult. In a barter system, the savers would be required to accumulate stocks of consumer goods and somehow make them available to investors who, in turn, would use them to "pay" the workers who build the capital goods. It could be done, but hardly extensively. How much simpler it is for the savers to save money income and lend that to the investors!

All this should make it clear why money was first created. It did not originate centuries ago with some farsighted government that saw the need for money and responded by offering it. Rather, it arose spontaneously out of the sheer necessity for a money substance to facilitate economic exchange. Governments now control the issuance of money, but they did not invent it, and some form of money would continue to be used with or without government involvement. In this area as much as in any other, "necessity" was truly the "mother of invention."

The Functions of Money

What, specifically, are the functions performed by money? They consist, of course, essentially of overcoming the difficulties of a barter system. Traditionally, three main functions are considered.

Medium of Exchange. First and perhaps most important, money serves as a medium of exchange—as a vehicle through which the process of exchange among interdependent specialists is made possible. In this role, money serves as an essential lubricant that permits highly industrialized, intricately specialized economies to operate smoothly and effectively.

Unit of Account. In addition to its medium-of-exchange function, money serves as a *numeraire*, a sort of “value measuring rod,” in terms of which the values of millions of goods and services can be expressed and compared. Students should recognize that this function is different from that of medium of exchange. Although in the United States today the dollar fulfills both roles simultaneously, this need not be the case. There have been a number of examples in history of one form of money fulfilling the medium-of-exchange function while an entirely different instrument played the role of unit of account in the public’s calculations of value.³

Store of Value. Money that is spent is, of course, fulfilling the medium-of-exchange function. Obviously, however, a holder of money is free to “not spend” it—to retain it for any period of time desired as a store of value or a generalized, uncommitted claim to wealth.

Money shares this role with a long list of other assets: stocks, bonds, real commodities, and many other items may also be considered appropriate forms in which to “store value.” Sometimes (as in periods of falling prices), money is an extremely appropriate form in which to hold one’s wealth. In inflationary periods, it is generally much less so. As we shall see, a significant portion of monetary theory and policy revolves around the public’s decisions as to what portion of the money stock it chooses to hold as a store of value.

The Current Official Definition of Money in the United States

As noted earlier, most economists consider the medium-of-exchange function to be the critical one for distinguishing money from nonmoney claims. For them, the so-called “narrowly defined money stock” series entitled M1 is collected and reported on a regular basis.

³Some economists choose to list money’s role as a *standard for deferred payments* as a separate function. Since this may be treated as simply a subfunction of its role as a unit of account, we do not list it separately here.

For those who consider the essence of money to be its capacity to serve as a “temporary abode of purchasing power,” broader series focusing more on the store of value function are needed. To satisfy this view, the Federal Reserve System regularly reports an M2 and M3 money stock.

Let us consider each of these in turn.

The Narrowly Defined Money Stock: M1

By all odds, the most widely used definition of money is *anything generally accepted as a medium of exchange*. Although in other times and other cultures many items have fulfilled this definition (such as, for example, gold, beads, cigarettes, and even millstones), until quite recently in the United States the only things generally accepted as payment media were currency and coins in addition to demand deposits (i.e., checking accounts) held by the public at commercial banks.⁴ But although these items still dominate the M1 money supply (constituting almost 80 percent of the M1 total in early 1983), financial innovation and regulatory changes in the past decade or so have complicated the issue markedly.

The Development of “Other Checkable Deposits.” In brief, what we have seen is the following. Unprecedented and persisting inflation throughout the 1970s and early 1980s was accompanied by (indeed, in large part, *led to*) unprecedented rises in interest rates. These high interest rates sharply raised the opportunity cost of holding money (noninterest-earning) balances. That, in turn, led financial institutions, ever alert to the public’s desire to minimize the cost of holding transactions balances, to seek new financial arrangements that could accommodate such desires. Finally, these efforts at financial innovation tended to induce governmental regulatory reforms that have had the effect of legalizing several new types of “checkable deposits.”

Perhaps the most important of these are the so-called “NOW accounts.” Technically speaking, *NOW accounts (or negotiable orders of withdrawal)* are interest-earning savings accounts on which checks can be written.⁵ The first NOW accounts were issued in 1972 by mutual savings banks in Massachusetts and New Hampshire where, under state law, they were declared legal.

After being upheld by the courts, the issuance of NOW accounts spread rapidly throughout New England. Within two years, to prevent a competitive advantage to mutual savings banks, all depository institutions in Massachusetts and

⁴Until recently, the law forbade any institution other than commercial banks to issue demand deposits, so that it was convenient to define commercial banks as “financial institutions that issue demand deposits.” Unhappily, recent changes have made the definition of a commercial bank just about as fuzzy as the definition of money.

⁵For all practical purposes, NOW accounts could be considered checking accounts that pay interest, but since federal law still forbids payment of interest on checking accounts, they are technically considered savings accounts on which checks can be written. Earlier NOW accounts were subject to interest rate ceilings but beginning in January, 1983, depository institutions have been authorized to issue so-called *Super Now’s* with no interest rate ceilings.

New Hampshire except credit unions were authorized by Congress to issue NOW accounts. Then, in 1976, the same authority was granted to depository institutions in all New England states. Finally, after being legalized in still more states, Congress, in the Depository Institutions Deregulation and Monetary Control Act of 1980 (D.I.D.M.C. Act), authorized their issuance by all federally insured commercial banks, savings banks, and savings and loan associations throughout the country beginning in January 1981.

A second development of note was the authorization of so-called ‘**ATS accounts**’ at commercial banks. **ATS accounts (bank accounts offering “automatic transfer service”)** are arrangements whereby banks automatically transfer funds from interest-bearing savings accounts to checking accounts as checks are written. This, of course, permits the account owner to earn interest on his or her account—but to have it as readily available for spending purposes as a checking account. ATS accounts were initially authorized by bank regulatory agencies in 1978, challenged in the courts, but then made legal by the same 1980 D.I.D.M.C. Act that permitted nationwide NOW accounts.

Third, there was the development and subsequent legalization of “share draft accounts” issued by credit unions. These are arrangements whereby owners of interest-earning shares (accounts) at credit unions can write checks on them. They, too, were challenged in the courts, but ultimately they were made legal by the D.I.D.M.C. Act of 1980.

The Specific Components of M1. Following a revision in 1980 that properly recognized the development of these new payment media, the M1 money supply currently includes the following:

1. **Currency and coins held by the nonbank public;** *not* included in M1 are currency and coins held by the U.S. Treasury, the Federal Reserve banks, and commercial banks.
2. **Demand deposits owned at commercial banks by the nonbank public;** *not* included in M1 are demand deposits owned by commercial banks that are issued by other commercial banks, the U.S. Treasury, and foreign banks and official institutions as well as cash items in process of collection and Federal Reserve float.⁶
3. **Other checkable deposits, which include**
 - a. All NOW accounts.
 - b. Automatic transfer service accounts at banks and thrift institutions.
 - c. Share draft accounts held at credit unions.
 - d. Demand deposits (and outstanding traveler’s checks) owned by the nonbank public and issued by depository institutions other than commercial banks.⁷

⁶Cash items in process of collection plus Federal Reserve float represents checks that have been deposited in one bank but have not yet been collected from the bank on which they are written. They are, of course, excluded to avoid double-counting a single demand deposit at two different banks.

⁷Mutual savings banks and savings and loan associations were authorized to issue demand deposits when related to newly authorized commercial loans in the D.I.D.M.C. Act of 1980 and in the Depository Institutions Act of 1982.

Continuing Financial Innovation and the M1 Concept. Certainly the addition of these “other checkable deposits” to the M1 money series represented a much needed improvement. But the economic environment that fostered these financial innovations has not disappeared since the major revisions of 1980. And, as a result, other, newer financial innovations continue to pop up, threatening the meaningfulness and inclusiveness of the current M1 definition.

Most important among these has been the development of the *money market mutual fund* and its more recent clone, the *money market deposit account*. A money market mutual fund, as we shall learn in more detail in a later chapter, is a specialized type of investment company that collects householders’ savings via sale of “shares” and then uses the proceeds to purchase large denomination short-term I.O.U.’s issued by business and governments. During periods of rampant inflation such as the past decade, money market mutual fund shares have tended to pay their owners much higher rates of return than were typically available on ordinary depository institution savings accounts (which, as we shall see, have, until recently, been forbidden by law from paying competitive rates).

The enormous popularity of money market mutual funds is evidenced by their meteoric growth from total assets of \$4 billion as recently as 1978 to over \$230 billion in late 1982. The attractive features which led to this growth—in addition to the high rate of return—have included their availability in relatively modest (usually \$1,000) denomination sizes, the fact that they can be cashed in without penalty at any time, and the fact that most funds offer their share holders limited (normally in amounts of \$500 or more) check-writing privileges.

It is this latter feature that creates problems with their classification. Undoubtedly most MMMF owners look upon their shares more as financial investments similar to savings accounts or certificates of deposit than as true transactions accounts fitting the “medium of exchange,” M1 concept. But the fact that checks can be written on them leaves substantial room for doubt.

Even more perplexing is the proper classification of the much newer *money market deposit account*. Authorized initially in December of 1982 (as a result of the Depository Institutions Act of 1982) these accounts are specifically intended to permit depository institutions to compete for funds which had been drained off into the money market mutual funds. Specifically, they are a special type of savings account issued by commercial banks, mutual savings banks, and savings and loan associations which pays depositors interest returns comparable to those offered by money market mutual funds (the legal limit having been removed in the case of MMDAs). These accounts are available in initial minimum denominations of \$2,500, are immediately withdrawable without penalty, and offer the advantage (over money market mutual funds) of federal government insurance up to \$100,000 per account. In addition, account holders are permitted to write up to three checks per month on them.

So what about money market deposit accounts? Should they be treated as a part of M1 because they are indeed—at least to some extent—transactions accounts which serve as a medium of exchange? Or should they be relegated to the broader

M2 category because, in the main, most account holders consider them financial investments similar to savings accounts? Obviously, they present serious classification problems and, although at the time of this writing they are being included entirely as a part of M2, a case could be made for different treatment.

And if the conceptual problems created by money market accounts aren't enough, consider the recent practice of "deposit sweeping." Under this arrangement, owners of large accounts (primarily corporations) have their entire accounts available to them for check writing purposes up to a certain hour each day. At that hour, the bank automatically "sweeps" the bulk of the account into an interest-earning asset for the rest of the day. The result is that, while the entire account may be considered a part of the firm's spendable transactions balances, when M1 figures are collected (at the end of the day), only a small part of it gets included.

We could go on, but the point is simple. So long as the incentive is there, financial innovation is likely to continue. And as has been the case in the past, such changes have the capacity to alter drastically the items that satisfy the requirements of a claim "generally accepted as a medium of exchange."

The upshot is a problem much more profound than that of posing mere difficulties with definitions. For if the narrow M1 money supply is an important determinant of economic welfare, the fact that we can't even measure or define it adequately bodes ill for efforts to promote economic welfare via its control. In short, if we don't even know what the money supply is, it is going to be pretty hard to control.

More Broadly Defined Money Stocks: M2 and M3

For those who consider the essence of "moneyness" to be a claim's capacity to serve as a "temporary abode of purchasing power," and to serve not only as a store of value but also to be readily convertible into a medium of exchange, additional claims must be included. To those who hold this view, the essence of an instrument's moneyness is thought to be its *liquidity*, which, in turn, largely determines its suitability as a store of value.

What is liquidity? An asset is said to possess *perfect* liquidity if it can be immediately converted into a fixed number of dollars without risk of loss.⁸

Now if our money concept were to be limited to assets possessing absolutely *perfect* liquidity, the items included would be precisely the same as those identified earlier as generally accepted media of exchange—coins, currency, and checkable deposits. Such a limitation would, of course, have the virtue of providing a not entirely unreasonable distinction between "money" and "nonmoney" assets. But

⁸The phrase "without risk of loss" refers to dollars, not real purchasing power. For example, if a particular asset is of such a nature as to guarantee the holder immediate access to, say, \$100, it has perfect liquidity even if the \$100 may, as a result of inflation, have less real purchasing power than when the asset was initially purchased.