

Edited by Frank J. Fabozzi Fordham University

Readings in Investment Management



© RICHARD D. IRWIN, INC., 1983

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.

ISBN 0-256-02934-2 Library of Congress Catalog Card No. 82-82691 Printed in the United States of America

Preface

This book is designed for use as a supplementary book for an undergraduate or MBA course in investment management. It differs from other readings books in two ways. First, the majority of readings in most books are reprints of articles that have provided the foundation for the development of the present literature. Although instructors would like their students to read the original works, it is unlikely that students will gain an appreciation of the significance of the contribution in an introductory course. In fact, an important consideration in selecting an investment management textbook is the depth and breadth of coverage of the literature. At the introductory level, it is easier to have the textbook set forth the prevailing literature and summarize the contribution of researchers than trying to have students read the original works and recognize the significance of the contributions.

The selection of readings in this book was based on a different criterion. The topics are those that are either not adequately covered or not covered at all in most investment textbooks. In some instances, the lack of coverage may be due to the fact that a topic is too new to have been included in the textbook. The field of investment management has grown dramatically in recent years with the development of new financial contracts and new portfolio strategies, and the willingness of money managers to invest in opportunities outside of the traditional investments such as common stock and bonds. Therefore, it is understandable that authors find it difficult to cover all new developments.

The second way in which this book differs from other readings books is the source of the contributions. Whereas other readings books include articles from academic and professional journals, only one selection in this book is taken from a journal. The other selections are taken from either a Dow Jones-Irwin handbook or adapted from a book written on the topic. Consequently, the selections are written like chapters in a textbook. This makes it easier for the instructor to integrate the readings with the textbook and for students to understand the topic. The grid that appears on page xi sug-

gests how each selection in this book can be assigned as supplementary reading to the chapters of 15 investment management textbooks. The book is divided into the following five sections:

- 1. Psychology and Markets
- 2. Fixed Income Instruments
- 3. Portfolio Management
- 4. Options and Financial Futures
- 5. Tax Shelters, Real Estate, and Venture Capital

The contributors are recognized experts in the area they have written about for this book. Of the 26 contributors, only 3 are not engaged in full-time employment in the investment community. Twelve of the contributors have written or edited at least one book related to the topic they have contributed to this book.

I am indebted to many for their assistance in this project. To all the contributors, I extend my deep thanks and appreciation. The following individuals provided me with guidance in selecting the topics included in this book: Professor Stanley B. Block (Texas Christian University), Professor Geoffrey A. Hirt (Illinois State University), and Professor Robert Klemkosky (Indiana University). Special thanks are extended to Dr. Sylvan Feldstein (Moody's Investors Service), Professor Michael G. Ferri (University of South Carolina), Professor Jack Clark Francis (Bernard M. Baruch College, CUNY), Gary L. Gastineau (Kidder, Peabody & Co., Inc.), Professor Harry Greenfield (Queens College, CUNY), Dr. Robert Kopprasch (Salomon Brothers Inc), and Dean Richard R. West (Amos Tuck School, Dartmouth College) whose advice and friendship have been helpful throughout.

I am grateful to the following publishers for granting me permission to reprint the selections in this book: Addison-Wesley Publishing Company, Inc., Dow Jones-Irwin, Inc., McGraw-Hill Book Company, Random House, Inc., and the *Financial Analysts Journal*.

Frank J. Fabozzi

List of Contributors

- Gary L. Bergstrom, Ph.D.: President, Acadian Financial Research, Inc., Boston, Massachusetts.
- Peter L. Bernstein: Peter L. Bernstein, Inc., New York, New York, and Editor of *The Journal of Portfolio Management*.
- Richard M. Bookstaber, Ph.D.: Associate Professor of Economics and Finance in the Graduate School of Business at Brigham Young University.
- Peter E. Christensen: Vice President, The First Boston Corporation.
- David N. Dreman: Managing Director, Dreman, Gray & Embry, Inc., New York, New York.
- Frank J. Fabozzi, Ph.D., C.F.A., C.P.A.: Professor of Economics, Fordham University.
- Sylvan G. Feldstein, Ph.D.: Vice President and Bond Analyst, Moody's Investors Service.
- Gary L. Gastineau: Manager, Options Portfolio Service, Kidder, Peabody & Company, New York, New York.
- Roy D. Gottlieb: President, Kenroy Inc., Skokie, Illinois.
- Alan J. Inbinder, AFLM: President, The Indevco Group, Skokie, Illinois.
- John K. Koeneman: Vice President, State Street Bank & Trust Co., Boston, Massachusetts.
- Robert W. Kopprasch, Ph.D., C.F.A.: Vice President, Salomon Brothers Inc, New York, New York.
- Martin L. Leibowitz, Ph.D.: Managing Director, Bond Portfolio Analysis Group, Salomon Brothers Inc, New York, New York.
- Allan M. Loosigian: President, Allan M. Loosigian & Company, Stamford, Connecticut.
- Victor Niederhoffer, Ph.D.: Chairman, Niederhoffer, Cross and Zeckhauser, Inc., New York, an investment banking firm that engages in the trade of commodities through its subsidiary, NCZ Commodities.
- Alan Joel Patricof: Alan Patricof Associates, New York, New York.
- Paul Sack: The Rosenberg Real Estate Equity Funds, San Francisco, California.
- Maury Seldin, DBA: Professor of Finance and Real Estate, School of Business Administration, The American University, Washington, D.C.
- Martin Siegel: Vice President of International Arbitrage Department, Salomon Brothers Inc, New York, New York.

List of Contributors

- Marcia Stigum, Ph.D.: President, Stigum & Associates, New York, New York.
- Robert E. Swanson, JD: Tax shelter consultant and lawyer with practices in New York City and Ridgewood, New Jersey.
- Barbara Mardinly Swanson: Professional writer.
- Kenneth J. Thygerson, Ph.D.: Executive Vice President, Western Federal Savings and Loan Association of Colorado and Chairman of the Board, WestAmerica Mortgage Co., Englewood, Colorado.
- James R. Vertin, C.F.A.: Senior Vice President, Wells Fargo Investment Advisors, San Francisco, California.
- Arthur W. Weimer, Ph.D., LL.D., MAI, CRE: Economic Consultant, United States League of Savings Associations, Washington, D.C.
- Richard Zeckhauser, Ph.D.: Professor of Political Economy, Harvard University, Cambridge, Massachusetts and founder of Niederhoffer, Cross, and Zeckhauser, Inc.

Cross-Index of Readings to Investment Management Textbooks

| | | | | | | | | | | | | | | | | | _ |
|---------------------------------------------------------------------|-----------------|---------------------------|-------------------|----------------------|-------------|----------------|----------------|---------------|--------------|------------|---------------|-----------|---------------|---------------|--------|------------|-----------------------------------|
| Venture Capital | 07 | 1 | 1 | 15 | 1 | 1 | 1 | 16 | 1 | 18 | 19 | 1 | | 1 | ı | 1 | |
| Management of Real Estate Portfolios | 61 | | 25 | 15 | 1 | 1 | 25 | 15 | 1 | 18 | 16 | 1 | 2 | 2 | 1 | 1 | |
| Land Investment | 81 | | 25 | 15 | 1 | 1 | 25 | 15 | 1 | 18 | 19 | | 2 | 2 | ı | 1, | |
| Selecting Real Estate Investment Opportunities | ΔI | | 25 | 15 | 1 | 1 | 25 | 15 | | 18 | 19 | 1 | 2 | 2 | 1 | | |
| Tax Shelters | 91 | 1 | | 15 | 1 | S | 7 | 16 | ı | 19 | 16 | 1 | 1 | | 6 | | |
| Market Index Futures Contracts and Predictions Fulfilled | 14 <i>&</i> | 1 | ı | 1 | 12 | , | 24 | 12 | | 17 | 19 | 13 | 1 | 18 | 17 | 10 | |
| Financial Futures: Hedging Interest Rate Risk | εī | | 22 | 15 | 12 | 1 | 24 | 12 | | 17 | 19 | 13 | , | 18 | 17 | 10 | |
| The Option Pricing Formula | 12 | 14 | S | 15 | 12 | 16 | 23 | 11 | 1 | 13 | 18 | 12 | 23 | 91 | 16 | 15 | |
| Options: Risks and Rewards | 11 | 14 | 5 | 15 | 12 | 16 | 23 | = | 1 | 13 | 18 | 12 | 23 | 16 | 16 | 15 | |
| International Securities Market | 10 | 1 | 26 | ı | 1 | ı | - | , | 1 | ı | 1 | 1 | 21 | 22 | 22 | 91 | |
| Bond Portfolio Immunization | 6 | 12 | 1 | 14 | 17 | ı | 18 | 17 | = | 1 | 1 | 6 | 18 | 15 | ı | 10 | |
| oiloîtro¶ bond ni shnərT Management | 8 | 12 | 1 | 14 | 17 | ı | 18 | 17 | = | 11 | | 6 | 18 | 15 | 12 | 19 | |
| Management of Individual Portfolios | L | 27 | ı | 9 | 18 | 19 | ! | 5, 17 | 21 | = | , | 22 | 19 | 20 | 20 | 19 | |
| Passive Equity Management Strategies | 9 | 27 | 1 | 9 | 17 | 19 | 1 | 17 | 18 | | 14 | 22 | 19 | 70 | 20 | 19 | |
| Early Redemption (Put) Options on Fixed Income Securities | ς | 13 | 9 | 14 | 11 | ∞ | 17 | 11 | 11 | 12 | 17 | 12 | 17 | 15 | 12 | 13 | • |
| Guidelines in the Credit Analysis of Gen. Ob. & Rev. Muni. Bonds | Þ | 9 | 1 | 13 | - | 1 | 17 | 6 | 13 | 1 | 7 | 1 | 16 | 14 | 11 | | |
| Investing in Mortgage-Backed Securities | ε | 3 | 25 | 15 | 5 | 1 | 1 | 6 | ı | m | ∞ | - | 16 | 14 | 11 | ı | |
| Money Market Instruments | 7 | - | 22 | 15 | 1 | - | - | 1 | ı | 1 | 2 | 2 | 1 | - | 11 | 1 | |
| Psychology and Markets | ī | 1 | - | 1 | ı | 1 | 1 | 1 | ı | 1 | ! | 1 | _ | _ | 1 | 1 | |
| Readings Titles | | | | | | | | | | | | _ | | | | \exists | |
| | Authors | Bellmore/Phillips/Ritchie | Christy/Clendenin | Cohen/Zinbarg/Ziekel | Curley/Bear | Francis (1980) | Francis (1983) | Gitman/Joehnk | Hayes/Bauman | Hirt/Block | Mittra/Gassen | Radcliffe | Reilly (1979) | Reilly (1982) | Sharpe | Tinic/West | Note: indicates that the indicate |

is not extensive coverage of topic in textbook. The numbers in the boxes indicate the chapters in the textbooks.

Key to Textbooks

- Douglas H. Bellemore, Herbert E. Phillips, and John C. Ritchie, *Investment Analysis and Portfolio Selection: An Integrated Approach* (Cincinnati: South-Western Publishing, 1979).
- George A. Christy and John C. Clendenin, *Introduction to Investments*, 7th ed. (New York: McGraw-Hill, 1978).
- Jerome B. Cohen, Edward D. Zinbarg, and Arthur Zeikel, *Investment Analysis and Portfolio Management*, 4th ed. (Homewood, Ill.: Richard D. Irwin, 1982).
- Anthony J. Curley and Robert M. Bear, *Investment Analysis and Management* (New York: Harper & Row, 1979).
- Jack C. Francis, *Investments: Analysis and Management*, 3d. ed. (New York: McGraw-Hill, 1980).
- Jack C. Francis, *Management of Investments* (New York: McGraw-Hill, expected copyright date 1983). Cross-index based on preliminary outline reviewed.
- Lawrence J. Gitman and Michael D. Joehnk, Fundamentals of Investing (New York: Harper & Row, 1981).
- Douglas A. Hayes and W. Scott Bauman, *Investments: Analysis and Management*, 3d. ed. (New York: Macmillan, 1976).
- Geoffrey Hirt and Stanley Block, Fundamentals of Investment Management and Strategy (Homewood, Ill.: Richard D. Irwin, 1983). Cross-index based on preliminary outline reviewed.
- Sid Mittra and Chris Gassen, Investment Analysis and Portfolio Management (New York: Harcourt Brace Jovanovich, 1981).
- Robert C. Radcliffe, *Investment: Concepts, Analysis, and Strategy* (Glenview, Ill.: Scott, Foresman, 1982).
- Frank K. Reilly, *Investment Analysis and Portfolio Management* (Hinsdale, Ill.: Dryden Press, 1979).
- Frank K. Reilly, Investments (Hinsdale, Ill.: Dryden Press, 1982).
- William F. Sharpe, *Investments*, 2d. ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1981).
- Seha M. Tinic and Richard R. West, *Investing in Securities: An Efficient Markets Approach* (Reading, Mass.: Addison-Wesley Publishing, 1979).

Contents

| | ss-Index of Readings to Investment Management Textbooks xi to Textbooks | | | | |
|----------------------------------|------------------------------------------------------------------------------------------------------------|--|--|--|--|
| section 1 Psychology and Markets | | | | | |
| 1. | Psychology and Markets David N. Dreman | | | | |
| | ion 2 d Income Instruments | | | | |
| 2. | Money Market Instruments Marcia Stigum | | | | |
| 3. | Investing in Mortgage-Backed Securities Kenneth J. Thygerson 49 | | | | |
| 4. | Guidelines in the Credit Analysis of General Obligation and Revenue Municipal Bonds Sylvan G. Feldstein 68 | | | | |
| 5. | Early Redemption (Put) Options on Fixed Income Securities Robert W. Kopprasch | | | | |
| | on 3 folio Management | | | | |
| 6. | Passive Equity Management Strategies James R. Vertin | | | | |
| 7. | Management of Individual Portfolios Peter L. Bernstein 137 | | | | |
| App | endix: Capital Gain and Loss Tax Treatment Frank J. Fabozzi 149 | | | | |
| 8. | Trends in Bond Portfolio Management Martin L. Leibowitz 154 | | | | |
| 9. | Bond Portfolio Immunization Sylvan G. Feldstein, Peter E. Christensen, and Frank J. Fabozzi | | | | |
| Ann | | | | | |
| љррі 10. | endix: Bond Duration Frank J. Fabozzi | | | | |
| 10. | International Securities Market Gary L. Bergstrom, John K. Koeneman, and Martin J. Siegel | | | | |
| | on 4 ons and Financial Futures | | | | |
| 11. | Options: Risks and Rewards Gary L. Gastineau | | | | |
| 12. | The Option Pricing Formula Richard M. Bookstaber | | | | |

| 13. | Financial Futures: Hedging Interest-Rate Risk Allan M. Loosigian |
|------|---------------------------------------------------------------------------------------------------------|
| 14. | |
| 15. | Predictions Fulfilled: The Early Experience of Market Index Futures Contracts Richard Zeckhauser and |
| | Victor Niederhoffer |
| | on 5 Shelters, Real Estate, and Venture Capital |
| 16. | Tax Shelters Robert E. Swanson and Barbara Mardinly Swanson 333 |
| 17. | Selecting Real Estate Investment Opportunities |
| | Maury Seldin and Arthur M. Weimer |
| 18. | Land Investment Alan J. Inbinder and Roy D. Gottlieb362 |
| 19. | Management of Real Estate Portfolios Paul Sack |
| 20. | Venture Capital Alan Joel Patricof |
| Sour | ces of Readings |

section 1

Psychology and Markets

INTRODUCTION

We often hear market participants refer to a particular security as under or overvalued in the marketplace. What does this mean? According to the principles of security valuation, it means that the present value of the *expected* cash flow that will be produced by the security, when discounted at an interest rate reflecting the risk inherent with holding the security, is significantly different from its market price. The role of the security analyst is to uncover mispriced securities.

In the case of common stock, the value of a share is equal to the present value of the expected dividends. Several stock valuation models have been developed based on different assumptions about the type of dividend stream that is anticipated from the stock being analyzed.

Not all market observers, however, believe that the present value approach is a valid procedure for valuing common stock. Sir John

¹ Some market participants believe that earnings rather than dividends should be discounted. However, as explained in most textbooks, Miller and Modigliani have shown that under specified conditions both approaches are equivalent.

Maynard Keynes, for example, viewed this approach as merely a convention. In his book, *The General Theory of Employment, Interest, and Money*, he argued that short-run speculation, not long-run expectations concerning earnings and dividends, is the key determinant of stock prices. Keynes viewed the activity of professional money managers, as follows:

most of these persons are, in fact, largely concerned, not with making superior long-term forecasts of the probable yield of an investment over its whole life, but with foreseeing changes in the conventional basis of valuation a short time ahead of the general public. They are concerned, not with what an investment is really worth to a man who buys it "for keeps," but with what the market will value it at, under the influence of *mass psychology*, three months or a year hence. ... For it is not sensible to pay 25 for an investment of which you believe the prospective yield to justify a value of 30, if you also believe that the market will value it at 20 three months hence.

Thus the professional investor is forced to concern himself with the anticipation of impending changes, in the news or in the atmosphere, of the kind by which experience shows that the *mass psychology* of the market is most influenced.²

The pressure on professional money managers to "perform" in the short-run lends support to Keynes' view that stock prices may be dominated by short-run speculation.

Although textbooks explain the present value approach to stock valuation, little, if any, attention is devoted to the impact of *mass psychology* on stock prices.³ In Reading 1, David N. Dreman explains the influence of psychology on financial markets and sets forth some general principles that seem to emerge.

² John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harcourt Brace Jovanovich, 1936), pp. 154-55 (emphasis added).

³Two recent studies have found fault with the present value approach based on its apparent inability to explain the volatility of stock prices. See Stephen F. LeRoy and Richard D. Porter, "The Present Value Relation: Tests Based on Implied Variance Bounds," *Econometrica*, May 1981, pp. 555-74; and Robert J. Shiller, "Do Stock Prices Move Too Much to be Justified by Subsequent Changes in Dividends?" *American Economic Review*, June 1981, pp. 421-36.

Psychology and Markets*

 ${f l}$ DAVID N. DREMAN

Managing Director Dreman, Gray & Embry, Inc. New York, New York

London during the first days of 1524 was a city awaiting its doom. Crowds of anxious people of every social stratum gathered to listen to the numerous astrologers and fortune tellers along bustling thoroughfares. All said the same thing: on February 1 the Thames would suddenly rise from its banks, engulf the entire city, and sweep away 10,000 homes. The vision was described in terrifying detail to increasingly larger throngs.

It had started the preceding June, when a few soothsayers began to bandy about the prophecy, which quickly permeated their ranks. Month after month the warnings were repeated with total assurance, and as time passed, they became accepted by most of the population, even though the Thames had always been the most docile of rivers.

At first, only a handful of families began to leave the city, but as the time grew near, people left in ever-increasing numbers. Long streams of laborers on foot, trailed by their wives and children, tramped the muddy roads to higher ground, 15 to 20 miles away. They were joined by their more prosperous neighbors whose horse-

^{*}Adapted from chapter 4, "The Strange World of Reality," from *The New Contrarian Investment Strategy* by David N. Dreman. Copyright © 1982 by David N. Dreman. Reprinted by permission of Random House, Inc.

drawn carts were piled high with possessions. Nobles and clergy followed suit, fleeing to safe country estates. By the middle of January over 20,000 people had departed. London was rapidly becoming a ghost town.

Electing to stay, the prior of Saint Bartholomew's built a towerlike structure on Harrow-on-the-Hill and provisioned it for two months. He also acquired several boats manned by expert rowers—just in case.¹

When the ill-fated day arrived, some braver souls stayed behind to watch, the soothsayers had predicted that the river would rise slowly, allowing those fleet enough to escape. The hour finally came and, to the consternation of the watchers, nothing happened. The tide quietly ebbed and flowed, and ebbed and flowed as it always had. An awareness slowly spread over the good people that they had been had. Still, to be safe, most stayed up that night and continued their watch.

The next morning, with the Thames continuing to flow peacefully within its banks, the crowd, joined by the returning evacuees, was boiling with fury. Many shouted to throw the pack of soothsayers into the river.

Fortunately, the prophets were prepared. In a clever maneuver—seemingly not lost on present-day chartists—they said they had scrupulously rechecked their calculations the previous night and found a minute error. London was most certainly doomed, the stars were as always undeniably right. But, because of the minor oversight, the great flood would occur in 1624, not 1524. The good townspeople could go home—at least for a while.

This story, whose many variations have been replayed through history, has a great deal more to do with financial markets than you might at first think. Present-day investors employ a variety of tools to formulate investment strategies. Although these tools appear to be practical, they rest on a bed of psychological quicksand. Without understanding how investors form opinions and the psychology that affects their decision making, people's odds are considerably reduced in the marketplace.

A good place to start examining what goes wrong with established investment methods is to observe how groups or crowds affect our ability to exercise independent judgment, even in areas where we think we can be totally objective. In this chapter, we will look at crowd behavior and how it can influence us as investors.

It is important to recognize that people in groups tend to be continually swept by one idea or trend after another. Sometimes, as in the London of 1524, they have no supporting facts and still participate in crowd action that to an impartial observer borders on the

¹ Charles Mackay, Extraordinary Popular Delusions and the Madness of Crowds (New York: Noonday Press, 1974), p. 421. Originally published in London in 1841 by Richard Bently.

insane. On each occasion most people justify and often enthusiastically back the new thinking. While we can always look back and shake our heads at group folly in the past, it is far harder to remain unaffected by these influences in our own time.

The American Civil Liberties Union (ACLU) considered itself very brave indeed to defend the right to demonstrate of a handful of Nazis in 1978, a group who—though thoroughly repugnant—represented no real threat at the time. But at the height of McCarthyism during the early 1950s, the ACLU was swept along like most people and refused to defend suspected Communists. And while we may laugh at the absurd carryings on of the 17th-century Dutchmen who frantically sold their gold, jewelry, crops, and houses to buy tulip bulbs, investors made remarkably similar decisions in the 1960s and 1970s—only this time in stock rather than tulip markets.²

To survive in the marketplace, it is essential to avoid being carried away by the current mood of the crowd. The investor must find some means of being able to withstand the tide—a task anything but simple. It is necessary first to understand exactly how these crowd influences affect investment decisions and why they are so powerful. Armed with this knowledge, you can develop strategies that should not only allow you to resist the pull of current opinion but take advantage of it.

DR. LEBON'S CROWD

The potent force of massed human beings is a phenomenon recognized since antiquity, one often discussed by the philosopher or portrayed by the dramatists. Still, a more scientific analysis of crowd behavior, like many other such philosophical curiosities, was not undertaken until the latter part of the nineteenth century. Only then did rigorous investigation begin.

In 1895 a Frenchman, Gustave LeBon, wrote what continues to rank as one of the most incisive works on mass psychology, *The Crowd.* According to LeBon, "the sentiments and ideas of all persons in a gathering take one and the same direction, and their conscious personality vanishes. A collective mind is formed, doubtless transitory, but presenting very clearly defined characteristics. The gathering has then become . . . a psychological crowd." In such situations, the actions of individuals may be quite different from those the same individuals would consider when alone.

One of the most striking features of the crowd to LeBon was its

² For a discussion of "tulipmania," see chapters 3 and 4 in David N. Dreman, *Psychology and the Stock Market* (New York: AMACOM, 1977).

³ Gustave LeBon, *The Crowd* (New York: Viking Press, 1960), pp. 23-24.

great difficulty in separating the imagined from the real. "A crowd thinks in images, and the image itself calls up a series of other images, having no logical connection with the first . . . a crowd scarcely distinguishes between the subjective and the objective. It accepts as real the images invoked in its mind, though they most often have only a very distant relation with the observed facts. . . . Crowds being only capable of thinking in images are only to be impressed by images."

At times, as LeBon saw, the image evokes cruel behavior; the belief in witches and sorcerers sent tens of thousands to the stake in the 16th and 17th centuries, and the "isms" of this century have taken tens of millions of lives. At other times, the image can inspire heroism: the crowd that swept the Bastille; or the Republican crowd that with bare hands stormed the fascist Montana Barracks in Madrid in 1936. With the benefit of hindsight, the image may become droll, as when London was abandoned to the Thames. But, to capture the crowd, the image must always be extremely simple. LeBon believed the individual regresses in a crowd and "descends several rungs in the ladder of civilization. Isolated, he may be a cultivated individual; in a crowd he is a barbarian. He possesses the spontaneity, the violence, the ferocity, and also the enthusiasm and heroism of primitive beings." 5

LeBon was an astute, if not particularly sympathetic, observer of crowds, and his description of crowd behavior is strikingly applicable to what we can readily discover taking place in financial markets. Certainly all the elements are present: numbers of people, intense excitement, and that essential simple image. Indeed few images are more simple and yet as beguiling as *instant wealth*. Each such image carried the crowd far into the realm of fantasy, and sometimes beyond the boundaries of sanity. Despite the assumption of the rationality and omniscience of investors claimed by our academic friends, the last word on the subject often seems to be the roar of the crowd.

Each time, as LeBon foresaw, the image was not only simple and enticing, but seemingly infallible. And, as he predicted, people lost their individuality. Crowd contagion swept intellectuals, artists, nobles, and businessmen in every period as easily as it did the common people. Actually, those who should have known best often led the way. And so, to see just how strong its pull can be, we might look a little more closely at the behavior of crowds in the marketplace.

THE MISSISSIPPI SCHEME

The French, usually pacesetters in fashion, launched one of the first of the gigantic speculative manias, beginning in 1716. The Mis-

⁴ Ibid., pp. 41-61.

⁵ lbid., p. 70.