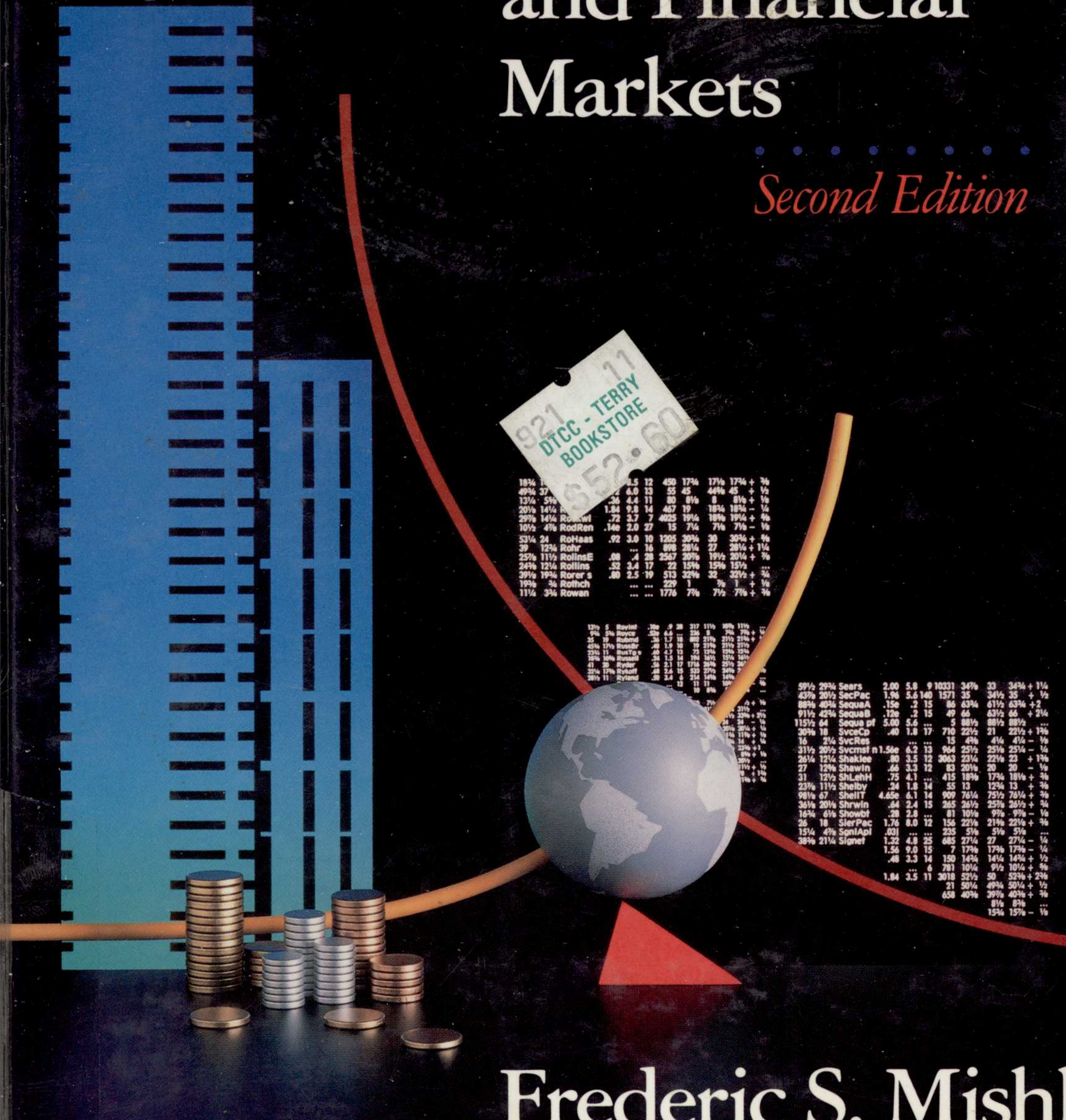
The Economics of

Money, Banking, and Financial Markets

Second Edition



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Second Edition

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Preface

In the past ten years, the field of money, banking, and financial markets has become one of the most exciting in all of economics. Financial markets are changing rapidly, with new financial instruments appearing almost every day; the once staid banking industry is now highly dynamic, with the distinction between commercial banks and other financial institutions becoming increasingly blurred; the conduct of monetary policy is at center stage in debates about economic policy; and new developments in monetary theory have changed the way we think about the role of money in the economy.

The challenge in writing a modern money and banking text is how to convey these exciting developments and important concepts in the field so that they are understandable and interesting to students. I confronted this challenge by keeping three objectives in mind when writing this text. First, I wanted to provide students with a simple unifying framework for studying money, banking, and financial markets to help them better understand the subject. Such a framework would not only keep their knowledge from becoming obsolete; it would also discourage them from memorizing a mass of facts that will be forgotten after the final exam. Second, I wanted to write a modern, contemporary text that would enable students to understand important and relevant policy debates. Finally, I wanted to create a well-designed learning tool with pedagogical features that would aid and interest students.

To accomplish these objectives, this edition continues to apply throughout a few basic economic principles that students can use to organize their thinking about the role of money in the economy, bank management, and the operation of financial markets. These principles include a simplified approach to portfolio choice (what I have called the Theory of Asset Demand), the concept of equilibrium, supply and demand analysis, profit maximization, and aggregate demand and supply analysis.

To help students apply these economic principles, the text adopts an approach found in the best principles of economics books: simple models are constructed in which the variables being held constant are carefully delineated, and the models are then used to explain important economic phenomena by focusing on the appropriate change in variables, *ceteris paribus*. This approach makes the subject matter accessible to students who have taken a course in principles of economics as well as to those who have not. Furthermore, it is my goal to discourage students from rote memorization and encourage them to think of economics more as a means to clear thinking than as a set of facts. In a field characterized by rapid change, the use of economic analysis can not only help students to understand the current operation of banks and financial markets but also help them to see how financial markets and institutions might respond to future changes in the regulatory environment and in the conduct of monetary policy.

In order to instill students with enthusiasm for the subject, this edition continues to emphasize the interaction of economic theory and empirical data. Throughout the text and in special interest boxes, evidence is presented that supports or casts doubt on the economic propositions being discussed. This exposure to real-life events and data should dissuade students from thinking that economists merely make abstract assumptions and develop theories that have nothing to do with actual behavior. The book's twenty major applications and analysis of effects from such events as the stock market crash of 1987 further demonstrate that economic analysis is a powerful tool that can be used to explain many important real-world situations.

COVERAGE AND ORGANIZATION

The following discussion of the topics covered in this book will illustrate how my approach, which stresses application of a few basic economic principles and the interaction of theory and data, works in practice. As you will see, the text is comprehensive in range of topics covered, but I have tried not to clutter it with unnecessary detail.

Flexibility

A feature of the text that reviewers and survey respondents have continually commented on is its flexibility. There are as many ways to teach money, banking, and financial markets as there are instructors. To satisfy the needs of diverse instructors, the text achieves its flexibility as follows: Core chapters provide the analysis used throughout the book, and other chapters can be used or omitted according to the instructor's preference. Comprehensive coverage combined with flexible organization should allow instructors to tailor the book in a manner that maximizes their course objectives.

(Specific information about how best to use this book for your course is available in the Instructor's Manual.)

Financial Markets

After the introductory chapters, which outline why money, banking, and financial markets are worth studying (Chapter 1) and what money is (Chapter 2), Chapters 3–7 examine the operation and behavior of financial markets. Some preliminaries on the structure of financial markets and on the meaning of interest rates are first presented, followed by a discussion of the basic factors that determine how people choose one asset over another. Once this simple approach to portfolio choice (the Theory of Asset Demand) is understood, a supply and demand analysis of the bond and money markets is easily developed. Such an analysis helps students understand not only how the overall level of interest rates is determined, but also the risk and term structure of interest rates. The predictions of supply and demand analysis are repeatedly compared with empirical evidence so that students can see that supply and demand analysis is not a theoretical exercise but a valuable tool helping to explain changes in the economy.

Financial Institutions

The third part of the book focuses on how the search for profits determines the activities of financial institutions. The principles of how a bank operates are set forth in Chapter 8. Chapters 9 and 10 provide the essential institutional details about the market structure and government regulation of both the banking industry and the increasingly important nonbank financial institutions. These two chapters also highlight economic principles, such as adverse selection and moral hazard, which have led to severe problems for the insurance industry and to the current crisis in the banking system. The search for profits by participants in financial markets is used in Chapter 11 to explain many recent financial innovations. An understanding of the factors that contribute to financial innovation is especially critical in today's economic environment. The knowledge gained about current financial innovations may become obsolete, but the fundamental reasons behind financial innovation are likely to endure.

The Money Supply Process

In Chapters 12–14, a simple, cohesive model of the money supply process is built step by step, using the Theory of Asset Demand and the principle of profit maximization on the part of banks. The resulting money supply model is used to examine many topics, including multiple deposit creation, the effects of various tools of monetary control, the effects of interest rate movements on the money supply, the results of bank panics, and the role of depositor preferences. As in other chapters, historical episodes and data are drawn on extensively in applications that refine the theoretical framework of the money supply process.

Most textbooks address these topics as separate issues and never show the student how they are interrelated—an approach that makes the material confusing, difficult to learn, and, most unfortunate of all, boring. Chapters 12 and 13 outline a basic framework for understanding how the money supply is determined. Chapter 14 uses economic principles to analyze the factors that motivate depositors' and banks' behavior. This chapter also promotes a student's sense of how economists look at the interaction of theory and data to come up with a better understanding of the economy.

Because some instructors do not want to devote much time to the money supply process, Chapters 12 and 13 are a self-contained unit, allowing Chapter 14 to be skipped without loss of continuity.

The Federal Reserve and the Conduct of Monetary Policy

Chapters 15–18, which focus on the institutional structure of the Federal Reserve System and how it conducts monetary policy, use the unified approach to the money supply process to discuss the actual conduct of monetary policy. The question of how the Fed might best pursue its goals of fighting inflation and promoting full employment is addressed by looking at historical examples of Federal Reserve policymaking and at the success of particular Federal Reserve procedures of monetary control.

Monetary Theory and Policy

The coverage of monetary theory in Chapters 19–26 is unified by the basic theoretical framework of aggregate demand and supply. The disagreements between monetarists and Keynesians are discussed in depth; more important, students will see that there has been a convergence of their viewpoints on such questions as how inflation might be curbed. Because the role of expectations has come to the forefront of current debates on monetary theory, the theory of rational expectations receives special attention in Chapters 25 and 26.

One problem with many discussions of monetary theory is that students come away thinking that the theory is elegant but, unfortunately, irrelevant to issues that affect their everyday lives. I have tried to avoid this problem in three ways. First, the entire discussion of monetary theory is oriented to answering questions about the proper conduct of policy, especially monetary policy: Should the Fed give up discretionary monetary policy and adopt constant growth rate rules? Should high employment targets be abandoned? How can policymakers eliminate inflation at the lowest cost in lost output and unemployment? Second, the economic positions implied by differing views of monetary theory are examined in the light of empirical evidence; this evidence, on such topics as the demand for money and the importance of money to economic activity, receives more attention than is typical of most money and banking textbooks. Finally, this part of the book contains nine applications requiring students to use economic analysis in order to explain past and predict future movements of business cycles and inflation.

The *ISLM* Model This textbook has been designed to allow the instructor to cover the most important issues in monetary theory and policy without having to use the *ISLM* model. My own teaching experience indicates that many students find the *ISLM* model difficult to master. I have found that aggregate demand and supply analysis of output and the price level presents students with fewer difficulties because it is closer in approach to the supply and demand analysis learned in Principles courses.

On the other hand, some instructors prefer to begin with the *ISLM* model and monetary theory. I have arranged the material so that the book also allows this approach. If the *ISLM* model is taught early in the course, Chapter 6 may be omitted. With this plan, instead of using a partial equilibrium approach to interest rate determination, students easily see that interest rates are determined not only by the money market but also by the goods market.

International Trade and Finance

With the growing integration of world markets, international trade and finance have become a major factor in our economy. In contrast to many other money and banking textbooks, this text discusses throughout the effect of international trade and finance on money, banking, and financial markets. The internationalization of banking and financial markets is covered in Chapters 3, 9, and 11, and the effects of this internationalization on the conduct of monetary policy are discussed in Chapter 18. International trade flows are now included as an important element in the *ISLM* model (Chapter 21), in the aggregate supply and demand model (Chapter 22), and in the transmission mechanisms of monetary policy (Chapter 24). The final chapters on international finance (Chapters 27 and 28) stress that international financial transactions directly influence a country's money supply and hence the conduct of monetary policy. The basic principle of supply and demand developed in Chapter 6 is again used to explain behavior in foreign exchange markets and the movement of international reserves.

Because instructors differ on how much they want to "internationalize" their course, the coverage of international trade and finance in the book can be used flexibly. If an instructor does not want to devote much time to international topics, this material can be ignored without loss of continuity. For an instructor who wishes to fully internationalize the course, however, the chapters on international finance (27 and 28) can be taught much earlier in the course (I teach them directly after Chapter 18).

CHANGES FROM THE FIRST EDITION

Although the basic framework of the first edition remains intact in this edition, comments from reviewers and users of the text have led to numerous changes throughout the text.

New Material on Financial Markets and Institutions With the rapid change in the financial marketplace, much material on financial markets and institutions has been added to the text. Chapter 8 on the banking firm has been substantially expanded and now includes a section on managing interest-rate risk, in which gap and duration analysis is explained, and a section on off-balance sheet activities, which have grown in importance in recent years. Chapter 9 has been substantially updated to describe new banking legislation and regulations and includes a discussion of the current crisis for the FSLIC and the banking industry. Chapter 9 now also makes use of two economic concepts—adverse selection and moral hazard—to suggest why, in recent years, so many commercial banks and savings and loans have gotten into so much trouble and why recent bank legislation may make the problem worse. Chapter 10 also introduces adverse selection and moral hazard to explain some of the problems for the private insurance industry and for government insurance agencies such as Penny Benny. The development of "securitization" in financial markets, an important financial innovation in recent years, is now discussed in Chapter 11.

Internationalization of the Text The increasing importance of international trade and financial markets to our economy in recent years has made it necessary to thoroughly integrate international topics throughout the text in this edition. Chapter 3 has a new section on the internationalization of financial markets, describing the rapid growth of the eurobond and euroequities markets and the growing internationalization of stock markets. The section in Chapter 9 on international banking has been updated and expanded to discuss the new dominance of Japanese banks. Chapter 11 has a new section on the role of financial innovation in the internationalization of financial markets. New sections on how international considerations affect the conduct of monetary policy have been added to Chapter 18. An appendix to Chapter 21 describes how the *ISLM* model in the chapter can be converted to an open economy model in which trade flows play an important role. Aggregate demand in Chapter

22 now includes net exports. Two new applications in this chapter discuss effects from international trade: one examining the potential effect of elimination of Japanese trade barriers on the United States economy, and the other describing the effect of the decline in American competitiveness on aggregate output in the mid-1980s. Chapter 23 now includes among transmission mechanisms the effects of monetary policy exchange rate effects on net exports.

As mentioned earlier, the material internationalizing the text can be ignored without loss of continuity if the instructor is so inclined.

New Boxes To keep the material in the text both lively and current, there are twenty new special-interest boxes. These include several on the stock market crash of 1987, as well as boxes on junk bonds, interest-rate swaps, woes of the FSLIC, program trading and portfolio insurance, and real business cycle theory.

New Appendixes Two mathematical appendixes have been added at the end of the text to satisfy instructors who want to include more mathematics in their teaching. The mathematical appendix to Chapter 19 explains mathematical treatment of the Baumol-Tobin and the Tobin mean-variance models, and the appendix to Chapter 21 describes the algebra of the *ISLM* model. Both of these appendixes can be skipped without loss of continuity.

Updating All figures and data in the text have been thoroughly updated through the end of 1987 (except in rare instances when this was not possible).

Expositional Changes Throughout the text the exposition has been improved with mostly minor changes. The only major changes occur in Part IV, The Money Supply Process. The notation in this part of the text has been simplified to make it less confusing and more pleasing to the eye. In addition, Chapters 14 and 15 in the first edition have been combined into one, Chapter 14. This change is beneficial in reducing the length of the money supply analysis in the text and eliminating unnecessary repetition.

LEARNING FEATURES

A textbook must be a solid motivational teaching tool. To this end, many pedagogical features are incorporated in my presentation.

Chapter Previews Each chapter begins with a Chapter Preview telling students where the chapter is heading, why specific topics are important, and how they relate to other topics in the book.

Special Interest Boxes Boxes are sprinkled liberally throughout the text in order to heighten students' interest. The boxes highlight dramatic historical episodes or interesting ideas related to the subject matter in the chapter.

Following the Financial News A unique and practical feature of the book is the Following the Financial News boxed inserts, which introduce students to relevant news articles and data that are reported daily in the press. These inserts are designed to show students how to interpret the reporting on finance found in newspapers or on television.

Study Guides Study Guides are highlighted statements scattered throughout the text that are designed to steer students away from rote memorization. They provide hints on how to think about or approach a topic as students work their way through it.

Captioned Graphs and Summary Tables Captions are included with graphs to help students clearly understand the interrelationship of the variables plotted and the principles of analysis. The captions are also a useful study aid in reviewing material because they feature the main analytical points in a chapter. Occasional summary tables are provided as another tool for review.

Summary, Key Terms, Key Statements, and Glossary Each chapter ends with a Summary and a list of Key Terms. Within each chapter, important words or phrases appear in boldface type when they are defined for the first time, and the Glossary at the back of the book lists the definitions for all the boldfaced words and phrases. Key statements are also set in boldface type so that students can easily find them for later reference.

Questions and Problems Because I believe that students can learn the subject matter of this book effectively only by applying economic concepts, I have included more than four hundred end-of-chapter questions and problems. The problems do not require simple regurgitation of material in the chapter, but instead demand thoughtful analysis. Included in the end-of-chapter problem sets is a class of problems entitled *Using Economic Analysis to Predict the Future.* These exercises reinforce my emphasis that a good economic model not only explains the past, but also predicts how economic variables and institutions will respond to future events. The solutions to half of the problems (marked by *) are at the back of the book.

Suggested Readings At the end of every chapter is an annotated list of Suggested Readings. My experience with lists of additional readings in many textbooks has been that these readings are too difficult for undergraduates—and even for MBA candidates. My criteria for choosing the

Suggested Readings (which can also be used as supplemental readings for discussion in class) are that they be accessible and interesting to students as well as current.

SUPPLEMENTARY MATERIALS

The Economics of Money, Banking, and Financial Markets, 2nd ed., includes the fullest package of supplementary materials of any money, banking, and financial markets textbook. These include:

Study Guide and Workbook The *Study Guide and Workbook,* prepared by John McArthur and myself, combines desirable features of both study guides and workbooks. It includes chapter synopses/completions, exercises, self-tests with true-false and multiple-choice questions, and answers to the exercises and self-tests.

Reader James Wilcox of the University of California, Berkeley edits a book of readings every year, entitled *Current Readings on Money, Banking, and Financial Markets.* This book, on which I am a consulting editor, is designed to be used with my text (although it can be used with other textbooks as well) and its annual editions enable instructors to keep the subject matter of their course current throughout the three-year life of an edition of the text. Readings from the 1988 Wilcox reader are marked with a * in the Suggested Readings section at the end of each chapter in this book. As a service to adopters of the text, every year they will be sent an outline of which readings can supplement each chapter of the text.

Computer Software To give students hands-on experience with the analytic concepts in the text, Richard Alston and Wan Fu Chi of Weber State College have written computer software for PCs (available for the 1989 winter semester). They place students in the role of Chairman of the Federal Reserve Board and ask them to make decisions on monetary policy and analyze their effects on the economy. This software should not only facilitate learning by giving students practice with the material in the text but should also make learning about money, banking, and financial markets more fun. Additional computer software modules that explore interest rate calculations, interest rate forecasting, bank management, and foreign exchange rate forecasting will be available later.

Instructor's Manual Prepared by John McArthur, of the Claremont Graduate School, and myself. The Manual includes sample course outlines, answers to questions and problems in the text, additional readings, essay and discussion questions, and multiple-choice test questions.

Transparency Masters For one hundred of the most important figures and tables.

Computerized Test Bank Approximately one thousand multiple-choice test items from the Instructor's Manual and Study Guide and Workbook are available on personal computer diskettes, enabling the instructor to produce exams automatically.

ACKNOWLEDGMENTS

As always in so large a project, there are many people to thank. I remain grateful to those who helped me in the first edition. (Limited space does not allow me to repeat these acknowledgments.) For the preparation of this edition, special thanks o to Jane Tufts, my development editor, who is not only the best in the business but has also become a dear friend. I also thank Denise Clinton, the economics editor, and Victoria Keirnan, production editor, for sweating out the details that get a book such as this into print. I also have been assisted by comments from my colleagues at Columbia University—Frank Edwards, Alberto Giovannini, and Bob Shay—and from my students.

I was also helped in this edition by the nearly two hundred money and banking instructors who responded to a questionnaire. Many outside reviewers as well as correspondents have also provided me with numerous suggestions that have made this a better book. I thank the following: Avner Bar-Ilan (Dartmouth College); James W. Eaton (Bridgewater College); Robert Eisner (Northwestern University); Hugo Kaufman (Queens College); Gary Quinlivan (St. Vincent College); Charles Britton (University of Arkansas); Kathleen Brook (New Mexico State University); Kevin Calandri (California State University—Sacramento); John Campbell (Princeton University); John Cooper (Moorhead University); Dean Croushore (Pennsylvania State University); Martin Eichenbaum (University of Chicago); Gregory Falls (Central Michigan University); Mary Gade (Oklahoma State University); Patrick Gaughan (Fairleigh Dickinson University); Frank Gery (St. Olaf College); Oliver Guinn (Washburn University of Topeka); Mark Haggerty (Washington State University); William Holahan (University of Wisconsin-Milwaukee); John Kaatz (Georgia Institute of Technology); John Knudsen (University of Idaho); Nicholas Kontos (Marshall University); Beverly Lapham (University of Minnesota); Patricia Mosser (Columbia University); Gerard T. O'Boyle (St. John's University); Ronnie Phillips (Colorado State University); Dean Popp (San Diego State University); Zena Seldon (University of Wisconsin-La-Crosse); Duane Stock (University of Oklahoma); R. Vaitheswaran (Coe College); Howard Wall (State University of New York at Buffalo); John Wassom (Western Kentucky University); Eugene White (Rutgers University).

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Frederic S. Mishkin
New York, New York

Brief Contents

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Introduction

* Summary, Key Terms, Questions and Problems, and Suggested Readings appear at the end of every chapter.