

高等院校双语教材 · 金融系列

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# CAPITAL MARKETS

INSTITUTIONS AND INSTRUMENTS (Fourth Edition)

## 资本市场 机构与工具 (第四版)

弗兰克·J·法博齐 (Frank J. Fabozzi)  
弗朗哥·莫迪利亚尼 (Franco Modigliani)  
汪涛 改编

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## 出版说明

随着金融全球化进程的不断加快,金融人才的竞争日益激烈,用国际通用的英语来思考、工作、交流的能力也越来越重要。如何顺应这一潮流,培养和造就专业知识和语言水平都具有竞争力的金融人才,一直是各大高等院校和一些主要教材出版单位思考的重要问题,开展双语教学是教育界的共识。双语教学在我国主要指采用汉语和国际通用的英语教学,目的是培养全面的适合国际交流的高素质人才。由于我国长期以来缺乏英语交流的环境,开展双语教学面临着特殊的困难,我们认为双语教学从一开始就应该使用原版的优秀教材,保证语言的原汁原味。

顺应这一潮流,中国人民大学出版社携手国际著名的出版公司,推出了适合经济金融专业的双语系列教材。本套教材具有如下几个特色:

第一,精选教材。本套教材遴选了一批国外优秀的教材,涉及金融学、投资学、公司理财、金融市场与机构、国际货币与金融、国际投资、跨国公司财务管理、金融工程、银行管理、保险学等多门课程,涵盖了金融专业开设的主要必修科目。

第二,保持原教材的特色。本套双语教材广泛听取了一线任课教师的意见和建议,考虑到课时要求,采用了删减影印的形式,主要是删减了一些相互重复的以及不适应我国国情的内容,但在体系结构和内容特色方面都保持了原教材的风貌。

第三,内容紧扣学科前沿。本套教材基本上都选择国外最流行教材的最新版本,有利于老师和学生掌握国外教学研究的最新发展趋势。

第四,提供强大的教学支持。依托国外大出版公司的力量,本套教材为教师提供了配套的网上教辅资料,如教师手册、PPT课堂演示文稿、试题库等,从而使教学更为便利。

本套教材主要适用于高等院校经济金融专业的本科教学,同时也适用于金融行业从业人员以及对金融专业感兴趣的人士。

本套教材是对双语教学的积极探索,错误遗漏之处在所难免,恳请广大读者指正。

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## 改 编 者 前 言

金融是经济的核心，是现代经济发展的血液。各类金融市场功能的完整发挥与各类金融机构运转的正常进行是经济得以持续发展、社会财富不断增加的前提和保障。金融业的存在和发展对经济的影响是深远的，然而，金融业的竞争同时又是异常残酷的。因此，一直以来各市场主体都是通过不断地提高金融工具创新水平来维持竞争力。金融工具创新的不断深化，也是各国实现经济增长方式转变和产业结构转换的一个重要方式和手段。

即便是发端于2007年美国次贷市场的全球金融危机改变了现代金融机构的组织体系与金融市场功能的发挥，影响了金融工具创新的步伐。然而，金融市场在现代市场体系中的重要作用从来没有动摇过，相反，却承担着引领全球经济复苏的重任。金融机构体系的重组与金融市场功能的转变和完善，让学界的研究素材增加了许多，也为我们进一步探究金融市场本质、金融机构经营管理方式的改变和金融工具创新的改革提供了机会。

改革开放三十多年的发展历程也是我们不断引进西方成熟金融理论，用最先进的金融理论来指导我们金融改革和发展的实践过程。为了更好地服务于这一实践进程，在金融学教学领域，我们也在不断地引进西方成熟而又广受欢迎的高端金融学教材。

弗兰克·J·法博齐教授和弗朗哥·莫迪利亚尼教授都是我们非常熟悉的金融学教授，他们在金融、投资等领域取得了非常骄人的成就。由他们合著的《资本市场：机构与工具》一书自出版以来就受到了广大读者的喜爱，该书最大的特色在于用通俗易懂的语言对资本市场的各类金融机构和金融工具进行了全面而又细致的介绍。在原版英文类金融学教材中，这本书以其对资本市场基础知识的深刻把握和简单明了的叙述方式，让读者在学习的过程中，既能够掌握扎实的理论功底，又能够提高自己灵活运用知识的能力。在新编第四版中，原书共有33章，分8个部分，原书理论体系严密，逻辑结构紧凑，但从教学的角度出发，内容显得过多，而且与其他金融学教材存在内容重复的情况。因此，在不影响教学效果的前提下，结合其他金融学教材的内容，我们对原书进行了删减，目的是为了能够更好地提高学习效率，掌握核心知识体系。相信删减后的影印版教材对广大师生的教学和学习能够起到更好的促进作用。

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# Preface

The revolution that swept through the world financial markets was aptly described in 1985 by a noted economist, Henry Kaufman:

If a modern-day Rip Van Winkle had fallen asleep twenty years ago, or for that matter even ten years back, on awakening today, he would be astonished as to what has happened in the financial markets. Instead of a world of isolated national capital markets and a preponderance of fixed-rate financing, he would discover a world of highly integrated capital markets, an extensive array of financing instruments, and new methods of addressing market risk.

The purpose of this book is to describe the wide range of instruments for financing, investing, and controlling risk available in today's financial markets. New financial instruments are not created simply because someone on Wall Street believes that it would be "fun" to introduce an instrument with more "bells and whistles" than existing instruments. The demand for new instruments is driven by the needs of borrowers and investors based on their asset/liability management situation, regulatory constraints (if any), financial accounting considerations, and tax considerations. For these reasons, to comprehend the financial innovations that have occurred and are expected to occur in the future, a general understanding of the asset/liability management problem of major institutional investors is required. Therefore, in addition to coverage of the markets for all financial instruments, we provide an overview of the asset/liability management issues faced by major institutional investors and the strategies they employ.

In writing the previous three editions of this book, Professor Modigliani and I felt that the coverage provided on the institutional investors and financial instruments should be as up-to-date as possible in a market facing rapid changes in the characteristics of the players and those making the rules as to how the game may be played. I continued this tradition in this edition. The most recent shake-up in the market was due to the meltdown of the subprime mortgage market that started in the summer of 2007 and is described in Chapter 20. New financial instruments are introduced on a regular basis; however, armed with an understanding of the needs of borrowers and institutional investors and the attributes of existing financial instruments, the reader will be able to recognize the contribution made by a new financial instrument.

The first edition of this book was published in 1992. At the time, the book deviated in several significant ways from the traditional capital markets textbooks, notably in its coverage of derivative markets (futures, options, swaps, etc.). These markets are an integral part of the global capital market. They are not—as often categorized by the popular press and some of our less-informed congressional representatives and regulators—"exotic" markets. Derivative instruments provide a mechanism by which market participants can control risk—borrowers can control borrowing costs and investors can control the market risk of their portfolio. It is safe to say that without the derivative markets, an efficient global capital market would be impossible. In addition, it is important to appreciate the basic principles of options not only as a stand-alone instrument, but because

many financial instruments have embedded options. Also, the liabilities of many financial institutions contain embedded options. Thus, it is difficult to appreciate the complex nature of assets and liabilities without understanding the fundamentals of option theory.

Although we recognized that many colleges offered a specialized course in derivative markets, our purpose in the first edition was not to delve deeply into the various trading strategies and the nuances of pricing models that characterize such a course. Instead, Professor Modigliani and I provided the fundamentals of the role of these instruments in financial markets, the principles of pricing them, and a general description of how they are used by market participants to control risk.

A special feature of the book at the time was the extensive coverage of the mortgage market and the securitization of assets. Asset securitization refers to the creation of securities whose collateral is the cash flow from the underlying pool of assets. The process of asset securitization is radically different from the traditional system for financing the acquisition of assets. By far the largest part of the securitized asset market is the mortgage-backed securities market, where the assets collateralizing the securities are mortgage loans. Securitized assets backed by non-real estate mortgage loans were a small but growing part of the market at the time of the publication of the first edition. Now they are a major sector of the capital market where financial and nonfinancial corporations can raise funds.

Finally, in 1990 when we decided on the topics to cover in this book we discriminated between what belongs in a course on capital markets and what is the province of investment management. Often, because the needs of institutional investors dictate the need for financial instruments with certain investment characteristics or for a particular strategy employing a capital market instrument, we had to cross the line. The approach we took in writing the first edition was one that we felt would make it adaptable for a course in investment banking and as a supplement for a derivative markets course. The fourth edition can be used in the same way.

That was our thinking in the first edition of the book. We must admit that when the publisher Prentice Hall sent the initial drafts of the manuscript to ten reviewers, the reviews were mixed. Half thought that the book was so substantially different from what was traditionally taught in a capital markets or financial markets and institutions course that it would be an error for Prentice Hall to publish the book. The other five reviewers strongly endorsed the book as a major contribution and a blueprint as to how capital markets courses would be taught in the future. Of course, Prentice Hall did publish the book in 1992, and in 1996 published the second edition.

Our model or blueprint has been followed by other textbook writers since the mid-1990s. So, the unique features we claimed regarding the first edition and second edition are now common in other textbooks. However, we believe that our coverage and perspective, with respect to key market sectors, are still unique.

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## **DOWN THE ROAD**

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Because of the prominent role played by financial markets in economies, governments have long deemed it necessary to regulate certain aspects of these markets. In their regulatory capacities, governments have greatly influenced the development and evolution of financial markets and institutions. As stated in a March 31, 2008, speech by Henry M. Paul, Jr., Secretary of the U.S. Department of the Treasury:

A strong financial system is vitally important—not for Wall Street, not for bankers, but for working Americans. When our markets work, people throughout our economy benefit—Americans seeking to buy a car or buy a home,

families borrowing to pay for college, innovators borrowing on the strength of a good idea for a new product or technology, and businesses financing investments that create new jobs. And when our financial system is under stress, millions of working Americans bear the consequences. Government has a responsibility to make sure our financial system is regulated effectively. And in this area, we can do a better job. In sum, the ultimate beneficiaries from improved financial regulation are America's workers, families, and businesses—both large and small.

The regulatory structure in the United States is largely the result of financial crises that have occurred at various times. Most regulations are the products of the stock market crash of 1929 and the Great Depression of the 1930s. Some of the regulations may make little economic sense in the current financial market, but they can be traced back to some abuse that legislators encountered, or thought they encountered, at one time. In fact, as noted by Secretary Paulson in his March 31, 2008, speech:

Our current regulatory structure was not built to address the modern financial system with its diversity of market participants, innovation, complexity of financial instruments, convergence of financial intermediaries and trading platforms, global integration and interconnectedness among financial institutions, investors, and markets. Moreover, our financial services companies are becoming larger, more complex and more difficult to manage. Much of our current regulatory system was developed after the Great Depression and it has developed through reaction—a pattern of creating regulators as a response to market innovations or to market stress.

The current regulatory system in the United States is based on an array of industry and market focused regulators. We will discuss the complex array of regulation when we describe the various financial institutions and financial markets. At the time this book goes to press, there have been proposals for a drastic overhaul of the U.S. regulatory system. The proposal by the U.S. Department of the Treasury in March 2008, popularly referred to as the “Blueprint for Regulatory Reform” or simply Blueprint, would replace the prevailing complex array of regulators with a regulatory system based on functions. More specifically, there would be three regulators: (1) market stability regulator, (2) prudential regulator, and (3) business conduct regulator. The market stability regulator would take on the traditional role of the Federal Reserve by giving it the responsibility and authority to ensure overall financial market stability. The Federal Reserve would be responsible for monitoring risks across the financial system. The prudential regulator would be charged with safety and soundness of firms with federal guarantees that we will describe in this book such as federal depository insurance and housing guarantees. The business conduct regulator would regulate business conduct across all types of financial firms. This regulator would take on most of the roles for which the Securities and Exchange Commission and the Commodity Futures Trading Commission now have.

This change in regulatory structure is the long-term recommendation of the Blueprint. This may not occur for 10 or 15 years, if at all. If history is our guide, major regulatory changes do take that long to become legislation. For example, we will describe the major regulatory reform as of this writing: the Gramm-Leach-Bliley Act 1999. Portions of that legislation were first recommended by a special commission of the Reagan Administration in the early to mid 1980s. Consequently, the expectation is that there will be major changes in future editions of the book dealing with regulation.



# 目 录

第 1 章 导论 .....	1
<b>第一部分 市场参与者</b>	
第 2 章 市场参与者与金融创新概览 .....	19
第 3 章 存款金融机构 .....	39
第 4 章 保险公司 .....	62
第 5 章 资产管理公司 .....	74
第 6 章 投资银行 .....	100
<b>第二部分 市场组织与市场结构</b>	
第 7 章 初级市场和二级市场 .....	115
<b>第三部分 金融衍生品市场</b>	
第 8 章 金融期货市场 .....	143
第 9 章 期权市场 .....	168
第 10 章 互换、上限与下限市场 .....	196
<b>第四部分 权益市场</b>	
第 11 章 普通股票市场一 .....	205
第 12 章 普通股票市场二 .....	225
<b>第五部分 利率决定与债券估值</b>	
第 13 章 利率理论与利率结构 .....	252

第 14 章	债券合约价值与其价格波动特征 .....	278
第 15 章	利率期限结构 .....	300

## 第六部分 债券市场

第 16 章	货币市场 .....	322
第 17 章	国债与联邦机构证券市场 .....	339
第 18 章	公司高级金融工具市场 .....	360
第 19 章	市政证券市场 .....	372
第 20 章	住房抵押证券市场 .....	385
第 21 章	资产支持证券市场 .....	415
第 22 章	国际债券市场 .....	429
第 23 章	利率风险转移市场;证券交易所产品 .....	440
第 24 章	信用风险转移市场;信用衍生品与债务抵押债券 .....	461

## 第七部分 外汇市场

第 25 章	外汇交易市场与风险控制工具 .....	481
--------	---------------------	-----

---

# Contents

## **CHAPTER 1 Introduction 1**

Financial Assets	1
Financial Markets	9
Derivative Markets	13
Asset Classes	14

## **SECTION I: THE PLAYERS**

## **CHAPTER 2 Overview of Market Participants and Financial Innovation 19**

The Players	20
Financial Institutions	24
Role of Financial Intermediaries	25
Overview of Asset/Liability Management for Financial Institutions	27
Regulation of Financial Markets	30
Financial Innovation	32

## **CHAPTER 3 Depository Institutions 39**

Asset/Liability Problem of Depository Institutions	40
Concerns of Regulators	42
Commercial Banks	43
Capital Requirements for Banks	48
Savings and Loan Associations	54
Savings Banks	57
Credit Unions	57

## **CHAPTER 4 Insurance Companies 62**

Overview of Insurance Companies	62
Types of Insurance	63
Insurance Companies versus Types of Products	65
Fundamentals of the Insurance Industry	66

Regulation of Insurance Companies	66
Deregulation of the Insurance Industry	67
Structure of Insurance Companies	68
Types of Life Insurance	68
Taxation of Life Insurance	70
General Account and Separate Account Products	70
Insurance Company Investment Strategies	71

## **CHAPTER 5 Asset Management Firms 74**

Overview of the Asset Management Business	75
Investment Companies	76
Exchange-Traded Funds	84
Separately Managed Accounts	85
Hedge Funds	85
Pension Funds	90

## **CHAPTER 6 Investment Banking Firms 100**

Public Offering (Underwriting) of Securities	101
Trading of Securities	104
Private Placement of Securities	107
Securitization of Assets	108
Mergers and Acquisitions	108
Merchant Banking	110
Financial Restructuring Advising	110
Securities Finance	111
Prime Brokerage	111
Trading and Creation of Derivative Instruments	111
Asset Management	112

## **SECTION II: ORGANIZATION AND STRUCTURE OF MARKETS**

### **CHAPTER 7 Primary and Secondary Markets 115**

Primary Markets	116
Secondary Markets	123

## **SECTION III: DERIVATIVES MARKETS**

### **CHAPTER 8 Introduction to Financial Futures Markets 143**

Mechanics of Futures Trading	144
Futures versus Forward Contracts	146
Risk and Return Characteristics of Futures Contracts	146

Pricing of Futures Contracts	147
Theoretical Futures Price Based on Arbitrage Model	150
General Principles of Hedging with Futures	153
The Role of Futures in Financial Markets	163

## **CHAPTER 9 Introduction to Options Markets 168**

Option Contract Defined	168
Differences between Options and Futures Contracts	170
Risk and Return Characteristics of Options	170
Pricing of Options	179
Economic Role of the Option Markets	189
Exotic Options	191

## **CHAPTER 10 Introduction to Swaps, Caps, and Floors Markets 196**

Swaps	196
Cap and Floor Agreements	201

## **SECTION IV: THE EQUITY MARKET**

### **CHAPTER 11 Common Stock Market: I 205**

Overview of Trading Locations in the United States	206
Stock Exchanges	207
The OTC Market	210
The Third Market	212
The Fourth Market: Alternative Trading Systems	213
Execution of an Order	214
Other Types of Common Stock Trading	214
The Role and Regulation of Dealers in Exchange and OTC Markets	215
Trading of Stocks Outside the Country Where They Are Domiciled	221

### **CHAPTER 12 Common Stock Market: II 225**

Trading Mechanics	225
Transaction Costs	229
Trading Arrangements for Retail and Institutional Investors	232
Price Limits and Collars	238
Stock Market Indicators	240
Pricing Efficiency of the Stock Market	244
Global Diversification	246



## SECTION V: INTEREST RATE DETERMINATION AND BOND VALUATION

### CHAPTER 13 The Theory and Structure of Interest Rates 252

The Theory of Interest Rates	253
The Structure of Interest Rates	267

### CHAPTER 14 Valuation of Debt Contracts and Their Price Volatility Characteristics 278

Features of Debt Contracts	278
Basic Valuation Principles	279
Return from a Bond: Yield to Maturity Measure	281
Price of an Option-Free Bond	281
Reasons for Changes in Bond Price	282
What Determines the Premium-Par Yield	283
Reinvestment of Cash Flow and Yield	283
Bond Price Volatility	284

### CHAPTER 15 The Term Structure of Interest Rates 300

The Yield Curve and the Term Structure	300
Forward Rates	306
Historical Shapes Observed for the Treasury Yield Curve	311
Determinants of the Shape of the Term Structure	312
The Main Influences on the Shape of the Yield Curve	317

## SECTION VI: DEBT MARKETS

### CHAPTER 16 Money Markets 322

Treasury Bills	323
Commercial Paper	325
Large-Denomination Negotiable Certificates of Deposit	328
Bankers Acceptances	330
Repurchase Agreements	332
Federal Funds	336

### CHAPTER 17 Treasury and Agency Securities Markets 339

Market for U.S. Treasury Securities	339
Market for Federal Agency Securities	354

### CHAPTER 18 Corporate Senior Instruments Markets 360

Credit Risk and the Rating of Corporate Debt	361
Bankruptcy and Creditor Rights	364

Bank Loans	367
Lease Financing	369

## **CHAPTER 19 Municipal Securities Markets 372**

Types and Features of Municipal Securities	373
Credit Risk	377
Tax Risks Associated with Investing in Municipal Securities	378
The Primary Market	379
The Secondary Market	379
Yields on Tax-Exempt Municipal Bonds	380
The Taxable Municipal Bond Market	380
Regulation of the Municipal Securities Market	381

## **CHAPTER 20 The Market for Residential Mortgage-Backed Securities 385**

Development of the Secondary Mortgage Market	385
Sectors of the Residential Mortgage-Backed Securities Market	387
Agency Pass-Through Securities	388
Agency Collateralized Mortgage Obligations	398
Agency Stripped Mortgage-Backed Securities	407
Nonagency MBS	408

## **CHAPTER 21 Market for Asset-Backed Securities 415**

Creation of an ABS	416
Collateral Type and Securitization Structure	420
Review of Major Non-mortgage-Related Types of ABS	421
Credit Risks Associated with Investing in ABS	423
Securitization and the Impact on Financial Markets	426

## **CHAPTER 22 International Bond Markets 429**

Classification of Global Bond Markets	429
Eurobond Market	431
Government Bond Markets	434
Emerging Market Bonds	436
The European Covered Bonds Market	437

## **CHAPTER 23 Market for Interest Rate Risk Transfer Vehicles: Exchange-Traded Products 440**

Interest Rate Futures Contracts	441
---------------------------------	-----

Exchange-Traded Interest Rate Options	452
---------------------------------------	-----

**CHAPTER 24 Market for Credit Risk Transfer Vehicles: Credit Derivatives  
and Collateralized Debt Obligations 461**

Credit Derivatives	462
Credit Default Swaps	465
Collateralized Debt Obligations	470
Credit-Linked Notes	474
Concerns with New Credit Risk Transfer Vehicles	475

**SECTION VII: FOREIGN EXCHANGE MARKETS**

**CHAPTER 25 The Market for Foreign Exchange and Risk  
Control Instruments 481**

The Euro	482
Foreign Exchange Rates	483
Spot Market	486
Instruments for Hedging Foreign Exchange Risk	488

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# CHAPTER I

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## Introduction

### LEARNING OBJECTIVES

After reading this chapter you will understand:

- what a financial asset is.
- the distinction between a debt instrument and an equity instrument.
- the general principles for determining the price of a financial asset.
- ten properties of financial assets: moneyness, divisibility and denomination, reversibility, term to maturity, liquidity, convertibility, currency, cash flow and return predictability, complexity, and tax status.
- the principal economic functions of financial assets.
- what a financial market is and the principal economic functions it performs.
- the different ways to classify financial markets.
- what is meant by a derivative instrument.
- the reasons for the globalization of financial markets.
- the classification of global financial markets.
- what is meant by an asset class.

In a market economy, the allocation of economic resources is driven by the outcome of many private decisions. Prices are the signals that direct economic resources to their best use. The types of markets in an economy can be divided into (1) the market for products (manufactured goods and services), or the *product market*; and (2) the market for the factors of production (labor and capital), or the *factor market*. In this book, we focus on one part of the factor market, the market for financial assets, or, more simply, the **financial market**. This market determines the cost of capital. In this chapter we look at the basic characteristics and functions of financial assets and financial markets.

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### FINANCIAL ASSETS

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We begin with a few basic definitions. An **asset** is any possession that has value in an exchange. Assets can be classified as tangible or intangible. The value of a **tangible asset** depends on particular physical properties—examples include buildings, land, or machinery. Tangible assets may be classified further into reproducible assets such as machinery, or nonreproducible assets such as land, a mine, or a work of art.

**Intangible assets**, by contrast, represent legal claims to some future benefit. Their value bears no relation to the form, physical or otherwise, in which the claims are recorded. **Financial assets**, financial instruments, or securities are intangible assets. For these instruments, the typical future benefit comes in the form of a claim to future cash.