Second Edition

FINANCIAL INSTITUTIONS MANAGEMENT

A MODERN PERSPECTIVE

ANTHONY SAUNDERS

SECOND EDITION

FINANCIAL INSTITUTIONS MANAGEMENT

A Modern Perspective

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

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About the Author

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Anthony Saunders is the John M. Schiff Professor of Finance and Chair of the Department of Finance at the Stern School of Business at New York University. Professor Saunders received his PhD from the London School of Economics and has taught both undergraduate and graduate level courses at NYU since 1978. Throughout his academic career, his teaching and research have specialized in financial institutions and international banking. He has served as a visiting professor all over the world, including INSEAD, the Stockholm School of Economics, and the University of Melbourne. He is currently on the Executive Committee of the Salomon Center for the Study of Financial Institutions, NYU.

Professor Saunders holds positions on the Board of Academic Consultants of the Federal Reserve Board of Governors as well as the Council of Research Advisors for the Federal National Mortgage Association. In addition, Dr. Saunders has acted as a visiting scholar at the Comptroller of the Currency and at the Federal Reserve Bank of Philadelphia. He also held a visiting position in the research department of the International Monetary Fund. He is the editor of the *Journal of Banking and Finance* and the *Journal of Financial Markets, Instruments and Institutions,* as well as the associate editor of eight other journals, including *Financial Management* and the *Journal of Money, Credit and Banking*. His research has been published in all of the major money and banking journals and in several books. In addition, he has authored or coauthored several professional books.

PREFACE

The financial services industry is undergoing great changes. Not only are the boundaries between traditional industry sectors, such as commercial banking and investment banking, breaking down but competition is becoming increasingly global in nature. There are many forces 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, international banking, and so on.

The second edition of this text takes the same innovative approach as the first edition 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 becoming increasingly similar whether the 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. Thus, just as a shoe manufacturer has to manage an inventory of shoe leather, the FI has to manage an inventory of risks.

Intended Audience

Financial Institutions Management: A Modern Perspective is aimed at upper-level undergraduate and MBA audiences. Occasionally, in Chapters 7, 8, 10, 11, 24, and 26, 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 student interaction with the text and to aid them in absorbing the material. Some of these features include:

- **Chapter-opening outlines,** which offer students a snapshot view of what they can expect to learn from each chapter discussion.
- **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.
- **Concept questions,** which allow students to test themselves on the main concepts within each major chapter section.
- **Professional Perspectives boxes,** which feature financial practitioners and how they apply some of the topics throughout the text.
- **Contemporary Perspectives boxes,** which demonstrate the application of chapter material in real, current events.
- **Integrative problem material,** which covers all the main topics within the chapter.

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.

Chapters 1, 2, and 3 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 1, insurance institutions in Chapter 2, and other financial institutions in Chapter 3. Chapter 4 takes an analytical look at how financial intermediation benefits today's economy.

In Chapter 5, we start the risk-measurement section with an overview of the risks facing a modern FI. In Chapters 6, 7, and 8, we investigate 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 9, we analyze market risk, a risk that results when FIs actively trade bonds, equities, and foreign exchange.

In Chapter 10, 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 11, 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 12), making technological investments to reduce costs (Chapter 13), pursuing foreign exchange activities and overseas financial investments (Chapter 14), and engaging in sovereign lending and securities activities (Chapter 15). Each of these has implications for the size and variability of an FI's profit and/or its 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 16.

In Chapter 17, we begin the risk-management section by looking at ways in which FIs can insulate themselves from liquidity risk. In Chapter 18, 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 stake, which is the focus of Chapter 19. Chapters 20 and 21 analyze how and why both product and geographic diversification can improve an FI's return-risk performance and the impact of regulation on the diversification opportunity set. Chapters 22 through 26 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 22); options, caps, floors, and collars (Chapter 23); swaps (Chapter 24); loan sales (Chapter 25), and securitization (Chapter 26).

Changes in this Edition

New to this edition is a boxed feature entitled "Contemporary Perspectives," which provides added insights as to how the various chapter topics are being applied in the real world. Some of the topics addressed in these boxes include the phenomenal growth of the mutual fund industry and its impact on the U.S. financial landscape (Chapter 3); the recent activities of rogue traders and the subsequent collapse of some banks (Chapter 9); and the race among credit card companies to develop payment products for the Internet (Chapter 13).

Also, each chapter in this edition has been revised thoroughly to reflect the most up-to-date information available. End of chapter question and problem material has also been revised to provide a more complete selection of testing material. Finally, the order of the chapters has been revised to permit a better flow of information.

The following are some of the highlights of this revision.

In Part I, Introduction, we have increased our coverage of nonbank financial institutions to reflect the changing landscape of the financial institutions industry. In keeping with this, a new chapter has been added that focuses exclusively on the insurance industry sector of the financial service industry (Chapter 2).

In Part II, Measuring Risk, a wealth of new information has been added, along with two new chapters. New to this edition, Chapter 9, Market Risk, explores the measurement of market risk by presenting among other things the JPM RiskMetrics Model for measuring market risk exposure on a daily basis. It also discusses the 1995 standardized framework of capital requirements proposed by the BIS in an attempt to regulate the market risk exposure of banks. These capital requirements come into effect in 1997.

Chapter 10, Credit Risk: Individual Loan Risk, introduces the RAROC model, a popular means for evaluating credit risk based on market data. Pioneered by Bankers Trust, RAROC models have been adopted by virtually all large banks in the United States and Europe.

New to this edition, Chapter 11, Credit Risk: Loan Portfolio Risk, focuses exclusively on FI managers' ability to measure credit risk in a loan portfolio context. In addition to describing several technical models, it includes coverage of the approaches of bank and insurance regulators for measuring credit concentration risk.

In Chapter 15, Sovereign Risk, the importance of assessing the sovereign risk of a borrowing country is underscored by the recent example provided by the Mexican devaluation of the peso. Clearly, this event is likely to have serious repercussions for fund flows from U.S. FIs to similar emerging-market countries for a long time.

Chapter 16, Liquidity Risk, includes a new measurement technique—the liquidity index—for measuring a bank's liquidity exposure. Also, a discussion of liquidity planning has been added.

In Part III, the focus moves from the measurement of risk to the management of risk. In this edition, several chapters have been rearranged to permit a better flow of information across Parts II and III of the text. In order to present the chapters on measuring and managing liquidity risk in closer proximity, Chapter 17, Liability and Liquidity Management, now follows Chapter 16, Liquidity Risk, and introduces (rather than concludes) Part III. The chapter on deposit insurance (new Chapter 18) has been moved to follow Chapter 17.

Chapter 19, Capital Adequacy, continues to explore the capital requirements of various FIs, and now includes a new section on the capital requirements for property-casualty insurers.

In Chapter 20, Product Expansion, and Chapter 21, Geographic Diversification, coverage has been expanded to reflect the increased inroads of banks into product expansion such as insurance, the move toward nationwide branching in the United States, and the rapid growth of foreign banks in the United States.

In Chapter 24, Swaps, a new section has been added regarding the controversial "inverse floater" swaps that have made news recently in the bankruptcy of Orange County and in the legal suits issued against Bankers Trust by Gibson Greetings Cards and Procter & Gamble.

Chapter 25, Loan Sales and Other "New" Credit Risk Management Techniques, explores the growing role of loan sales as a credit risk management tool. New coverage in this chapter includes a discussion of the role of good banks and bad banks as a restructuring device.

Ancillaries

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

- Instructor's Manual/Test Bank includes detailed chapter contents, additional examples for use in the classroom, complete solutions to end of chapter question and problem material, and additional problems for test material.
- 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.
- Flannery and Flood's BankMaster: A Financial Services Simulation, designed by Mark Flannery of the University of Florida and Mark Flood of Concordia University, is a bank management simulation game offered for the first time with this edition.

Acknowledgments

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LIST OF CONTEMPORARY PERSPECTIVES BOXES

LIST OF PROFESSIONAL PERSPECTIVES BOXES

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