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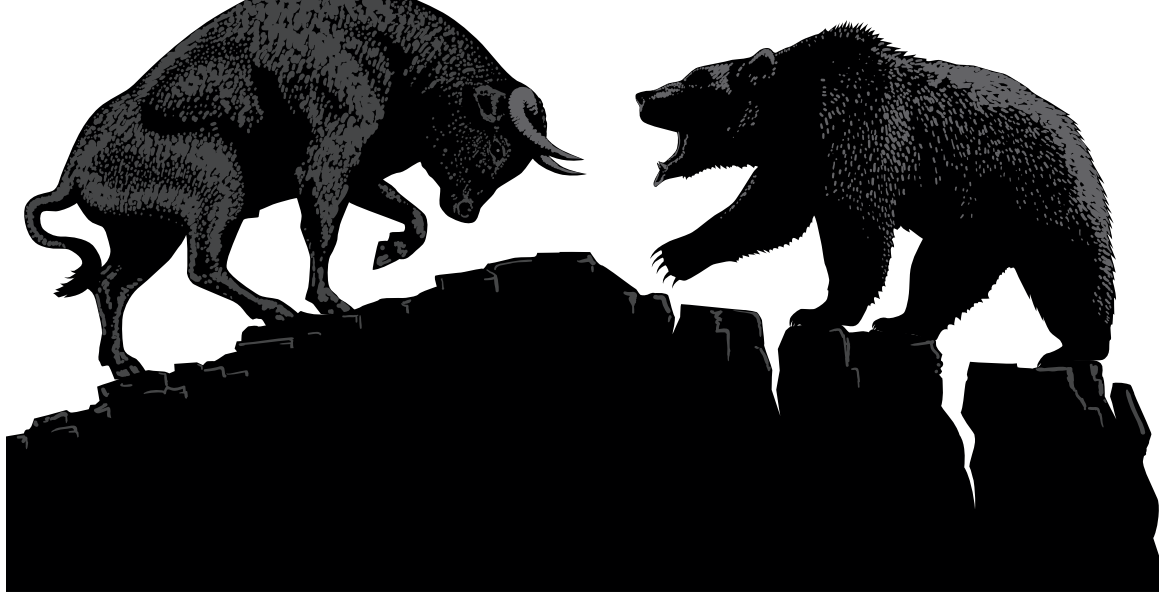


# Financial Markets and Institutions

NINTH EDITION

Frederic S. Mishkin • Stanley G. Eakins





# FINANCIAL MARKETS AND INSTITUTIONS

**Ninth Edition**

**Global Edition**

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*Authorized adaptation from the United States edition, entitled Financial Markets and Institutions, 9<sup>th</sup> Edition, ISBN 978-0-13-451926-5 by Frederic S. Mishkin and Stanley G. Eakins, published by Pearson Education © 2018.*

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**ISBN 10:** 1-292-21500-3

**ISBN 13:** 978-1-292-21500-6

**British Library Cataloguing-in-Publication Data**

A catalogue record for this book is available from the British Library

10 9 8 7 6 5 4 3 2 1

Typeset in Times NR MT Pro by Cenveo® Publisher Services

Printed and bound by Vivar in Malaysia

*To My Dad*

—F. S. M.

*To My Wife, Laurie*

—S. G. E.

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# Preface

## A Note from Frederic Mishkin

When I took leave from Columbia University in September 2006 to take a position as a member (governor) of the Board of Governors of the Federal Reserve System, I never imagined how exciting—and stressful—the job was likely to be. How was I to know that, as Alan Greenspan put it, the world economy would be hit by a “once-in-a-century credit tsunami,” the global financial crisis of 2007–2009? When I returned to Columbia in September 2008, the financial crisis had reached a particularly virulent stage, with credit markets completely frozen and some of our largest financial institutions in very deep trouble. The global financial crisis, which has been the worst financial crisis the world has experienced since the Great Depression, has completely changed the nature of financial markets and institutions.

Given what has happened, the study of financial markets and institutions has become particularly exciting. I hope that students reading this book will have as much fun learning from it as we have had in writing it.



August 2016

## What’s New in the Ninth Edition

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

### New Material on Financial Markets and Institutions

In light of ongoing research and changes in financial markets and institutions, we have added the following material to keep the text current:

- A new section on hedge funds (Chapter 2)
- An updated Mini-Case box on negative interest rates in the United States, Europe, and Japan (Chapter 3)
- An updated case on explaining low interest rates in Europe, Japan, and the United States (Chapter 4)
- A new Mini-Case box on the tyranny of collateral (Chapter 7)



- A new chapter on major central banks around the world, their origins, structure, and functions (Chapter 9)
- A new section describing securitization and the shadow banking system (Chapter 19)

## New Material on Monetary Policy

In the aftermath of the global financial crisis, there have been major changes in the way central banks conduct monetary policy. This has involved the following new material.

- A new Global box on the importance of the Bundesbank within the ECB (Chapter 9)
- A new Global box on whether non-Euro Central Banks are limited by their EU membership (Chapter 9)
- A new section on how Federal Reserve actions affect reserves in the banking system (Chapter 10)
- An updated section on forward guidance (Chapter 10)
- A new section on the policy tool, negative interest rates on bank deposits at central banks (Chapter 10)

## Appendices on the Web

The Web site for this book, [www.pearsonglobaleditions.com/Mishkin](http://www.pearsonglobaleditions.com/Mishkin), has allowed us to retain and add new material for the book by posting content online. The appendices include:

Chapter 4: Models of Asset Pricing

Chapter 4: Applying the Asset Market Approach to a Commodity Market: The Case of Gold

Chapter 4: Loanable Funds Framework

Chapter 4: Supply and Demand in the Market for Money: The Liquidity Preference Framework

Chapter 18: Banking Crises Throughout the World

Chapter 24: More on Hedging with Financial Derivatives

Instructors can either use these appendices in class to supplement the material in the textbook or recommend them to students who want to expand their knowledge of the financial markets and institutions field.

## Hallmarks

Although this text has undergone a major revision, it retains the basic hallmarks that make it the best-selling textbook on financial markets and institutions. The ninth edition of *Financial Markets and Institutions* is a practical introduction to the workings of today's financial markets and institutions. Moving beyond the descriptions and definitions provided by other textbooks in the field, *Financial Markets and Institutions* encourages students to understand the connection between the theoretical concepts and their real-world applications. By enhancing students' analytical abilities and concrete problem-solving skills, this textbook prepares students

for successful careers in the financial services industry or successful interactions with financial institutions, whatever their jobs.

To prepare students for their future careers, *Financial Markets and Institutions* provides the following features:

- A unifying analytic framework that uses a few basic principles to organize students' thinking. These principles include:
  - Asymmetric information (agency) problems
  - Conflicts of interest
  - Transaction costs
  - Supply and demand
  - Asset market equilibrium
  - Efficient markets
  - Measurement and management of risk
- “The Practicing Manager” sections include nearly 20 hands-on applications that emphasize the financial practitioner’s approach to financial markets and institutions.
- A careful step-by-step development of models enables students to master the material more easily.
- A high degree of flexibility allows professors to teach the course in the manner they prefer.
- International perspectives are completely integrated throughout the text.
- “Following the Financial News” is a feature that encourages the reading of a financial newspaper.
- Numerous cases increase students’ interest by applying theory to real-world data and examples.
- The text focuses on the impact of electronic (computer and telecommunications) technology on the financial system. The text makes extensive use of the Internet with Web exercises, Web sources for charts and tables, and Web references in the margins. It also features special “E-Finance” boxes that explain how changes in technology have affected financial markets and institutions.

## Flexibility

There are as many ways to teach financial markets and institutions as there are instructors. Thus, there is a great need to make a textbook flexible in order to satisfy the diverse needs of instructors, and that has been a primary objective in writing this book. This textbook achieves this flexibility in the following ways:

- Core chapters provide the basic analysis used throughout the book, and other chapters or sections of chapters can be assigned or omitted according to instructor preferences. For example, Chapter 2 introduces the financial system and basic concepts such as transaction costs, adverse selection, and moral hazard. After covering Chapter 2, an instructor can decide to teach a more detailed treatment of financial structure and financial crises using chapters in Part 3 of the text, or cover specific chapters on financial markets or financial institutions in Parts 4 or 5 of the text, or the instructor can skip these chapters and take any of a number of different paths.

- The approach to internationalizing the text using separate, marked international sections within chapters and 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 choose not to. Instructors who want less emphasis on international topics can easily skip Chapter 15 (on the foreign exchange market) and Chapter 16 (on the international financial system).
- “The Practicing Manager” applications, as well as Part 7 on the management of financial institutions, are self-contained and so can be skipped without loss of continuity. Thus, an instructor wishing to teach a less managerially oriented course, who might want to focus on public policy issues, will have no trouble doing so. Alternatively, Part 7 can be taught earlier in the course, immediately after Chapter 17 on bank management.

The course outlines listed next for a semester teaching schedule illustrate how this book can be used for courses with a different emphasis. More detailed information about how the text can offer flexibility in your course is available in the *Instructor’s Manual*.

*Financial markets and institutions emphasis:* Chapters 1–5, 7–8, 11–13, 17–19, and a choice of five other text chapters

*Financial markets and institutions with international emphasis:* Chapters 1–5, 7–8, 11–13, 15–19, and a choice of three other text chapters

*Managerial emphasis:* Chapters 1–5, 17–19, 23–24, and a choice of eight other text chapters

*Public policy emphasis:* Chapters 1–5, 7–10, 17–18, and a choice of seven other text chapters

## Pedagogical Aids

A textbook must be a solid motivational tool. To this end, we have incorporated a wide variety of pedagogical features.

1. **Chapter 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. **Cases** demonstrate how the analysis in the book can be used to explain many important real-world situations.
3. **“The Practicing Manager”** is a set of special cases that introduce students to real-world problems that managers of financial institutions have to solve.
4. **Numerical Examples** guide students through solutions to financial problems using formulas, time lines, and calculator key strokes.
5. **“Following the Financial News” boxes** introduce students to relevant news articles and data that are reported daily in financial news sources and explain how to read them.
6. **“Global” boxes** include interesting material with an international focus.
7. **“Inside the Fed” boxes** give students a feel for what is important in the operation and structure of the Federal Reserve System.
8. **“E-Finance” boxes** relate how changes in technology have affected financial markets and institutions.

9. **“Conflicts of Interest” boxes** outline conflicts of interest in different financial service industries.
10. **“Mini-Case” boxes** highlight dramatic historical episodes or apply the theory to the data.
11. **Summary Tables** are useful study aids for reviewing material.
12. **Key Statements** are important points that are set in boldface type so that students can easily find them for later reference.
13. **Graphs** with captions, numbering over 60, help students understand the inter-relationship of the variables plotted and the principles of analysis.
14. **Summaries** at the end of each chapter list the chapter’s main points.
15. **Key Terms** are important words or phrases that appear in boldface type when they are defined for the first time and are listed at the end of each chapter.
16. **End-of-Chapter Questions** help students learn the subject matter by applying economic concepts and feature a special class of questions that students find particularly relevant, titled “Predicting the Future.”
17. **End-of-Chapter Quantitative Problems**, numbering over 250, help students to develop their quantitative skills.
18. **Web Exercises** encourage students to collect information from online sources or use online resources to enhance their learning experience.
19. **Web Sources** report the URL source of the data used to create the many tables and charts.
20. **Marginal Web References** point the student to Web sites that provide information or data that supplement the text material.
21. **Glossary** at the back of the book defines all the key terms.
22. **Full Solutions to the Questions and Quantitative Problems** appear in the *Instructor’s Manual* and on the Instructor’s Resource Center at [www.pearsonglobaleditions.com/Mishkin](http://www.pearsonglobaleditions.com/Mishkin). Professors have the flexibility to share the solutions with their students as they see fit.

## Supplementary Materials

The ninth edition of *Financial Markets and Institutions* includes the most comprehensive program of supplementary materials of any textbook in its field. These items are available to qualified domestic adopters but in some cases may not be available to international adopters. These include the following items:

### For the Professor

The demands for good teaching at business schools have increased dramatically in recent years. To meet these demands, the ninth edition of *Financial Markets and Institutions* includes the most comprehensive program of supplementary materials of any textbook in its field that should make teaching the course substantially easier. These resources are available at [www.pearsonglobaleditions.com/Mishkin](http://www.pearsonglobaleditions.com/Mishkin).

1. **Instructor’s Manual:** This manual, prepared by the authors, includes chapter outlines, overviews, teaching tips, and complete solutions to questions and problems in the text.
2. **PowerPoint:** Prepared by John Banko (University of Florida). The presentation, which contains lecture notes and the complete set of figures and tables from