

# **PART ONE**

## **How to Use the Instructor's Manual and Other Textbook Ancillaries**



# Organization of the Instructor's Manual

To help instructors cope with the increased demands for good teaching in recent years, *The Economics of Money, Banking, and Financial Markets*, Alternate Edition, includes the most comprehensive package of supplementary materials of any money, banking, and financial markets textbook. As part of these supplemental materials, I have designed the Instructor's Manual to help save you time in preparing class materials, such as class outlines, solutions to homework problems, lecture notes, and overhead transparencies.

This Instructor's Manual is divided into four parts. Part One discusses how to use the Instructor's Manual and the other textbook ancillaries to make your teaching of the money and banking course both more effective and less time consuming. Part Two contains an overview of all the textbook chapters along with teaching tips that I have found effective. Part Three contains the answers to the end-of-chapter problems that are not answered in the back of the textbook, and so are excellent candidates for assignment as problem sets. Part Four contains transparency masters of chapter outlines, which can be used either to make overhead transparencies for use in class or to make handouts for the students.

To obtain any of the available ancillaries, adopters of the text just need to get in touch with their Pearson Addison-Wesley sales representative, or alternatively they can make an e-mail request at [econ@awl.com](mailto:econ@awl.com) or visit the Instructor's Resource Center at <http://www.aw-bc.com>.



# Alternative Course Outlines

There are many different ways to teach a course on money, banking, and financial markets. For this reason, the material in *The Economics of Money, Banking, and Financial Markets*, Alternate Edition, has been arranged with flexibility in mind, so that many teaching styles can be accommodated. The following sections suggest sample outlines for four main approaches to teaching money, banking, and financial markets, showing how the text can be adapted to each approach, as well as to quarter and semester teaching schedules. Note, however, that many variations on these outlines are possible.

## ■ Outline for General Money and Banking Course

### Core Chapters

#### Chapter No. Chapter Title

1. Why Study Money, Banking, and Financial Markets?
2. An Overview of the Financial System
3. What Is Money?
4. Understanding Interest Rates
5. The Behavior of Interest Rates
9. Banking and the Management of Banking Institutions
10. Banking Industry: Structure and Competition
11. Economic Analysis of Banking Regulation
15. Structure of Central Banks and the Federal Reserve System
18. Tools of Monetary Policy
19. What Should Central Banks Do? Monetary Policy Goals, Strategy and Tactics
23. Aggregate Demand and Supply Analysis
25. Money and Inflation

*For a one-semester course, cover any six of the following optional chapters:*

#### Chapter No. Chapter Title

6. The Risk and Term Structure of Interest Rates
7. The Stock Market, the Theory of Rational Expectations, and the Efficient Markets Hypothesis
8. An Economic Analysis of Financial Structure
12. Nonbank Finance
13. Financial Derivatives
14. Conflicts of Interest in the Financial Industry
16. Multiple Deposit Creation and the Money Supply Process
17. Determinants of the Money Supply
20. The Foreign Exchange Market
21. The International Financial System
22. The Demand for Money
24. Transmission Mechanisms of Monetary Policy: The Evidence

*A one-quarter course would probably only include one or two of the optional chapters unless some of the chapters on central banking and the conduct of monetary policy (Chapters 15, 18, and 19) were deleted.*

## ■ Outline for General Money and Banking Course with an International Emphasis

### Core Chapters

#### **Chapter No. Chapter Title**

1. Why Study Money, Banking, and Financial Markets?
2. An Overview of the Financial System
3. What Is Money?
4. Understanding Interest Rates
5. The Behavior of Interest Rates
9. Banking and the Management of Banking Institutions
10. Banking Industry: Structure and Competition
11. Economic Analysis of Banking Regulation
15. Structure of Central Banks and the Federal Reserve System
18. Tools of Monetary Policy
19. What Should Central Banks Do? Monetary Policy Goals, Strategy and Tactics
20. The Foreign Exchange Market
21. The International Financial System
23. Aggregate Demand and Supply Analysis
25. Money and Inflation

*For a one-semester course, cover any four of the following optional chapters:*

#### **Chapter No. Chapter Title**

6. The Risk and Term Structure of Interest Rates
7. The Stock Market, the Theory of Rational Expectations, and the Efficient Markets Hypothesis
8. An Economic Analysis of Financial Structure
12. Nonbank Finance
13. Financial Derivatives
14. Conflicts of Interest in the Financial Industry
16. Multiple Deposit Creation and the Money Supply Process
17. Determinants of the Money Supply
22. The Demand for Money
24. Transmission Mechanisms of Monetary Policy: The Evidence

*A one-quarter course would probably not include any other chapters unless some of the chapters on central banking and the conduct of monetary policy (Chapters 15, 18, and 19) were deleted.*

## ■ Outline for Financial Markets and Institutions Course

### Core Chapters

#### **Chapter No. Chapter Title**

1. Why Study Money, Banking, and Financial Markets?
2. An Overview of the Financial System
3. What Is Money?
4. Understanding Interest Rates
5. The Behavior of Interest Rates
6. The Risk and Term Structure of Interest Rates
7. The Stock Market, the Theory of Rational Expectations, and the Efficient Markets Hypothesis
8. An Economic Analysis of Financial Structure
9. Banking and the Management of Banking Institutions
10. Banking Industry: Structure and Competition
11. Economic Analysis of Banking Regulation
12. Nonbank Finance
13. Financial Derivatives
14. Conflicts of Interest in the Financial Industry

*For a one-semester course, cover any five of the following optional chapters:*

#### **Chapter No. Chapter Title**

15. Structure of Central Banks and the Federal Reserve System
16. Multiple Deposit Creation and the Money Supply Process
17. Determinants of the Money Supply
18. Tools of Monetary Policy
19. What Should Central Banks Do? Monetary Policy Goals, Strategy and Tactics
20. The Foreign Exchange Market
21. The International Financial System
22. The Demand for Money
23. Aggregate Demand and Supply Analysis
24. Transmission Mechanisms of Monetary Policy: The Evidence
25. Money and Inflation

*A one-quarter course would probably only include one of the optional chapters.*

## ■ Outline for Monetary Theory and Policy Course

### Core Chapters

<b>Chapter No.</b>	<b>Chapter Title</b>
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- |     |   |
|-----|---|
| 1.  | Why Study Money, Banking, and Financial Markets?                          |
| 2.  | An Overview of the Financial System                                       |
| 3.  | What Is Money?  |
| 4.  | Understanding Interest Rates  |
| 5.  | The Behavior of Interest Rates  |
| 15. | Structure of Central Banks and the Federal Reserve System                 |
| 16. | Multiple Deposit Creation and the Money Supply Process                    |
| 18. | Tools of Monetary Policy  |
| 19. | What Should Central Banks Do? Monetary Policy Goals, Strategy and Tactics |
| 23. | Aggregate Demand and Supply Analysis                                      |
| 24. | Transmission Mechanisms of Monetary Policy: The Evidence                  |
| 25. | Money and Inflation   |

*For a one-semester course, cover any seven of the following optional chapters:*

<b>Chapter No.</b>	<b>Chapter Title</b>
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- |     |   |
|-----|---|
| 6.  | The Risk and Term Structure of Interest Rates   |
| 7.  | The Stock Market, the Theory of Rational Expectations, and the Efficient Markets Hypothesis |
| 8.  | An Economic Analysis of Financial Structure   |
| 9.  | Banking and the Management of Banking Institutions  |
| 10. | Banking Industry: Structure and Competition   |
| 11. | Economic Analysis of Banking Regulation   |
| 12. | Nonbank Finance   |
| 13. | Financial Derivatives   |
| 14. | Conflicts of Interest in the Financial Industry   |
| 17. | Determinants of the Money Supply  |
| 20. | The Foreign Exchange Market   |
| 21. | The International Financial System  |
| 22. | The Demand for Money  |

*A one-quarter course would probably only include three or four of the optional chapters.*

## **Overviews of the Textbook Chapters and Teaching Tips**

I have been teaching money and banking now for over twenty years. The overviews and teaching tips in Part Two of the Instructor's Manual are intended to share with you some of my experiences in the classroom with teaching the material in the textbook. The overview and teaching tips for each chapter provide a brief description of the contents of the chapter, discuss the novel features of the chapter, indicate what central points need to be transmitted to the student, suggest teaching tips that I have found useful in class, and provide guidance as to what material can easily be skipped in each chapter.

## Answers to End-of-Chapter Problems

Part Three of the Instructor's Manual contains the answers to those end-of-chapter problems not marked with an asterisk and hence not answered in the back of the textbook. (Those with an asterisk are answered at the back of the textbook.) Some of these questions require students to look up current data, and in these cases no answers are given; however, for the rest of the questions the answers are quite complete.

Many instructors will use the end-of-chapter questions without asterisks for homework assignments, as I do. I have found it useful to hand out answers to the questions provided in Part Three to the students as solutions sets after they have completed their assignments; they find them to be an invaluable study aid. Making up these solution sets for reproduction should be quite easy, either by cutting and pasting from Part Three, using the files on the Instructor's Resource CD-ROM, or downloading the files from the Instructor's Resource Center at <http://www.aw-bc.com>.

## Transparency Masters of Chapter Outlines

Part Four of the Instructor's Manual comprises transparency masters of the chapter outlines, which contain all the headings from each chapter.

These can be used in two ways:

- 1) the transparency master can be photocopied and handed out before class so that the student can more easily follow the flow of the lecture, or
- 2) the transparency master can be used to make an overhead transparency that can be shown at the beginning of the class to help outline and motivate the lecture for the students.

## **Transparency Masters; PowerPoint Presentation; and Overhead Transparencies**

Also offered in the instructor supplements package are 550 Transparency Masters that contain lecture notes and all the textbook's figures and tables. This set of Transparency Masters (created from print-outs of the PowerPoint Presentation) is comprehensive and outlines all the major points covered in the text. The lecture notes have been class tested successfully—they are the ones that I use in class—and they should help other instructors prepare their lectures as they have helped me. Some instructors might use these Transparency Masters as their own class notes, but prefer to teach with a blackboard.

The Transparency Masters have been created from the PowerPoint Presentation, thereby allowing instructors with access to either a Macintosh or an IBM-PC with a projection system to present material in an exciting and dynamic way. The Power Point Presentation contains the same lecture notes as the Transparency Masters, along with all figures and tables from the text. Please note that unless you have access to PowerPoint version 4.0 or higher you will only be able to project the provided images using the viewer that is included; editing or adding material will not be possible unless you have the software program.

Other instructors might prefer to teach with Overhead Transparencies. The Overhead Transparencies contain every figure and table, but not the lecture notes, and are packaged separately as color acetates. Those who want to use the figures and table from the book in their class with modifications can cut and paste these from the PowerPoint Presentation.

To obtain either the set of Transparency Masters, Overhead Color Transparencies or the Instructor's Resource Disk (with PowerPoint files), adopters of the text just need to get in touch with their Pearson Addison-Wesley sales representative, send an e-mail request to [econ@awl.com](mailto:econ@awl.com) or visit the Instructor's Resource Center at <http://www.aw-bc.com> to download the available electronic files.

## **Instructor's Resource CD-ROM (With Electronic Files of the Instructor's Manual, Test Bank, and PowerPoint Presentation)**

To instructors who adopt the money and banking textbook, Pearson Addison-Wesley offers an Instructor's Resource CD-ROM, housing on one convenient disk the files for this Instructor's Manual (including the full set of lecture notes, modifiable to the instructor's needs). Also featured on the CD are the complete electronic test bank files in TestGen format and a PowerPoint Presentation featuring all the textbook's figures and tables. To obtain a copy of this indispensable teaching aid, contact your local sales representative or send an e-mail request to *econ@awl.com*. All instructor resources may also be downloaded from the Instructor's Resource Center at *http://www.aw-bc.com*.

## Printed and Computerized Test Bank

The Test Bank, by Kathy Kelly of the University of Texas, Arlington, and Richard Stahl of Louisiana State University, contains over 2,500 multiple-choice questions, many with graphs, that are appropriate for use as quiz or test questions. It is provided as a separate paperback book and alternatively in Macintosh and Windows versions on the Instructor's Resource CD-ROM. It can also be downloaded from the Instructor's Resource Center at <http://www.aw-bc.com>. These various forms provide alternative methods for the instructor to make up exams.

The Pearson Addison-Wesley TestGen program offered is a computerized test generator that lets you construct tests by choosing questions from the item bank that was prepared specifically for this textbook and your course. The test construction process involves the use of a simple TestGen screen that you fill in on the computer to choose questions for your test. If desired, test questions can be viewed on the screen, and test questions can be edited, saved, or printed. In addition, you can add questions, which may include graphics.

The program features:

- Test and item banks can include five types of question types: multiple choice; true/false; short answer; and essay.

- A supplementary page attached to each item bank question can contain its topic, objective, skill, difficulty, and other user-added information.

- Test questions can be chosen in a variety of ways including manual selection, random selection, choose while viewing, and choose by searching.

- Questions chosen for a test can be viewed and edited without affecting the original versions of the questions in the item bank.

- Test size is limited only by the memory size of the computer and the length of the questions you choose.

- Test questions can be printed in the exact order you specify or grouped and sorted automatically by the program.

- Printer files can be created or modified to take advantage of the capabilities of your printer.

## Course Management with MyEconLab

Every student who buys a new textbook receives a prepaid subscription to MyEconLab. MyEconLab delivers rich online content and innovative learning tools to your classroom. Instructors who use MyEconLab gain access to powerful communication and assessment tools, and their students receive access to the additional learning resources described below.

## Students and MyEconLab

MyEconLab delivers the content and tools your students need to succeed online, and is also available within Addison-Wesley's innovative CourseCompass system for instructors who choose to use it. Students whose instructors use MyEconLab gain access to a variety of study and practice tools that put them in control of their own learning:

- Practice tests, which enable students to check their understanding and identify areas in which they need to do further work.
- A personalized study plan based on test results will show students where further study is needed.
- Interactive exercises based on specific end-of-chapter questions as well as general topics allow the student to review the material at any time. Some exercises require students to draw a graph. See the preface to the textbook to view sample exercises.
- The textbook online, with animations of key figures.
- A selection of *Readings in Money, Banking, and Financial Markets*, regularly updated by me and James W. Eaton of Bridgewater College, provides current articles related to topics covered in the textbook.
- Each week during the semester, students will be asked to read an article from a major online news source and answer questions on it. This is an effective and natural way to bring current events into the classroom.
- Sample quizzes give students a chance to double-check their understanding and application of the main topics in each test chapter.
- Supplements to the textbook, such as chapter synopses, glossary flashcards, and links to other Web sites, help instructors to expand on the material.
- Users of the CourseCompass system will have access to Research Navigator™—a one-stop research tool, with extensive help on the entire research process, including evaluating sources, drafting, and documentation, as well as access to a variety of scholarly journals and publications, a complete year of search for full-text articles from *The New York Times*, and a “Best of the Web” Link Library of peer-reviewed Web Sites.

The Student Access Kit that arrives bundled with all new books walks students step-by-step through the registration process.

## Instructors and MyEconLab

With MyEconLab instructors can customize existing content and add their own. They can manage, create, and assign tests to students, choosing from the exercises in the Study Plan as well as from our Test Banks. MyEconLab also includes advanced tracking features that record students' usage and performance and a Gradebook feature to see students' test results. Choosing to use MyEconLab in CourseCompass provides an

instructor with even more tools for customization and class communication. Please contact your Pearson Addison-Wesley sales representative to find out which version of MyEconLab is right for your course.

## The Mishkin Companion Web Site

For those students who buy used textbooks and choose not to purchase access to MyEconLab, the Companion Web Site for *The Economics of Money, Banking, and Financial Markets*, Alternate Edition, at [www.aw-bc.com/mishkin](http://www.aw-bc.com/mishkin), offers a brief chapter preview, a review quiz, links to related Web sites, and glossary flashcards. Premium features such as the electronic textbook and interactive exercises are only available via MyEconLab.

## ***Readings in Money, Banking, and Financial Markets*** **(Online Reader)**

A basic problem of textbooks in the money and banking field is that current events and financial innovation make many of the facts in the textbook obsolete soon after publication. To minimize this problem, *The Economics of Money, Banking, and Financial Markets*, Alternate Edition, focuses less on a set of facts, but rather stresses the underlying principles to understand money, banking, and financial markets. The advantage to this approach is that these principles never become obsolete, and as a result, the material in the text continues to promote understanding of the financial system as it evolves over time.

Because of the emphasis on basic principles, the text works extremely well when it is supplemented by current readings on banking and financial markets. To make it easy for instructors to supplement the text with current readings, Pearson Addison-Wesley publishes an annual *Readings* book online, designed to supplement the text and edited by James W. Eaton of Bridgewater College and myself. The *Readings* collection is unique in that it is updated over the life of this edition of the textbook, with well over half of the articles new with each update. In addition, it includes summaries of the articles, provides suggestions for which textbook chapter(s) the reading might be assigned, and contains discussion questions that follow each reading in order to encourage students to think about how the reading relates to material in the text. The *Readings* should enable instructors to keep the subject matter of their course current throughout the life of the edition of the text.

*To provide you with a better feel for what the Readings comprise, the table of contents from the 2004 edition is provided on the next several pages.*

## ***Year 2004 Readings for Money, Banking, and Financial Markets\****

### **Reading 1**

“The Money Market”

Timothy Q. Cook and Robert K. LaRoche

### **Reading 2**

“The Consolidation of European Stock Exchanges”

James McAndrews and Chris Stefanadis

### **Reading 3**

“Perspective on Payments”

Joanna Stavins

### **Reading 4**

“Investment Improvement: Adding Duration to the Toolbox”

Michelle Clark Neely

### **Reading 5**

“Why Are TIPS Yields So High? The Case of the Missing Inflation-Risk Premium”

Ben Craig

### **Reading 6**

“Interest Rates, Yield Curves, and the Monetary Regime”

Joseph G. Haubrich

### **Reading 7**

“Understanding Asset Values: Stock Prices, Exchange Rates, and the ‘Peso Problem’”

Keith Sill

### **Reading 8**

“Stock Market Volatility”

John Krainer

### **Reading 9**

“For Better and For Worse: Three Lending Relationships”

Mitchell Berlin

### **Reading 10**

“Financial Modernization and Banking Theories”

Simon Kwan

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\* Readings are updated periodically.

**Reading 11**

“Financial Development, Productivity, and Economic Growth”  
Diego Valderrama

**Reading 12**

“Financial Fragility and the Lender of Last Resort”  
Desiree Schaan and Timothy Cogley

**Reading 13**

“Perils of Price Deflation: An Analysis of the Great Depression”  
Charles T. Carlstrom and Timothy S. Fuerst

**Reading 14**

“Learning from Argentina’s Crisis”  
Ramon Moreno

**Reading 15**

“What is Operational Risk?”  
Jose A. Lopez

**Reading 16**

“How Financial Firms Manage Risk”  
Jose A. Lopez

**Reading 17**

“The Internet’s Place in the Banking Industry”  
Robert DeYoung

**Reading 18**

“Subprime Mortgage Lending and the Capital Markets”  
Elizabeth Laderman

**Reading 19**

“Securitization”  
O. Emre Ergungor

**Reading 20**

“Banking Consolidation”  
Simon Kwan

**Reading 21**

“Whither the Community Bank? Relationship Finance in the Information Age”  
Robert DeYoung, William C. Hunter, and Gregory F. Udell

**Reading 22**

“Credit Unions Make Friends—But Not with Bankers”  
William R. Emmons and Frank A. Schmid

**Reading 23**

“Patterns in the Foreign Ownership of U.S. Banking Assets”

Jose A. Lopez

**Reading 24**

“Has Foreign Bank Entry Led to Sounder Banks in Latin America?”

Jennifer S. Crystal, B. Gerard Dages, and Linda S. Goldberg

**Reading 25**

“Competition and Opportunity: How International Forces Spurred Innovation in U.S. Banking”

Richard N. Cooper and Jane Little

**Reading 26**

“Deposit Insurance Reform: Is It Déjà Vu All Over Again?”

Mark D. Vaughan and David C. Wheelock

**Reading 27**

“A Third Pillar of Bank Supervision”

William R. Emmons, R. Alton Gilbert, and Mark D. Vaughan

**Reading 28**

“The Score on Credit Scoring in Small Business Lending”

Federal Reserve Bank of Atlanta *EconSouth*

**Reading 29**

“The Present and Future of Pension Insurance”

Simon Kwan

**Reading 30**

“Social Security Restructuring: Tough Decisions Ahead”

Jason L. Saving and Alan D. Viard

**Reading 31**

“Mutual Funds, Fee Transparency, and Competition”

John B. Carlson, Eduard A. Pelz, and Erkin Y. Sahinoz

**Reading 32**

“Debunking Derivatives Delirium”

Jeffery W. Gunther and Thomas F. Siems

**Reading 33**

“Options and the Future: What Do Markets Think?”

Ben Craig

**Reading 34**

“Open and Operating: Providing Liquidity to Avoid a Crisis”

Bruce Champ

**Reading 35**

“Explaining Bank Credit Crunches and Procyclicality”

Robert R. Bliss and George G. Kaufman

**Reading 36**

“Electronic Money and the Future of Central Banks”

Ed Stevens

### **Reading 37**

“U.S. Monetary Policy: An Introduction. Part 2: What Are the Goals of U.S. Monetary Policy?”

Federal Reserve Bank of San Francisco *FRBSF Economic Letter*

### **Reading 38**

“U.S. Monetary Policy: An Introduction. Part 4: How Does the Fed Decide the Appropriate Setting for the Policy Instrument?”

Federal Reserve Bank of San Francisco *FRBSF Economic Letter*

### **Reading 39**

“The Taylor Rule: A Guidepost for Monetary Policy?”

Charles T. Carlstrom and Timothy S. Fuerst

### **Reading 40**

“Should the Fed React to the Stock Market?”

Kevin J. Lansing

### **Reading 41**

“Burger Survey Provides Taste of International Economics”

Michael R. Pakko and Patricia S. Pollard

### **Reading 42**

“On the Rotation of the Earth, Drunken Sailors, and Exchange Rate Policy”

Owen F. Humpage

### **Reading 43**

“Towards a Sovereign Debt Restructuring Mechanism”

Mark M. Spiegel

### **Reading 44**

“What Monetary Regime for Post-War Iraq?”

Mark M. Spiegel

### **Reading 45**

“Transparency in Monetary Policy”

Carl E. Walsh

### **Reading 46**

“What Should Central Banks Do?”

Fredric S. Mishkin

### **Reading 47**

“Monetary Policy Rules and Stability: Inflation Targeting versus Price-Level Targeting”

Charles T. Carlstrom and Timothy S. Fuerst

### **Reading 48**

“What is the Right Inflation Rate?”

David E. Altig

**Reading 49**

“Deficit-Financed Tax Cuts and Interest Rates”

Sylvain Leduc

**Reading 50**

“What Accounts for the Postwar Decline in Economic Volatility?”

Keith Sill

**Reading 51**

“U.S. Monetary Policy: An Introduction. Part 3: How Does Monetary Policy Affect the U.S. Economy?”

Federal Reserve Bank of San Francisco *FRBSF Economic Letter*

**Reading 52**

“Stock Prices and Output Growth: An Examination of the Credit Channel”

Charles T. Carlstrom, Timothy S. Fuerst, and Vasso P. Ioannidou

**Reading 53**

“The Taylor Curve and the Unemployment-Inflation Tradeoff”

Satyajit Chatterjee

**Reading 54**

“How Inflation Hawks Escape Expectations Traps”

Sylvain Leduc

**Reading 55**

“Activist Monetary Policy For Good or Evil? The New Keynesians vs. the New Classics”

Tom Stark and Herb Taylor

**Reading 56**

“How Do Forecasts Respond to Changes in Monetary Policy?”

Laurence Ball and Dean Croushore

## Study Guide

The only way to learn effectively about money, banking, and financial markets is by continual, and active, application of the basic concepts developed in the textbook. To help the student in this endeavor, Edward Gamber of Lafayette College and David Hakes of the University of Northern Iowa have written the *Study Guide*.

*The Study Guide* contains the following elements for each chapter:

### Chapter Review:

Each chapter begins with a summary of the chapter. The chapter review is divided into sections based on the section headings provided in the text.

### Helpful Hints:

This section provides some additional suggestions and examples to help clarify the more difficult material.

### Terms and Definitions:

Students match key terms from the text to their definitions. This section is particularly important because a working economic and financial vocabulary is necessary in order for the student to advance through the material.

### Problems and Short-Answer Questions:

We provide a number of multi-step problems that require numerical, graphical, or written solutions. The problems are based on the larger issues developed in the chapter. Smaller issues are addressed with approximately ten short-answer questions.

### Critical Thinking:

This section provides a single multi-step problem that is an application of one of the major issues developed in the chapter.

### Self-Test:

The self-test section provides fifteen true/false and twenty multiple-choice questions to validate areas of successful learning and to highlight areas needing improvement.

### Solutions:

Detailed solutions for all problems and questions are provided at the end of each chapter.

