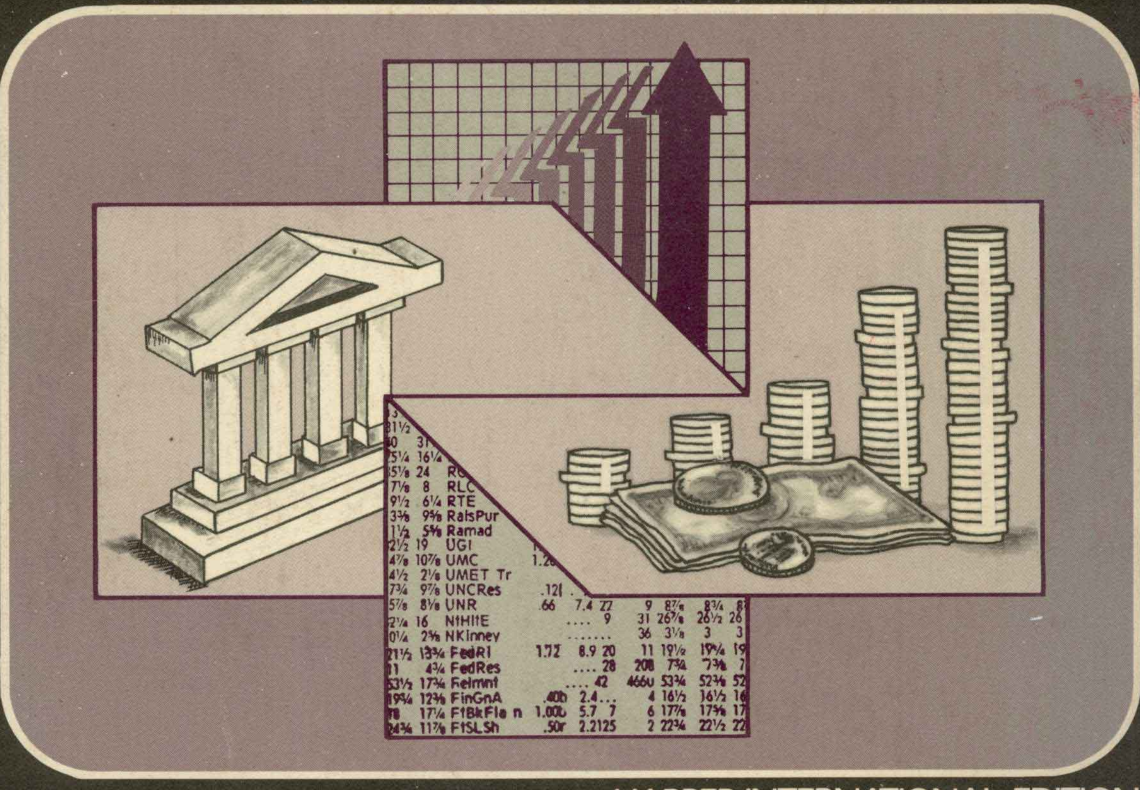
The Economics of Money and Banking

Eighth Edition



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S. M. Goldfeld
L. V. Chandler

EIGHTH EDITION

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PREFACE

Though extensively revised and rewritten, this edition is quite similar in purpose, approach, and treatment to the seven editions that preceded it. It is addressed primarily to college and university undergraduates who are just beginning their formal study of money and banking. In the selection and presentation of materials we have kept the needs of the students in mind constantly and have not tried to write to our professional colleagues.

This is not an exhaustive treatment of money and banking. Not even a book many times the size of this one could claim to deal exhaustively with the vast amounts of theoretical, legal, institutional, empirical, and historical materials that have been accumulated in the field of money and banking. Furthermore, we do not believe it appropriate that the newcomer should be forced to wade through an encyclopedic treatment of this broad and complex subject. We have therefore selected what we believe to be the most important principles, processes, and problems and have attempted to deal with them fully enough to clarify their significance and interrelationships.

The ultimate interest of this book is in policy. However, policy cannot be understood without a theory of the interrelationships of money and banking and the functioning of the economy as a whole, a clear understanding of the institutions and processes involved, and an appreciation of the social and historical context within which policy makers operate and by which their policies are shaped. This book therefore employs theoretical, institutional, and historical approaches. It emphasizes an evolutionary view, attempting not only to explain how present-day structures, attitudes, and policies evolved but also to suggest some possible directions of future change. This view seems particularly appropriate in the light of recent developments.

MAJOR CHANGES IN THE EIGHTH EDITION

The field of money and banking has undergone substantial changes in the relatively short period of time since the publication of the previous edition. Indeed, notions of what constitute both "money" and a "bank" have altered perceptably in the last several years. Furthermore the forces that have brought about these changes, financial innovation and regulatory reform, will inevitably provide further stimulus for change. Consequently, one major goal of this edition is to provide the reader with a firm understanding of the dynamic nature of the field of money and banking.

To accomplish this, the present edition introduces a number of major changes in both the exposition and coverage. The most extensive revisions appear in the new Part V devoted to monetary policy. This includes new chapters on the evolution of financial intermediaries and the actual conduct of monetary policy. These chapters document the growing similarities among financial institutions, examine in detail the role of interest rate ceilings, and contain an extended discussion of the important new legislative reforms embodied in the Depository Institutions Deregulation and Monetary Control Act of 1980.

Recent changes in the definition of money introduced by the Federal Reserve are also analyzed, and the question of the appropriateness of monetary rules is examined in the light of these new definitions. Elsewhere in the book, some of the more important changes include the following: an expanded discussion of the rationale of bank competition, supervision, and regulation; a fuller treatment of inflation; a more extensive analysis of the money supply process and money multipliers; and a considerably revised and updated discussion of international monetary relations.

Many individuals have made helpful contributions in the preparation of this edition. We would particularly like to thank our Princeton colleagues Dwight Jaffee and Robin Bauer, and Paul Howell of Baruch College. We also wish to thank Professors Harold R. Williams and Henry W. Woudenberg for preparing the *Instructor's Manual* that accompanies the text. Last, but not, as any author knows, least, we would like to thank Constance Dixon for her cheerful and efficient assistance in putting it all together.

Stephen M. Goldfeld
Lester V. Chandler

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I

THE NATURE AND FUNCTIONS OF MONEY AND FINANCE

THE ROLES OF MONEY

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One need not be an economist to be acutely aware that money plays an important role in modern life; one need think only of one's own experience and recall the headlines of recent years. From personal experience one knows that the process of getting a living is a process of getting and spending money, and that how well one can live depends on how many dollars one can get and how many goods and services each dollar will buy. One also knows that dollars are harder to get at some times than at others, and that the buying power of each dollar has varied widely, sometimes to one's benefit and sometimes not.

It is equally evident, even to the most casual observer, that the behavior of money is also vitally important to the operation of the national and international economies. When we recall the events of history, we are reminded that the periods of major economic contraction in the United States were frequently characterized by banking or monetary crises and invariably accompanied by substantial reductions in the stock of money. In particular, significant reductions of the money supply accompanied the major economic contractions of 1873–1879, 1893–1894, 1907–1908, 1920–1921, 1929–1933, and 1937–1938. Banking crises occurred in 1873 and again in 1907, the latter providing a stimulus for the subsequent creation of the Federal Reserve System.

During our most severe economic contraction, the Great Depression of 1929–1933, we witnessed a collapse of the banking system with the consequent disappearance via failure or merger of nearly 40 percent of the nation's banks. Newspapers of the 1930s headlined stories of "deflation and depression"; the drastic decline of output, job opportunities, and prices accompanying the shrinkage of effective demand; of wide-spread want and suffering while millions of unemployed workers and other productive facilities that were both willing and able to work were standing idle because of insufficient "demand"; and of wholesale failures of debtors to meet their obligations because of the decline of their money incomes and of the prices of their assets.

Headlines in other periods told different sorts of stories—not stories of deflation and shrunken employment, but stories of "inflation," of rising living costs, and of discontent and distress among those whose income and wealth were relatively fixed in terms of money. For example, in the periods surrounding the two World Wars—1914–1920 and 1939–1948—prices more than doubled. During each period the stock of money outstanding likewise more than doubled.

History also provides ample evidence that the movement of money between nations can have an important influence on economic developments throughout the world. In the United States, for instance, we have had to worry about the international position of the dollar, about the continuing deficit in our balance of international payments, the deterioration of our net international reserve position, speculation against the dollar, and conflicts among the domestic and international objectives of our monetary policies. These developments, it should be emphasized, are of more than historical interest. Aggravated by increasing oil prices, international monetary problems continued unabated in the 1970s. On the domestic front, we seemed to have the worst of both worlds, with the nation struggling to cope simultaneously with inflation and excessive unemployment. Indeed, for the first time in nearly 30 years, "double-digit" inflation surfaced in the United States in 1974. The subsequent contraction of the economy produced the worst U.S. recession of the post-World War II era, with the unemployment rate rising to 9 percent by mid-1975. A similar pattern seemed to be repeating itself in 1980, and as in earlier episodes, the newspapers were filled with a wide range of views as to the proper course for monetary policy.

In short, personal experience as well as some knowledge of history and economics makes it clear to everyone that money plays an important role in the economic system and that the behavior of money is somehow causally related to the behavior of employment, the rate of real output, the level of prices, the distribution of wealth and income, and so forth. What are not so clear, however, are the answers to questions such as these: Just what are the functions of money in the economy, and just how does money perform these functions? To what extent do economic disturbances "arise on the side of money and monetary policy"? To what extent do money and monetary policy amplify and spread through the economy disturbances originating in nonmonetary factors? What are the effects of the various types of money and monetary policies? Which ones promote economic objectives generally considered desirable, and which ones militate against the attainment of those objectives? With how much success can we use monetary policy to prevent unemployment, promote a steadily advancing level of output, and maintain a stable purchasing power of the dollar while preserving a basically free enterprise economy?

Such questions are the central concern of this book. The primary interest throughout is in the functioning of the monetary, credit, and banking systems and in their relationships to the functioning of the economy as a whole. Though much space will be devoted to historical, structural, and legal aspects of the various institutions that create, transfer, and destroy money, these aspects will not be studied primarily for their own sakes, but rather for their contribution to our understanding of the functioning of the economic system.

THE BASIC FUNCTION OF MONEY

Money has one fundamental purpose in an economic system: to facilitate the exchange of goods and services—to lessen the time and effort required to carry on trade. A person living and working in complete isolation from others has no use for money. It cannot be eaten or worn or used to promote productive processes; having no occasion to exchange either goods or services with others, such a person has no need for money. Even if a dozen persons lived together in isolation from all others, the use of money would be of only limited benefit to them; they could barter their goods and services among themselves with but little loss of time and effort. As groups become larger, however, and wish to increase their degree of specialization and the size of their trade area, they find the direct barter of goods and services increasingly inconvenient and increasingly wasteful of time and effort. They therefore search for something that will enable them to escape the wasteful processes of barter; they invent money.

We may say, then, that the sole purpose of money in the economic system is to enable trade to be carried on as cheaply as possible in order to make feasible the optimum degree of specialization, with its attendant increase of productivity. We are all familiar with the high degree of specialization that characterizes modern economies—specialization of persons, of business firms, of regions, and of types of capital. We know that without this high degree of specialization, which enables us to utilize the various regions to maximum advantage, to make the most advantageous use of native abilities, to develop skills, to amass huge amounts of specialized and useful knowledge, to employ large aggregations of specialized capital, and to achieve economies of scale, our productive powers and living standards would be far below their present levels. But this specialization would be impossible without an equally highly developed system of exchange or trade. Money is productive, therefore, in the sense that it is an essential part of the modern exchange mechanism and thereby facilitates specialization and production.

BARTER EXCHANGE

We have carefully avoided saying that exchange is impossible without money. People can, of course, carry on trade by a direct bartering of goods and services. Primitive trade was often carried on in this way, and bartering is not unknown even now. Yet pure barter is so wasteful of time and effort that little trade would be feasible if this were the only available method of exchange.

The first serious shortcoming of pure barter is the lack of any common unit in terms of which to measure and state the values of goods and services. (By the *value* of a good or service is meant its *worth*, the quantity of other goods and services that it can command in the market.) In this situation, the value of each article in the market could not be stated simply as one quantity, but would have to be stated in as many quantities as there were kinds and qualities of other goods and services in the market. For example, if there were 500,000 kinds and qualities of goods and services in the market, the value of each would have to be stated in terms of 499,999 others. Moreover, no meaningful accounting system would be possible. A balance sheet would consist of a long physical inventory of the kinds and qualities of the various goods owned and another inventory of those owed; consequently, the net worth of the person or firm could be ascertained, if at all, only by a prolonged and tedious study of the numerous barter rates of exchange prevailing in the market. Profit and loss statements would be equally difficult to draw up and interpret. A firm could only list the various kinds and qualities of goods and services acquired during the period as income and those paid out as expenses, so that again the net results could be discovered, if at all, only by a laborious study of barter rates of exchange. It is almost inconceivable that even a small department store, not to mention General Motors Corporation, could keep meaningful accounts in the absence of a monetary unit.

The second serious disadvantage of barter is often described as "the lack of a double coincidence of wants." Stated more simply, it would happen only rarely that the owner of a good or service could easily find someone who both wanted that commodity more than anything else and possessed the commodity that our trader wanted more than anything else. For example, suppose that a farmer owned a three-year-old draft horse and wished to trade it for a certain kind of two-wheeled cart. To find someone who already owned or could build with maximum economy exactly the kind of cart the farmer wanted and who would be willing to trade it, and who also wanted more than anything else the kind of horse that was being offered, would likely be a laborious and time-consuming process, if such a person existed at all. The farmer would probably have to accept something less desirable than the cart, or else carry through a number of intermediate barter transactions, for example, trading the horse for a cow, the cow for a boat, the boat for some sheep, and the sheep for the desired cart. Barter presents even more serious difficulties when the articles to be exchanged are not of the same value and cannot be divided without loss of value. Imagine, for example, the plight of the farmer who wanted to trade the horse for a pair of overalls, a hat, three dishes, an aluminum skillet, 50 cartridges, schoolbooks, and numerous other inexpensive articles.

A third disadvantage of pure barter is the lack of any satisfactory unit in terms of which to write contracts requiring future payments. Contracts involving future payments are an essential part of an exchange economy; individuals must enter into agreements as to wages, salaries, interests, rents, and other prices extending over a period of time. But in a pure barter economy these future payments would have to be stated in terms of specific goods or services. Though this would be possible, it would lead to three grave difficulties: (1) It would often invite controversy as to the quality of the goods or services to be repaid; (2) the parties would often be unable to agree on the specific commodity to be used for repayment; (3) both parties would run the risk that the commodity to be repaid would increase or decrease seriously in value over the duration of the contract (e.g., wheat might rise markedly in value in terms of other commodities, to the debtor's regret, or decrease markedly in value, to the creditor's regret).

A fourth disadvantage of pure barter, which results from its first two shortcomings, is the lack of any method of storing generalized purchasing power. People could store purchasing power for future use only by holding specific commodities or claims against specific commodities. This method of storing purchasing power has often been used, and as we shall see later, is used extensively even today. Yet it has serious disadvantages when it is the only method available. The stored commodity may deteriorate (or appreciate) in value, its storage may be costly, and it may be difficult to dispose of quickly without loss if its holder wishes to buy something else.

Because of the four disadvantages outlined above, pure barter is a highly inefficient means of trade. It was to overcome these difficulties that virtually every society invented some kind of money early in its development.

THE SPECIFIC FUNCTIONS OF MONEY

Money serves its basic purpose as "the great wheel of circulation, the great instrument of commerce" by performing four specific functions, each of which obviates one of the difficulties of pure barter described