

Handbook of Financial Markets

SECURITIES, OPTIONS AND FUTURES

edited by FRANK J. FABOZZI and FRANK G. ZARB

Frank J. Fabozzi and Frank G. Zarb
Editors

***Handbook of
Financial
Markets
Securities, Options,
Futures***

DOW JONES-IRWIN
Homewood, Illinois 60430

© DOW JONES-IRWIN, 1981

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional person should be sought.

From a Declaration of Principles jointly adopted by a Committee of the American Bar Association and a Committee of Publishers.

ISBN 0-87094-216-6

Library of Congress Catalog Card No. 80-70448

Printed in the United States of America

3 4 5 6 7 8 9 0 K 8 7 6 5 4 3

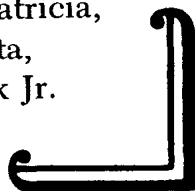


FJF's corner

To my wife Frances
and L, M, J, & S

FGZ's corner

To my wife Patricia,
daughter Krista,
and son Frank Jr.



Foreword

I once received a letter from a college student who posed several blunt questions concerning our nation's economy. One of the questions was, "What can we as citizens of the United States do to help the economic situation?" I responded that there were several principles of life that all of us can observe with the conviction that we will be helping our nation's economic situation. Foremost among those principles is the responsibility to improve our understanding of economic phenomena. Education is a never-ending process. The intellectual excitement of the classroom need not be lost and should not be lost as we move on in life. The economic problems of our time are profoundly challenging, and there will be new ones in the future. We must strive for dependable knowledge of economic realities so that we can make wiser decisions in the marketplace and at the polling booth. This work assembled by Frank J. Fabozzi and Frank G. Zarb is an important contribution to basic understanding of today's investment markets.

Arthur F. Burns

Preface

Sound investment policy requires an understanding of the different investment instruments from which a portfolio can be constructed. Investors are generally familiar with some of the more common instruments, but it is the experience of the editors that many misconceptions surround some instruments. Options and futures contracts, for example, are depicted as purely speculative instruments by some members of the investing public. Such a categorization reflects the lack of understanding about how these instruments can reduce overall portfolio risk when properly utilized.

Given the increasing number of outlets available to investors in the securities, options, and futures markets, the editors felt a need for a handbook that would provide a broad knowledge of these alternatives. The *Handbook*, intended for both experienced and novice investors, is divided into three books: Securities Markets, Options Market, and Futures Markets. The instruments and trading mechanics for each market are described. Since all forms of investing involve the assumption of risk, the particular risks associated with each instrument are explained. Because investors seek to maximize aftertax returns after adjusting for risk, the basic provisions of the tax code applicable to instruments traded in the three markets are discussed.

A well-educated investor should also be aware of market participants that may influence the price behavior of the instruments traded. Consider, for example, the following conclusion reported in *The New York Times*: "The Institutions . . . dump large blocks of shares in the market at the least hint of trouble, and the small investor usually becomes the victim of the resulting slump in the price of the stock."* Therefore, market participants in each market are described, and a chapter devoted to market psychology explains the herdlike trading pattern behavior of some institutional investors. Since the regulation of market-making activity and commissions charged for transactions will influence trading opportunities, the regulation of each market is discussed.

Each chapter of the *Handbook* was written by an expert in the field. Many of the contributors have written books and articles in leading professional journals about their topic. Several chapters incorporate

* "How to Ignore the Institutions," February 22, 1975, p. 34.

material previously published by a contributor, and we gratefully acknowledge with the appropriate credit line, the organizations permitting the inclusion and updating of such material.

We extend our deep personal appreciation to our contributors and others who contributed to the final product. In particular, our editorial advisory board guided us and gave generously of their precious time. Charles D. Ellis, Patrick J. Regan, and Richard R. West reviewed most of the Securities Markets chapters. Gary L. Gastineau and Edward D. Zinbarg gave considerable direction in the organization and content of the chapters in the Options Market section of the *Handbook*. Mark J. Powers was our sole mentor for Book III, Futures Markets.

An editorial footnote is needed to explain the use of the pronoun *he* in some parts of the *Handbook*. In most instances, when referring to a person the contributors used the term *investor*. It became necessary, however, to use a pronoun at certain times. The pronoun *he* was selected by both male and female contributors for convention. They felt that alternatives such as *he/she* or *he or she* or *(s)he* are awkward. The use of the generic *he* throughout this *Handbook*, then, is meant to include both sexes.

Frank J. Fabozzi

Frank G. Zarb

Contributors

- Robert M. Bear** Associate Professor of Finance, The Pennsylvania State University, University Park, Pennsylvania
- Gary L. Bergstrom** President, Acadian Financial Research, Inc., Boston, Massachusetts
- Gene Carasick** Assistant Director, Division of Market Regulation, Securities and Exchange Commission, Washington, D.C.
- David N. Dreman** President, David Dreman Associates, New York, New York
- Louis H. Ederington** Professor of Economics, Georgia State University, Atlanta, Georgia
- Frank J. Fabozzi** Associate Professor of Economics, Queens College of the City University of New York, Flushing, New York
- Stephen Feldman** Dean and Professor of Finance, School of Business and Public Administration, Western Connecticut State College, Danbury, Connecticut
- Katherine M. Finn** Portfolio Manager, Kidder, Peabody & Co., Inc., New York, New York
- Jack Clark Francis** Professor of Economics and Finance, Bernard Baruch College of the City University of New York, New York, New York
- Lawrence A. Garber** President, Woodcliff Consultants, Inc., Woodcliff Lakes, New Jersey
- Gary L. Gastineau** Manager, Options Portfolio Service, Kidder, Peabody & Co., Inc., New York, New York
- John G. Gillis** Hill & Barlow, and General Counsel of The Financial Analysts Federation, Boston, Massachusetts
- Beverly S. Gordon** Special Counsel, Options Division, American Stock Exchange, New York, New York
- Angelico Groppelli** Associate Professor of Banking and Finance, Hofstra University, Hempstead, New York
- Paul M. Horvitz** Professor of Finance, University of Houston, Houston, Texas
- Dennis J. Jacobs** Director of Research, United States League of Savings Associations, Chicago, Illinois

- Frank J. Jones** Senior Vice President and Director of Economic Research, New York Futures Exchange, New York, New York
- Robert Katz** Assistant Professor of Taxation, Hofstra University, Hempstead, New York.
- John K. Koeneman** Vice President, State Street Bank & Trust Co., Boston, Massachusetts
- Kenneth R. Leibler** Senior Vice President, Administration and Finance; former Vice President, Options Division, American Stock Exchange, New York, New York
- Nicholas J. Letizia** Arthur Andersen, New York, New York
- Gregory M. LiCalzi** Assistant Vice President, Municipal Finance Department, Drexel Burnham Lambert, Inc., New York, New York
- Terrence F. Martell** Associate Professor of Finance, The University of Alabama, University, Alabama
- William C. Melton** Vice President, Irving Trust Company, New York, New York
- Victor Niederhoffer** Chairman of Niederhoffer, Cross, & Zeckhauser, Inc., New York, New York
- Paul M. Otteson** Consultant, Owatonna, Minnesota
- Mark J. Powers** President, Powers-Vogel, Inc. Jersey City, New Jersey
- Patrick J. Regan** Vice President, BEA Associates, Inc., New York, New York
- Frank K. Reilly** Professor of Finance, University of Illinois at Urbana-Champaign, Urbana, Illinois
- David J. S. Rutledge** President and Chief Executive Officer, Sydney Futures Limited, Sydney, Australia
- Harry C. Sauvain** Professor of Finance, Emeritus, Indiana University, Bloomington, Indiana
- Howard Schneider** Rosenman Colin Freund Lewis & Cohen, and the first General Counsel of the Commodity Futures Trading Commission, 1975-1977, New York, New York
- Martin Siegel** Vice President and Manager, International Arbitrage Department, Salomon Brothers, New York, New York
- Marcia Stigum** President, Stigum & Associates, New York, New York
- Kenneth J. Thygerson** Chief Economist, United States League of Savings Associations, Chicago, Illinois
- Richard R. West** Dean and Professor of Finance, The Amos Tuck School of Business Administration, Dartmouth College, Hanover, New Hampshire

- Lewis M. Weston** Partner, Goldman, Sachs & Co., New York, New York
- Nancy H. Wojtas** Legal Assistant, Office of the Chairman, Securities and Exchange Commission, Washington, D.C.
- John C. Woody** John C. Woody Consulting Actuaries, New York, New York.
- Richard Zeckhauser** Professor of Economics, Harvard University, Cambridge, Massachusetts; Niederhoffer, Cross, & Zeckhauser, Inc., New York, New York

Contents

BOOK ONE SECURITIES MARKETS

PART ONE ENVIRONMENT

1. **An Overview of the U.S. Financial System,**
Frank J. Fabozzi and Angelico A. Groppelli 5
Flow of Funds among Economic Sectors. Importance of Financial Intermediaries to Major Economic Sectors. Sources and Uses of Funds. Markets for Short- and Long-Term Funds. The Nonfinancial Corporate Sector. Other Roles Played by Financial Intermediaries. Coda
2. **Efficiency of the Securities Markets,** *Richard R. West* 20
The Operational Efficiency of Securities Markets. The Pricing Efficiency of Markets. Operational versus Pricing Efficiency. The Allocational Efficiency of Securities Markets.
3. **Interest Rates and the Securities Markets,** *Frank J. Fabozzi* 29
Interest Rates and Bond Prices. Factors That Influence Interest Rates. Interest Rates and Remaining Maturity. Historical Returns on Bonds and Common Stock.
4. **Psychology and Markets,** *David N. Dreman* 41
Dr. Lebon's Crowd. The Mississippi Scheme. What Is Social Reality? The Reality of 1962. The Compellingness of Crowd Opinion. God Has Been Good to Solitron Devices. Not Very Different.
5. **Regulation of the Securities Markets: Securities and Exchange Commission,** *Nancy H. Wojtas* 63
Background. Organization of the SEC. The Securities Act of 1933. The Securities Exchange Act of 1934: Corporate Reporting. Proxy Solicitations: Tender Offer Solicitations and Going Private Transactions. Insider Trading. Registration of Securities Exchanges, Securities Associations, Brokers and Dealers, and Municipal Securities Dealers. National Market

System. Margin Trading. The Public Utility Holding Company Act of 1935. The Trust Indenture Act of 1939. The Investment Company Act of 1940. The Investment Advisers Act of 1940. Enforcement, Administrative Interpretations, and Rulemaking: Enforcement. Administrative Interpretations and Rulemaking.

- 6. Regulation of the Securities Markets: Self-Regulation,**
John G. Gillis 84
- The 1975 Securities Acts Amendments. Exchange Disciplinary Actions. The National Association of Securities Dealers, Inc. SEC Activity—The Options Study. The Commodity Futures Trading Commission. The Municipal Securities Rulemaking Board. Private Regulation of Financial Analysts and Investment Managers: *The Evolving Role of Financial Analysts and Investment Managers. Private Self-Regulation of Financial Analysts. The Investment Analysts Standards Board. The Disciplinary Structure.* The Accounting Profession: *AICPA Actions.*
- 7. Tax Policy and the Securities Markets, Robert Katz** 101
- Basic Provisions: *Miscellaneous Capital Gains Provisions.* Capital Gains History and Future Legislation: *Analysis of Capital Gains History. The Need for Capital Gains. Alternative Proposed Methods of Taxing Capital Gains. Capital Gains: What About the Near Future? An Analysis of the Capital Gains Alternatives.*

PART TWO

THE STRUCTURE OF THE SECURITIES MARKETS

- 8. The New Issues Market, Lewis M. Weston** 123
- Definitions. Sources of Issues and Methods. Underwriting—The Choices. Pricing an Issue. Price Performance of New Issues. Private Placements. Coda.
- 9. Secondary Markets, Frank K. Reilly** 135
- Introduction. What Is a Market? Factors That Determine a “Good” Market. Importance of Secondary Markets. Secondary Bond Markets: *Types of Bonds. Secondary Corporate Bond Market. Secondary Government Bond Market.* Secondary Equity Markets: *National Securities Exchanges. Regional Securities Exchanges. The Over-the-Counter Market (OTC). The Third Market. The Fourth Market.* Detailed Analysis of the Exchange Market: *Exchange Membership.* Market Participants and the Functioning of the Secondary Markets: *Evidence of Institutionalization. Growth of Block Trades.* Summary.

- 10. How a National Market System Might Work,**
William C. Melton 165
- Growth of Institutional Trading. Market Fragmentation. Response of the Congress and the SEC. Implementation of the 1975 Legislation. Rule 390. Evaluation of the Reforms. Alternative Designs for the NMS: *Intermarket Trading System. National Securities Trading System. An ITS/NSTS Interface.* Implications of the NMS. Whither the NMS? Appendix. The Secondary Market for Corporate Equities.
- 11. The Money Market,** *Marcia Stigum* 192
- The Instruments in Brief: *U.S. Treasury Securities. T Bill Futures Market. Federal Agency Securities. Federal Funds. Eurodollars. Certificates of Deposit. Eurodollar Certificates of Deposit. Commercial Paper. Bankers' Acceptances. Repurchases and Reverses. Municipal Notes.* Market Makers: Dealers. The Most Watched Player: The FED.
- 12. International Securities Markets,** *Gary L. Bergstrom,*
John K. Koeneman, Martin J. Siegel 214
- Introduction. Benefits of International Investing. Other Evidence of Risk Reduction from International Investing. Future Investment Returns. Potential Obstacles: *The Effects of Currency Fluctuations on International Equity Portfolios. Political Risks.* Tax Factors. Implementing International Investment Strategies. Availability of Information on Foreign Equities. Institutional Investing. Individual Investing. International Trading.

PART THREE

THE INSTRUMENTS OF THE SECURITIES MARKETS

- 13. Corporate Bonds,** *Harry C. Sauvain* 245
- Introduction. The Corporate Trustee. Security for Bonds: *Collateral Trust Bonds. Equipment Trust Certificates. Debenture Bonds. Subordinated and Convertible Debentures.* Provisions for Paying Off Bonds. Rates of Return on Corporate Bonds. Differences in Yields by Bond Ratings. Yields Vary with Market Rates of Interest. Bond Yields Vary with Rates of Inflation. Purchasing Power Risk. The Bond Markets: *The Exchange Market. The OTC Market.* Differences in the Quality of Marketability.
- 14. Corporate Stocks,** *Frank K. Reilly* 269
- Introduction. Description of Securities: *Preferred Stock. Equity Securities (common stock).* Classification of Companies: *Development of Tiered*

- Trading Markets. Sources of Information about a Company: Company-Generated Information. Commercial Publications. Brokerage Firm Reports. Investment Magazines. Buying and Selling Common Stock: Types of Orders. Margin Transactions. Cost of Transactions. Cost to Institutions. Costs for Individuals. Historical Returns on Common Stock. Empirical Evidence on Common Stocks as Inflation Hedges: RJS Studies. Further Studies. Stock Market Indicator Series: Differences among Market Series. Price-Weighted Series. Value-Weighted Series. Unweighted Price Indicator Series. Comparison of Indicator Series Changes over Time: Daily Percentage of Changes. Annual Price Changes. Summary.*
- 15. Money Market Instruments, Marcia Stigum** 312
- Treasury Bills: Determining the Yield on Bills. Bill Quotes. Fluctuations in a Bill's Price. Buying Bills. Selling Bills. Bills Held to Maturity. Commercial Paper: Issuers of Paper. Issuing Techniques. Paper Maturities. Paper Yields. Risk and Ratings. Buying Dealer Paper. Buying Direct Paper. Buying Bank Paper. Bankers' Acceptances. Negotiable Certificates of Deposit. Municipal Notes: Characteristics. Volume Outstanding.*
- 16. U.S. Government and Federal Agency Obligations, Marcia Stigum** 345
- U.S. Government Obligations: Volume Outstanding. Bills, Notes and Bonds. Issuing Practices. Buying and Selling Notes and Bonds: Series E and H Savings Bonds. Federal Agencies Issuing Securities: The Federal Financing Bank. Agency Securities. Housing Credit Agencies. Farm-Credit Agencies. Federal Agency Securities.*
- 17. State and Local Government Securities, Gregory M. LiCalzi** 375
- Federal Tax Exemption. Types of Municipal Securities: General Obligation Bonds. Revenue Bonds. Special-Tax Bonds. Refunding Bonds. Notes. Bond Description: Form, Interest Rate, and Principal Maturity. Price and Rate of Return. Municipal Yields and Yield Spreads. The Municipal Bond Market: The New Issue Market. The Secondary Market. Volume. Municipal Bond Insurance.*
- 18. Mortgages, Dennis J. Jacobe and Kenneth J. Thygeson** 399
- The Mortgage Market in Aggregate. The Primary Mortgage Market: Major Private Mortgage Lending Institutions. Mortgages for New and Existing Units. The Volatility of Residential Mortgage Lending. The*

Secondary Mortgage Market: *A Description of the Secondary Mortgage Market. Major Participants in the Secondary Mortgage Market. Mortgage-Backed Debt Instruments: Government National Mortgage Association Pass-Through Securities. Federal Home Loan Mortgage Corporation Participation Certificates. Federal Home Loan Mortgage Corporation Guaranteed Mortgage Certificates. Private Issue Mortgage-Backed Bonds. Private-Issue Pass-Through Certificates. Industrial Development Mortgage Bonds. Summary.*

**PART FOUR
PRIVATE FINANCIAL INTERMEDIARIES AND THE
SECURITIES MARKETS**

- 19. **Commercial Banks, Paul M. Horvitz 421**
 Risk, Return, and Liquidity. The Sources of Commercial Bank Funds. The Use of Bank Funds. Commercial Bank Loans: *Types of Loans*. Bank Investments. Liability Management.

- 20. **Savings and Loan Associations, Mutual Savings Banks, and
Credit Unions, Kenneth J. Thygeson 449**
 Introduction. Government Incentives for Nonbank Financial Intermediaries: *Federal Deposit Insurance of Accounts. Tax Incentives. Regulation Q and the Differential. Access to Federal Agency Credit*. Savings and Loan Associations: *Business Structure. Asset Structure. Liquidity. Other Investments. Liabilities and Net Worth. Government Supervision, Examination, and Assistance*. Mutual Savings Banks: *Business Structure. Asset Structure. Liabilities and Net Worth. Government Supervision, Examination, and Assistance*. Credit Unions: *Business Structure. Common Bond. Asset Structure. Liabilities and Net Worth. Government Supervision, Examination, and Assistance*.

- 21. **Life Insurance Companies, John C. Woody 474**
 Insurance as a Risk Transfer. Long-Term versus Short-Term risks. Constraints on Investment of Reserves. Mutual versus Stock Companies. Sources of Funds for Investment. Factors Affecting Benefit Payments. Interest and Expense. Regulation and Tax Considerations: *Regulation. Federal Income Tax. Conclusion*.

- 22. **Private Noninsured Pension Funds, Patrick J. Regan 484**
 What Are Private Noninsured Pension Funds? The Magnitude of Pension Assets. Changes in Asset Mix. Secular Changes in Pension Funds.

- 23. Property and Casualty Companies, Paul M. Otteson** 495
 Overview. The Business of Property-Casualty Insurance. Constraints on Investment Policy. Investment Objectives, Policy Determination and Execution. Summary.
- 24. Investment Companies, Frank J. Fabozzi and Angelico A. Groppelli** 507
 Types of Investment Companies: *Open-End Investment Companies. Closed-End Investment Companies.* Objectives and Policies: *Money Market Funds.* Management Fees and Services. Valuation of Fund Shares. Market Performance and Growth of Funds. Regulation of Investment Companies. Tax Features of Investment Companies. Conclusion.
- 25. Bank Trust Departments, Stephen Feldman and Angelico A. Groppelli** 527
 What Is a Trust? Trust Agreement and Trustee Responsibility. Types of Trusts: *Testamentary Trusts. Irrevocable Living Trusts. Short-Term Trusts. Revocable Living Trusts.* Other Trust Plans of Commercial Banks. Common Trust Fund. Investment Policies of Trusts. Importance of Trusts to Commercial Banks. Regulation of Trusts.

BOOK TWO

THE OPTIONS MARKET

- 26. The Different Types of Options, Jack Clark Francis** 545
 Put and Call Markets. Profit Graphs for Options: *Call. Put. Straddle. Strip. Strap. Other Options. Writing Options Covered and Uncovered or Naked.* Options Premiums. Warrants. Conclusions.
- 27. The Risk/Reward Characteristics of Options and Options Portfolios, Gary L. Gastineau** 559
 Overview. Risk/Reward Characteristics of Options. The Significance of Option Evaluation. Variations in Option Premium Levels. Option Evaluation and Portfolio Management. The Analysis of Risk.
- 28. Mechanics and Regulation of Options Trading, Gene Carasick** 570
 The History of Options Regulation. Conventional Options. Listed Options. Expiration Cycles. Exercise Prices. Adjustments in the Terms of Listed Options Contracts. Restrictions on Deep-Out-Of-The-Money Options (The "Restricted Options Rule"). Other Restrictions. Limitations on

Positions in Listed Options. Limitations on the Exercise of Listed Options. Underlying Securities. Margin Requirements.

- 29. **Market Participants: Individuals and Market Professionals,**
Katherine M. Finn 586
Individual Investors. Market Professionals.
- 30. **Market Participants: Institutions,** *Beverly S. Gordon* 593
The Prudent-Man Rule. State Law: *Options and the Prudent Man. Writing Calls. Buying Calls. Writing Puts. Buying Puts. Current State of the Law.* Federal Law—ERISA.
- 31. **Tax Planning and Options Trading,** *Kenneth R. Leibler* 608
Capital Gains and Losses. The Taxation of Options Holders: *Planning Techniques for Holders.* Taxation of Options Writers: *Planning Techniques for Writers.* Spreads and Straddles: *Options Spreading. Straddle Positions.*

BOOK THREE
FUTURES MARKETS

- 32. **Introduction to Futures Contracts,** *Robert M. Bear* 629
Background. The Development of a Modern Futures Contract. Economic Benefits of Futures Trading. Hedging. Speculating: *Spreading. Margins. Motives for Speculation.* Concluding Comments.
- 33. **Mechanics of Futures Trading,** *Robert M. Bear* 640
The Futures Commission Merchant. Making a Transaction. The Delivery Procedure: *Why and When. Where and How.*
- 34. **Commodity Futures Markets: General Information,**
Mark J. Powers 647
Commodity Futures Exchange. The Commodities Traded.
- 35. **The Futures Markets for Precious Metals,**
David J. S. Rutledge 655
Introduction. The Metals and the Markets: *Gold. Silver. Platinum and Palladium.* Price Determinants: *Gold. Silver. Platinum and Palladium.* Hedging in Precious Metals Futures: *An Example of Long Hedging. An Example of a Short Hedge.* Spreading Transactions in Precious Metals Futures. Conclusion.