

The
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of
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FINANCIAL
MARKETS

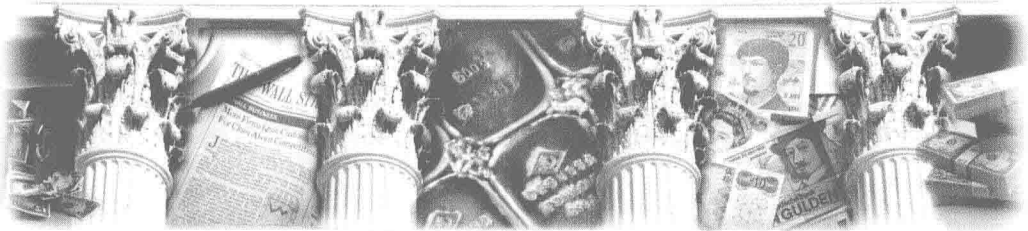
Fifth Edition



Frederic S. Mishkin

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Frederic S. Mishkin

Columbia University

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TO SALLY

PREFACE

This edition of *The Economics of Money, Banking, and Financial Markets* is the most significant revision of the textbook to date because it has been greatly affected by my time spent in the Federal Reserve System. I have been surprised by the extent to which my understanding of four key aspects of the money and banking field has deepened. I had expected to gain a better understanding of the monetary policy process and the operation of the Federal Reserve. But I have also learned much about two other key areas: the nature of the regulation and supervision of the financial system, including the challenges posed by derivatives; and the growing impact of international considerations on our financial system.

This edition therefore has many new insights on the monetary policy process, the regulation and supervision of the financial system, and the internationalization of financial markets. However, it retains the basic hallmarks that have made it the best-selling textbook on money and banking in the past four editions, including:

- A unifying, analytic framework that uses a few basic economic principles to organize students' thinking about the structure of financial markets, the foreign exchange markets, financial institution management, and the role of monetary policy in the economy
- A careful, step-by-step development of models, an approach found in the best principles of economics textbooks, that makes it easier for students to learn
- An applications-oriented perspective that increases students' interest because it lets them apply theory to real-world examples
- A thoroughly up-to-date treatment of the latest developments in monetary theory
- Integration of an international perspective
- A high degree of flexibility that allows professors to teach the course however they want

What's New in the Fifth Edition

In addition to the expected updating of all data, there is substantial new material in every part of the text.

THE MONETARY POLICY PROCESS AND THE FEDERAL RESERVE SYSTEM

Having participated in the monetary policy process at the Federal Reserve, I have learned a great deal about central banking and the subtleties of how monetary policy is conducted and how a central bank operates. My new knowledge is reflected in this edition in substantial new material and a rewrite of Part IV on central banking and the conduct of monetary policy (Chapters 15–20). For example, in recent years, the Federal Reserve and central banks of many other countries have deemphasized the use of monetary aggregates and now focus on setting interest-rate operating targets in the pursuit of price stability. In keeping with the deemphasis of monetary aggregates in policymaking circles, this edition substantially reduces coverage of the money supply while expanding discussion of

monetary policy strategy. I also share my knowledge about how the Federal Reserve operates with new material on such topics as the political genius of setting up the Federal Reserve in such a way as to preserve its independence, the special role of the Federal Reserve Bank of New York and the research staff in the Federal Reserve System, the role of member banks, the conduct of a typical Federal Open Market Committee (FOMC) meeting, and the operation of the foreign exchange and open market desks at the Federal Reserve Bank of New York. To highlight this new material, I have included some of it in a new set of special-interest boxes, titled "Inside the Fed," that provide insights on how the Federal Reserve System operates, although they are based on information that is entirely in the public domain.

MONETARY THEORY AND THE TRANSMISSION MECHANISMS OF MONETARY POLICY This text has always striven to provide the most up-to-date treatment of monetary theory of any textbook on the market. One of the most exciting contemporary areas of research in monetary economics is the transmission mechanisms of monetary policy. In pursuing the goal of keeping the textbook as up-to-date as possible, I have substantially rewritten the chapter on money and economic activity (now Chapter 25) and renamed it "Transmission Mechanisms of Monetary Policy: The Evidence." This chapter features extensive new material on the so-called credit view, which is currently receiving much research attention. In addition, Chapter 25 has an increased policy focus because it links the material on the monetary transmission mechanisms with resulting lessons for policy-making.

Another area of exciting new research has examined the validity of rational expectations and efficient markets. Recent work has uncovered fascinating anomalies that cast doubt on these theories. The chapter on the theory of rational expectations and efficient capital markets (now Chapter 27) has therefore been substantially rewritten to reflect this latest research and to give a more balanced view of these theories.

COMPLETE INTEGRATION OF AN INTERNATIONAL PERSPECTIVE In the course of my work at the Federal Reserve Bank of New York, I have been continually exposed to international issues, have written many research papers with an international orientation, and have traveled widely to foreign countries. Although users of the text in the United States and abroad were happy with the increased international focus of the last edition, my work experience and comments by users of the book have led me to take the next logical step in the internationalization of the text: I have completely integrated international material throughout the book, incorporating it into the body of the text rather than relegating such material to separate boxes as in the previous edition. Furthermore, I have altered the focus of some chapters to make them more internationally oriented. For example, the chapter on the structure of the Federal Reserve System is now more internationally focused as reflected in its new title, "Structure of Central Banks and the Federal Reserve System."

I have also included substantial additional international material in new sections on financial development and economic growth (Chapter 9), the Mexican foreign exchange and financial crisis of 1994 (Chapters 9 and 20), banking crises

throughout the world (Chapter 10), the globalization of financial futures markets (Chapter 12), hedging foreign exchange rate risk (Chapter 12), separation of the banking and securities industries in other countries (Chapter 13), the decline of traditional banking throughout the world (Chapter 13), the structure and independence of foreign central banks (Chapter 15), and monetary and inflation targeting in other countries (Chapter 19). A global icon is used to designate text sections, applications, and boxes that have an international focus.

REGULATION AND SUPERVISION OF THE FINANCIAL SYSTEM My experience at the New York Fed has also exposed me to the dramatic changes that are occurring in the regulation and supervision of the financial system, particularly banks. In earlier editions, I stressed the role of capital requirements in banking regulation. With the dramatic collapse of banks such as Barings (whose capital was dissipated extremely rapidly), however, bank regulators have been seeking a new approach to bank supervision. This edition emphasizes the new trend in banking regulation and supervision in Part III, “Financial Institutions” (Chapters 9 to 14), which focuses much greater attention on risk management and disclosure requirements. New material on consumer protection legislation such as the Community Reinvestment Act (CRA) examines its effects on bank regulation and supervision.

DERIVATIVES Media reports of late have featured more and more about derivatives, especially because their use has led to major losses at both corporations and banks, such as Sumitomo and Barings. Because of their major role in the sometimes swift dissipation of capital in these and other cases, many instructors have asked for a more extensive treatment of this subject. In this edition, I have therefore added an entire new chapter (Chapter 14) on financial derivatives—forwards, futures, swaps, and options. In keeping with the basic hallmarks of the book, the treatment differs from other money and banking textbooks in that it goes well beyond the descriptive to develop analytic concepts for understanding how financial derivatives can be used by financial institutions to hedge risks. Also in keeping with the text’s emphasis on flexibility, the material on derivatives can be skipped with little loss of continuity.

AN INCREASED APPLICATIONS ORIENTATION In teaching money, banking, and financial markets over the past 20 years, I have found that students get more out of an applications-oriented course. Applications help convince students that the material in the course is relevant to real-world issues, and engage them in active learning, which increases the probability that they will retain knowledge after the final exam. This is why my previous edition had over 25 special applications sections, including “Reading the *Wall Street Journal*” and “Following the Financial News” boxes, and over 400 end-of-chapter problems (half of them answered at the back of the book), including ones designed to demonstrate the use of economic analysis to predict the future.

More convinced than ever that an applications-oriented textbook is a most effective teaching tool, I have thoroughly integrated applications into the body of the text and increased their number to more than 50. Entirely new applications consider whether the low savings rate in the United States has contributed to higher interest rates (Chapter 6), the impact on interest rates of Treasury securities

if they were no longer default-free (Chapter 7), financial development and economic growth (Chapter 9), financial crises in developing countries (Chapter 9), hedging with interest-rate forward contracts, financial futures, futures options, and interest-rate swaps (Chapter 14), hedging foreign exchange risk (Chapter 14), the dangers of a meltdown from financial derivatives (Chapter 14), and the Mexican peso crisis of 1994 (Chapter 20).

STREAMLINED ORGANIZATION Helpful comments from reviewers have also encouraged me to reorganize the book to improve the flow and streamline the organization. I have eliminated three chapters. The financial innovation chapter in the previous edition has been deleted, and its material has been integrated into other chapters. Because of the decreased emphasis on monetary aggregates in the monetary policy process in the United States and other countries, I have reduced the number of chapters on the money supply process from three to two. Also, I have deleted the chapter on understanding movements in the monetary base, while moving the most important material from this chapter to Chapters 16 and 26.

I also changed the chapter order to improve the flow in Part IV, on central banking and the conduct of monetary policy. The first chapter focuses on the structure of central banks and the Federal Reserve System; the next two chapters feature the money supply process; the next two examine the tools, goals, and targets of monetary policy; and the final one considers the international financial system and monetary policy.

OTHER CHANGES AND NEW MATERIAL

- Chapter 3 contains substantial new material on electronic money.
- Chapter 10 offers extensive new coverage of electronic banking.
- Chapter 11, on the banking industry, has been substantially rewritten to include new treatments of banking consolidation and the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994.
- Chapter 12 on banking regulation has a somewhat different focus from the previous edition and has thus been renamed “Economic Analysis of Banking Regulation.”
- Chapter 21, on the demand for money, has been modified to include material on empirical evidence.
- Boxes, discussions of empirical evidence, and all the figures and data have been thoroughly updated—through the end of 1996 wherever possible.

Flexibility

In using previous editions, adopters, reviewers, and survey respondents have continually praised this text’s flexibility. There are as many ways to teach money, banking, and financial markets as there are instructors. To satisfy the diverse needs of instructors, the text achieves flexibility as follows:

- Core chapters provide the basic analysis used throughout the book, and other chapters or sections of chapters can be used or omitted according to instructor preferences. For example, Chapter 2 introduces the financial sys-

tem and basic concepts such as transaction costs, adverse selection, and moral hazard. After covering Chapter 2, the instructor may decide to give more detailed coverage of financial structure by assigning Chapter 9, or may choose to skip Chapter 9 and take any of a number of different paths through the book.

- The text also allows instructors to cover the most important issues in monetary theory and policy without having to use the *ISLM* model in Chapters 22 and 23, while more complete treatments of monetary theory make use of the *ISLM* chapters.
- The internationalization of the text through marked international sections within chapters as well as through complete separate chapters on the foreign exchange market and the international monetary system is comprehensive yet flexible. Although many instructors will teach all the international material, others will not. Instructors who want less emphasis on international topics can easily skip Chapter 8, on the foreign exchange market, and Chapter 20, on the international financial system and monetary policy. The international sections within chapters are self-contained and can be omitted with little loss of continuity. Instructors who would like to teach material on the foreign exchange market later in the course can teach Chapter 8 just before Chapter 20.

To illustrate how this book can be used for courses with varying emphases, several course outlines are suggested for a semester teaching schedule. More detailed information about how the text can be used flexibly in your course is available in the Instructor's Manual.

General Money and Banking Course: Chapters 1–6, 10–12, 15, 18, 19, 24, 26, with a choice of 6 of the remaining 14 chapters.

General Money and Banking Course with an International Emphasis: Chapters 1–6, 8, 10–12, 15, 18–20, 24, with a choice of 4 of the remaining 12 chapters.

Financial Markets and Institutions Course: Chapters 1–7, 9–14, 27, with a choice of 6 of the remaining 14 chapters.

Monetary Theory and Policy Course: Chapters 1–6, 15–19, 21, 24–26, with a choice of 5 of the remaining 13 chapters.

An Easier Way to Teach Money, Banking, and Financial Markets

The demands for good teaching have increased dramatically in recent years. To meet these demands, for the previous edition and this edition alike, I have provided the instructor with new supplementary materials, unavailable with any competing text, that should make teaching this course substantially easier.

This edition of the book comes not only with full-color PowerPoint electronic transparencies of all the figures and tables in the book but also with full-color overhead transparencies. Furthermore, the Instructor's Manual has been thoroughly reorganized for greater ease of use and contains transparency masters of the lecture notes, perforated so that they can easily be detached for

The lecture notes are comprehensive and outline all the major points covered in the text. They have been class-tested successfully—they are in fact the notes that I use in class—and they should help other instructors prepare their lectures as they have aided me. Some instructors might use these lecture notes as their own class notes and prefer to teach with a blackboard. But for those who prefer to teach with visual aids, the PowerPoint presentation and the full-color transparencies of the figures and tables afford the flexibility to take this approach.

I am also aware that many instructors want to make variations in their lectures that depart somewhat from material covered in the text. For their convenience, the entire set of lecture notes has been put on diskette using Word and the WordPerfect word processing languages, and the diskette is included with the Instructor's Manual. Instructors can modify the lecture notes as they see fit for their own use, for class handouts, or for transparencies to be used with an overhead projector.

The diskette also offers the entire contents of the Instructor's Manual, which includes chapter outlines, overviews, and teaching tips; answers to the end-of-chapter problems that are not included in the text; and discussion questions. Using this handy feature, instructors can prepare student handouts such as solutions to problem sets made up of end-of-chapter problems, the outline of the lecture that day, or essay discussion questions for homework. I have used handouts of this type in my teaching and have found them to be very effective. Instructors have my permission and are encouraged to photocopy all of the materials on the diskette and use them as they see fit in class.

Supplements Program to Accompany the Fifth Edition

The Economics of Money, Banking, and Financial Markets, Fifth Edition, includes the most comprehensive program of supplements of any money, banking, and financial markets textbook. These items are available to qualified domestic adopters but in some cases may not be available to international adopters.

FOR THE PROFESSOR

1. **Instructor's Resource Manual**, prepared by me and offering conventional elements such as sample course outlines, chapter outlines, and answers to questions and problems in the text. In addition, it has two unique features:
 - **Lecture Notes**, numbering over 300 in transparency master format, that comprehensively outline the major points covered in the text.
 - **Diskette with Entire Contents of the Instructor's Manual** (including the Lecture Notes), which contains WordPerfect and Word files that can be modified to fit any particular course.
2. **Full-Color Transparencies**, numbering over 150, for *all* of the figures, tables, and summary tables.
3. **PowerPoint Electronic Transparencies**, numbering over 300, which include all the book's figures and tables in full color, plus the lecture notes.
4. **Printed Test Bank**, which comprises over 2,500 multiple-choice test items, many with graphs.

5. **Computerized Test Bank**, allowing the instructor to produce exams efficiently. This product consists of the 2,500 multiple-choice items in the print test bank and offers editing capabilities. Free to adopters, this supplement is available in Macintosh and Windows versions.
6. **MacNeil-Lehrer/Addison-Wesley Video Library**, in which noted reporter Paul Solman presents news stories relevant to the money and banking course. Free to adopters, these videos can be obtained through the local Addison-Wesley sales representative.
7. **Mishkin Website** located at: ([http://hepg.awl.com/mishkin/money &banking/](http://hepg.awl.com/mishkin/money&banking/)) which features audio clips, teaching tips, links to relevant data sources and Federal Reserve websites, and other resources for the instructor.

FOR THE STUDENT

1. **Study Guide and Workbook**, prepared by John McArthur of Wofford College and me, which includes chapter synopses and completions, exercises, self-tests, and answers to the exercises and self-tests.
2. **Readings in Money, Banking, and Financial Markets**, edited by James W. Eaton of Bridgewater College and me, updated annually, with over half the articles new each year to enable instructors to keep the content of their course current throughout the life of an edition of the text. The reader is sold with the text at a very affordable price.
3. **Money Game Computer Software**, prepared for IBM-compatible PCs by Richard Alston and Wan Fu Chi of Weber State College, offering students hands-on experience with the analytic concepts in the text.

Pedagogical Aids

In teaching theory or its applications, a textbook must be a solid motivational tool. To this end, I have incorporated a wide variety of pedagogical features to make the material easy to learn.

1. **Previews** at the beginning of each chapter tell students where the chapter is heading, why specific topics are important, and how they relate to other topics in the book.
2. **Applications**, numbering over 50, demonstrate how the analysis in the book can be used to explain many important real-world situations. A special set of applications, called "Reading the *Wall Street Journal*," shows students how to read daily columns in this leading financial newspaper.
3. **"Following the Financial News" boxes** introduce students to relevant news articles and data that are reported daily in the press, and explain how to read them.
4. **"Inside the Fed" boxes** give students a feel for what is important in the operation and structure of the Federal Reserve System.
5. **Special-interest boxes** highlight dramatic historical episodes, interesting ideas, and intriguing facts related to the subject matter.

6. **Study Guides** are highlighted statements scattered throughout the text that provide hints on how to think about or approach a topic as students work their way through it.
7. **Summary tables** provide a useful study aid in reviewing material.
8. **Key statements** are important points that are also set in italic type so that students can easily find them for later reference.
9. **Graphs** with captions, numbering over 150, help students clearly understand the interrelationship of the variables plotted and the principles of analysis.
10. **Summary** at the end of each chapter lists the main points.
11. **Key terms** are important words or phrases, boldfaced when they are defined for the first time and listed at the end of the chapter.
12. **End-of-chapter questions and problems**, numbering over 400, help students learn the subject matter by applying economic concepts, including a special class of problems that students find particularly relevant, under the heading "Using Economic Analysis to Predict the Future."
13. **Glossary** at the back of the book provides the definitions for all the key terms.
14. **Answers section** at the back of the book, provides solutions to half of the questions and problems (marked by *).

Acknowledgments

As always in so large a project, there are many people to thank. My special gratitude goes to Bruce Kaplan, former economics editor at HarperCollins, who has been particularly valuable for both this and the two previous editions; Denise Clinton, economics editor at Addison Wesley Longman; and Jane Tufts, the best development editor in the business. I also have been assisted by comments from my colleagues at Columbia and from my students.

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Frederic S. Mishkin

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Frederic S. Mishkin is the A. Barton Hepburn Professor of Economics at the Graduate School of Business, Columbia University. He is also a research associate at the National Bureau of Economic Research. Since receiving his Ph.D. from the Massachusetts Institute of Technology in 1976, he has taught at the University of Chicago, Northwestern University, Princeton University, and Columbia. From 1994 until 1997 he was executive vice president and director of research at the Federal Reserve Bank of New York and was an associate economist to the Federal Open Market Committee of the Federal Reserve System.

Professor Mishkin's research focuses on monetary policy and its impact on financial markets and the aggregate economy. He is the author of *A Rational Expectations Approach to Macroeconomics: Testing Policy Ineffectiveness and Efficient Markets Models* (Chicago: University of Chicago Press, 1983); *Money, Interest Rates, and Inflation* (London: Edward Elgar, 1993); and *Financial Markets and Institutions* (Reading, Mass.: Addison Wesley Longman, 1998). In addition, he has published nearly one hundred articles in such journals as the *American Economic Review*, the *Journal of Political Economy*, *Econometrica*, the *Quarterly Journal of Economics*, the *Journal of Finance*, and the *Journal of Monetary Economics*.

Professor Mishkin has served on the editorial board of the *American Economic Review*, has been an associate editor at the *Journal of Business and Economic Statistics*, and was the editor of the Federal Reserve Bank of New York's *Economic Policy Review*. He is currently an associate editor at the *Journal of Applied Econometrics*, the *Journal of International Money and Finance*, the *Journal of Money, Credit and Banking*, and the *Journal of Economic Perspectives*. He has been an academic consultant to the Board of Governors of the Federal Reserve System, on the Academic Advisory Panel of the Federal Reserve Bank of New York, and a visiting scholar at the Ministry of Finance in Japan and the Reserve Bank of Australia.



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