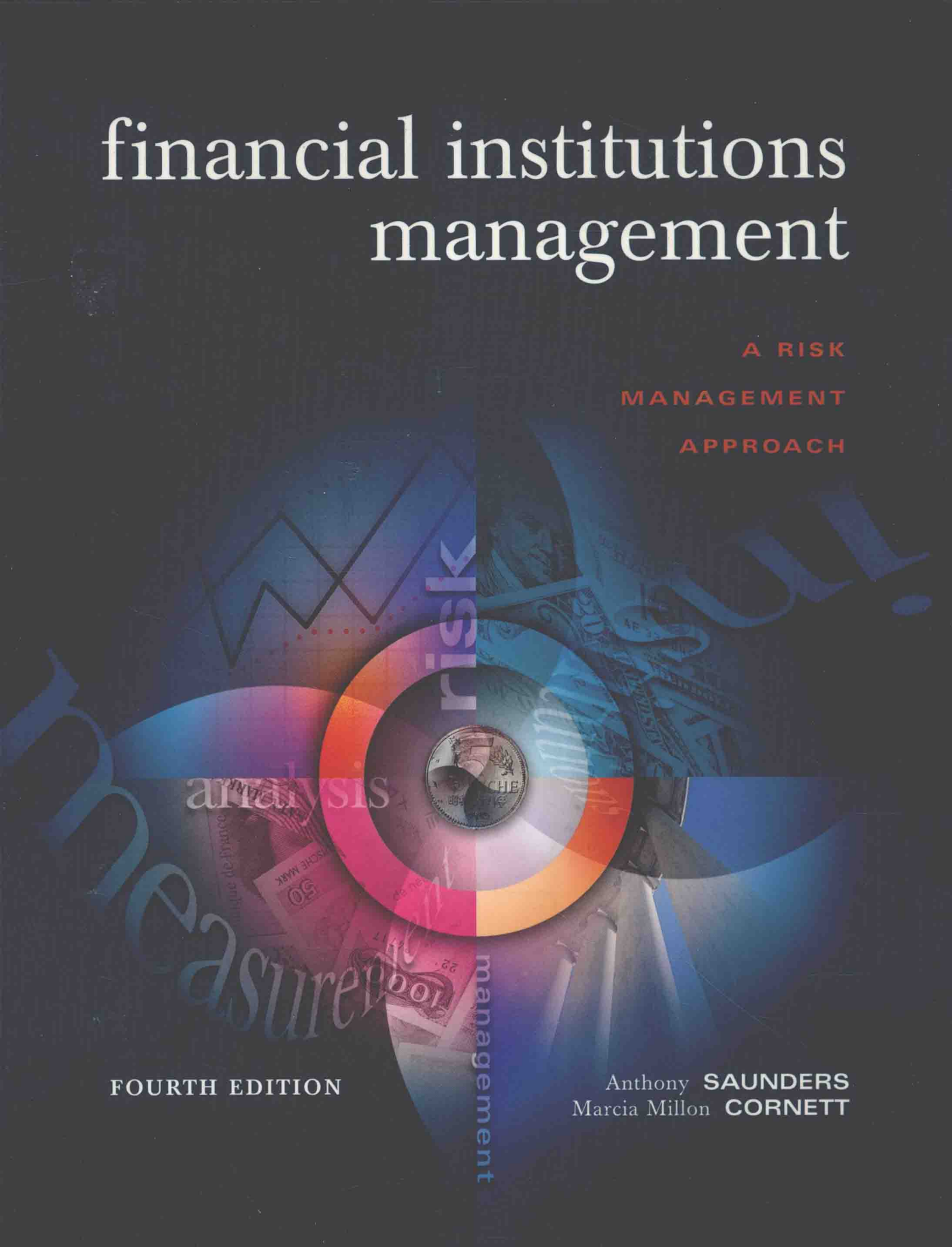


# financial institutions management

A RISK  
MANAGEMENT  
APPROACH

FOURTH EDITION

Anthony SAUNDERS  
Marcia Millon CORNETT



# Financial Institutions Management

**A Risk Management Approach**

*Fourth Edition*

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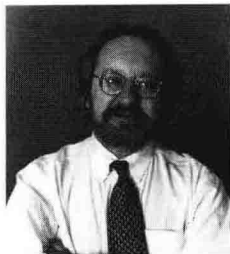
This book is dedicated to Pat, Nicholas, and  
Emily and to my mother, Evelyn.

Anthony Saunders

To the Millons and the Cornetts, especially  
Galen.

Marcia Millon Cornett

# About the Authors



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# Preface

The financial services industry continues to undergo dramatic changes. Not only have the boundaries between traditional industry sectors, such as commercial banking and investment banking, broken down but competition is becoming increasingly global in nature. Many forces are contributing to this breakdown in interindustry and intercountry barriers, including financial innovation, technology, taxation, and regulation. It is in this context that this book is written. Although the traditional nature of each sector's product activity is analyzed, a greater emphasis is placed on *new* areas of activities such as asset securitization, off-balance-sheet banking, and international banking.

When the first edition of this text was released in 1994, it was the first to analyze modern financial institutions management from a risk perspective. Thus, the title, *Financial Institutions Management: A Modern Perspective*. At that time, traditional texts presented an overview of the industry sector by sector, concentrating on balance sheet presentations and overlooking management decision making and risk management. Over the last decade other texts have followed this change, such that a risk management approach to analyzing modern financial institution is now well accepted. Thus, the new title of the fourth edition: *Financial Institutions Management: A Risk Management Approach*.

The fourth edition of this text takes the same innovative approach taken in the first three editions and focuses on managing return and risk in modern financial institutions (FIs). *Financial Institutions Management's* central theme is that the risks faced by FI managers and the methods and markets through which these risks are managed are similar whether an institution is chartered as a commercial bank, a savings bank, an investment bank, or an insurance company.

As in any stockholder-owned corporation, the goal of FI managers should always be to maximize the value of the financial intermediary. However, pursuit of value maximization does not mean that risk management can be ignored.

Indeed, modern FIs are in the risk-management business. As we discuss in this book, in a world of perfect and frictionless capital markets, FIs would not exist and individuals would manage their own financial assets and portfolios. But since real-world financial markets are not perfect, FIs provide the positive function of bearing and managing risk on behalf of their customers through the pooling of risks and the sale of their services as risk specialists.

## INTENDED AUDIENCE

*Financial Institutions Management: A Risk Management Approach* is aimed at upper-level undergraduate and MBA audiences. Occasionally there are more technical sections that are marked with an asterisk (\*). *Sections highlighted with an \* may be included or dropped from the chapter reading, depending on the rigor of the course, without harming the continuity of the chapters.*

## MAIN FEATURES

Throughout the text, special features have been integrated to encourage students' interaction with the text and to aid them in absorbing the material. Some of these features include:

- **In-chapter examples**, which provide numerical demonstrations of the analytics described in various chapters.
- **Bold key terms and marginal glossary**, which emphasize the main terms and concepts throughout the chapter. They emphasize the most important terms and aid in studying.
- **In-chapter Internet references**, which guide the student to access the most recent issues and data on the Web.
- **Concept questions**, which allow students to test themselves on the main concepts within each major chapter section.
- **Technology in the News boxes**, which feature discussions of how technology is affecting financial institutions and intermediation including risk measurement and management.
- **Industry Perspectives boxes**, which demonstrate the application of chapter material to real current events.
- **Integrative problem material**, which covers all the main topics within the chapter.
- **End-of-chapter problems**, which are written for varied levels of difficulty.

## ORGANIZATION

Since our focus is on return and risk and the sources of that return and risk, this book relates ways in which the managers of modern FIs can expand return with a managed level of risk to achieve the best, or most favorable, return-risk outcome for FI owners.

Chapter 1 introduces the special functions of FIs and takes an analytical look at how financial intermediation benefits today's economy. Chapters 2 to 6 provide an overview describing the key balance sheet and regulatory features of the major sectors of the U.S. financial services industry. We discuss depository institutions in Chapter 2, insurance institutions in Chapter 3, securities firms and investment banks in Chapter 4, mutual funds in Chapter 5, and finance companies in Chapter 6. In Chapter 7 we preview the risk measurement and management sections with an overview of the risks facing a modern FI. We divide the chapters on risk measurement and management into two sections: measuring risk and managing risk.

In Chapters 8 and 9 we start the risk-measurement section by investigating the net interest margin as a source of profitability and risk, with a focus on the effects of interest rate volatility and the mismatching of asset and liability durations on FI risk exposure. In Chapter 10 we analyze market risk, a risk that results when FIs actively trade bonds, equities, and foreign currencies.

In Chapter 11 we look at the measurement of credit risk on individual loans and bonds and how this risk adversely impacts an FI's profits through losses and provisions against the loan and debt security portfolio. In Chapter 12 we look at the risk of loan (asset) portfolios and the effects of loan concentrations on risk exposure. Modern FIs

do more than generate returns and bear risk through traditional maturity mismatching and credit extensions. They also are increasingly engaging in off-balance-sheet activities to generate fee income (Chapter 13), making technological investments to reduce costs (Chapter 14), pursuing foreign exchange activities and overseas financial investments (Chapter 15), and engaging in sovereign lending and securities activities (Chapter 16). Each of these has implications for the size and variability of an FI's profits and/or revenues. In addition, as a by-product of the provision of their interest rate and credit intermediation services, FIs face liquidity risk. We analyze the special nature of this risk in Chapter 17.

In Chapter 18 we begin the risk-management section by looking at ways in which FIs can insulate themselves from liquidity risk. In Chapter 19 we look at the key role deposit insurance and other guaranty schemes play in reducing liquidity risk. At the core of FI risk insulation is the size and adequacy of the owners' capital or equity investment in the FI, which is the focus of Chapter 20. Chapters 21 to 23 analyze how and why product diversification and geographic diversification—both domestic and international—can improve an FI's return-risk performance and the impact of regulation on the diversification opportunity set. Chapters 24 through 28 review various new markets and instruments that have been innovated or engineered to allow FIs to better manage three important types of risk: interest rate risk, credit risk, and foreign exchange risk. These markets and instruments and their strategic use by FIs include futures and forwards (Chapter 24); options, caps, floors, and collars (Chapter 25); swaps (Chapter 26); loan sales (Chapter 27); and securitization (Chapter 28).

## CHANGES IN THIS EDITION

Each chapter in this edition has been revised thoroughly to reflect the most up-to-date information available. End-of-chapter questions and problem material have also been revised to provide a more complete selection of testing material.

The following are some of the new features of this revision:

- Marcia Millon Cornett, Southern Illinois University at Carbondale, has been added as a coauthor in this edition. The addition brings new points of view and fresh blood to the text, while maintaining the main theme, Risk Management in Financial Institutions.
- All chapters have been updated. Tables and figures in the text include the most recently available data.
- The first seven chapters of the text have been substantially enhanced. The chapter order has changed such that we start in Chapter 1 with a review of why financial institutions exist (previously Chapter 6). We also present a more detailed look at what is new in each of the different sectors of the financial institutions industry. We have expanded international coverage with a global issues section at the end of each of these chapters and new international examples. Also, the impact of technology on each sector is highlighted.
- A substantially revised Chapter 14 now includes material on electronic technology and the Internet's impact on financial services. Technological changes occurring over the last decade have changed the way financial institutions offer services to customers, both domestically and overseas. The effect of technology is also referenced in other chapters where relevant. The chapter also includes an expanded discussion of other operational risks.



- New discussion of how the Financial Services Modernization Act of 1999 affects financial institutions has been added to several chapters and the details of this regulation and its overall impact on financial institutions is discussed in detail in Chapter 21.
- The Basel capital regulations for banks and thrifts are included in detailed examples in Chapter 20. Major changes are scheduled to become effective in 2006. The chapter examines both the current regulations as well as the new capital regulations. Both will likely be in effect at some point in time while this edition of the text is in print. Any final changes to the Basel agreement announced after the book is published will be announced on the book's website ([www.mhhe.com/business/finance/saunders4e](http://www.mhhe.com/business/finance/saunders4e)).
- Chapter 19 discusses and provides an example of new FDIC deposit insurance premium requirements.
- Highlighted in-chapter examples have been added throughout the chapters.
- A website has been created to supplement the text. The website, [www.mhhe.com/business/finance/saunders4e](http://www.mhhe.com/business/finance/saunders4e), will include information about the book, and an Instructor's site containing the password protected Instructor's Manual and Power-Point material.
- Technology in the News boxes have been added that discuss how technology and the Internet are affecting financial institutions as an industry.
- Internet references have been added throughout each chapter as well as at the end of each chapter and Internet questions found after the end-of-chapter questions.
- More nonbank specific questions and examples have been added to provide a broader financial intermediation perspective.
- A more user-friendly design includes shaded Technology in the News boxes, Industry Perspective boxes, Internet problems, examples, and tables and exhibits.
- New enhanced chapter introductions have been added to better serve readers and provide more interesting lead-ins to the conceptual material.

We have retained and updated these features:

- The risk approach of Financial Institutions Management has been retained, keeping the first section of the text as an introduction and the last two sections as a risk measurement and risk management summary, respectively.
- Increased coverage of Credit Risk models (including newer models, such as KMV, CreditMetrics, and CreditRisk+).
- The "Market Risk" chapter not only explores the measurement of market risk by presenting the JP Morgan Chase RiskMetrics Model for measuring market risk exposure on a daily basis, but also discusses advances in market risk measurement including updates to RiskMetrics.
- Updated coverage in the "Product Diversification" chapter and the "Geographic Diversification" chapter reflect increased inroads of banks into the insurance field, the

move towards nationwide banking (in the United States), and the rapid growth of foreign banks and other intermediaries in the United States.

- An expanded problem set can be found at the end of each chapter that allows students to practice a variety of skills using the same data or set of circumstances.

### Standard & Poor's

New to this edition, S&P Market Insight problems will be available on the Saunders/Cornett *Financial Institutions Management*, 4<sup>th</sup> edition website, [www.mhhe.com/business/finance/saunders4e](http://www.mhhe.com/business/finance/saunders4e), for both students and faculty. Relevant chapters will include two to three problems that require the use of the Educational Version of *Market Insight*, a Standard and Poor's Compustat® database. See how easily this web asset, unique to McGraw-Hill/Irwin, can add value to your entire teaching experience, and add real-world data into your students learning. Over 300 companies and key financial data will be available as a problem solving resource, of which over 40 are financial service institutions.

## ANCILLARIES

To assist in course preparation, the following ancillaries are offered:

- New to this edition is the Saunders/Cornett *Financial Institutions Management* website: [www.mhhe.com/business/finance/saunders4e](http://www.mhhe.com/business/finance/saunders4e). This site will be accessible to both professors and students, having a username and password protecting the instructor's portion of the site. The site will include: About the Authors, Table of Contents, Internet Problems, URLs, PowerPoint, Instructor's Manual, and an Update Section.
- Finance around the World—an outstanding global financial resource that provides “live real-time links” for researching and exploring finance. As an interactive, on-line map, Finance around the World allows you to access finance and business news and analysis from your favorite global region of interest.
- Through a unique arrangement with Dow Jones, the price of the special *Wall Street Journal* version of the text includes a 10-week subscription to this business periodical. Please contact your McGraw-Hill/Irwin representative for ordering information.
- The *Instructor's Manual/Test Bank*, prepared by Ernie Swift, Georgia State University, includes detailed chapter contents, additional examples for use in the classroom, PowerPoint teaching notes, complete solutions to end-of-chapter questions and problem material, and additional problems for test material.
- The PowerPoint Presentation System was created by Kenneth Stanton of the University of Baltimore. It contains useful and graphically enhanced outlines, summaries, and exhibits from the text. The slides can be edited, printed, or arranged to fit the needs of your course.
- Computest, our computerized version of the test bank, allows the instructor to pick and choose the order and number of questions to include for each test

## ACKNOWLEDGMENTS

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*Anthony Saunders*

*Marcia Millon Cornett*

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