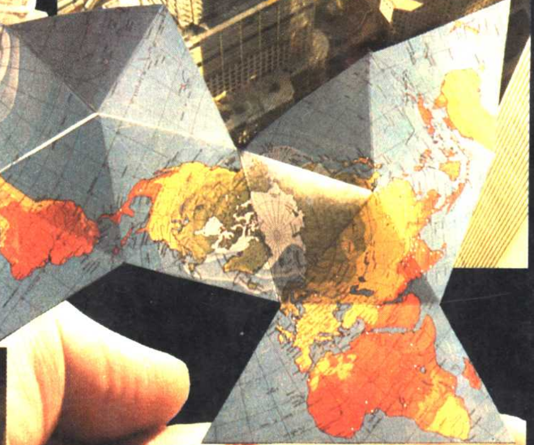
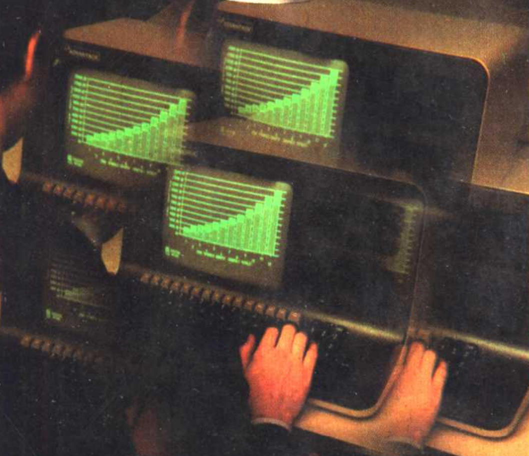
ROGER G. IBBOTSON
GARY P. BRINSON

Gaining the Performance Advantage

INVESTMENT MARKETS

Investment Markets

Gaining the Performance Advantage

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Preface

This book provides an analysis and history of capital markets throughout the world. We see the unique contributions of the work as threefold. Although many attempts have been made to assess various investment returns, here, for the first time, the returns are measured consistently on many assets across long periods of time. In addition, both income and capital gain components of these returns are segregated. This careful and detailed record provides an important historical perspective on investment markets. The book's second contribution is an economic analysis of all these investment returns in a single volume. The risks associated with investments in various assets and the effects of diversifying those risks are clearly identified. Based on an assessment of each asset market, expected returns are also shown. The third contribution of this work is that it tells investors how to handle various assets in their portfolios. Sound investment advice is always useful, and we base it on both economic analysis and historical evidence. Advice specific to each asset, such as real estate, is presented at the end of the chapter describing that asset's returns. All advice is then summarized in the last chapters, which cover first institutional and then individual portfolios.

This book is not necessarily intended to be read sequentially from front to back. Those concerned primarily with institutional management will be most interested in Chapter 16, which covers investment advice for those managing tax-exempt portfolios. Advice for managing personal portfolios, with returns subject to tax, is given in Chapter 17. Readers interested in the size and scope of various capital markets will want to turn directly to particular chapters on specific assets, which can be iden-

tified through the table of contents or the index. Finally, persons interested in the economic perspective may wish to follow the book's organization, which sets the stage, examines various markets, and then draws conclusions about investment activities based on the analysis.

To provide this compendium on capital markets, we draw upon a variety of secondary sources. Unlike other volumes on the subject, however, this work presents the data in a way that is generally comparable across asset classes. To our knowledge, this is the first time that total returns on a wide variety of assets have been made available and also converted to indexes. Since hundreds of years worth of data are compiled from numerous sources, with varying degrees of reliability, this material is useful primarily to provide a view of broad trends. The interested reader who wishes to make statistical use of the data as a basis for evaluating investment performance or for capital market research is urged to go to the original source and determine its level of reliability.

Academic jargon, mathematical formulas, and statistical terms have been largely avoided in the text; an element of precision is sacrificed in order to make the work readable and understandable by investors generally. Our intended audience is broad. Although primarily designed for individual and institutional investors, the book could also be a reference source for the bookshelves of business writers, financial economists, and libraries.

Acknowledgments

The volume would not have been possible without the dedication, patience, and work of others, to whom we are clearly indebted over the years. Laurence B. Siegel was involved with the manuscript from start to finish; he was absolutely vital in the initial conceptualization and ongoing exposition of ideas, as well as the writing, data analysis, exhibit preparation, and manuscript editing. For research, writing, editing, and coordination of a myriad of publication details, we acknowledge the invaluable contribution of Margaret A. Corwin. Also, Jeffrey J. Diermeier made major contributions to the ideas, drafting, and illustrations in the chapter on the institutional portfolio.

In addition, we wish to thank our editor, Martha Jewett, who gave the book focus, discipline, and moral support throughout the publication process. First Chicago Investment Advisors and Ibbotson Associates provided significant financial support. For research assistance and data analysis, we recognize the contributions of Wilbur John Coleman and L. Randolph Hood, Jr. Over the years, Wendy Freyer, Kathryn Love, Nina Bhosley, and Mary Jo Kringas labored to compile exhibits and put them

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into final form. Many others at Ibbotson Associates, First Chicago Investment Advisors, The University of Chicago, Yale University, and other institutions also helped in specific ways. We gratefully recognize all this help, without which this book would not exist.

Roger G. Ibbotson and Gary P. Brinson

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PART 1

Investing in Multiple Assets

1
The Investment Setting

This book is intended to help both personal investors and institutional money managers improve the returns on their portfolios and reduce their risks. For the first time, investors can compare the returns on a wide variety of assets across long time periods. Here they also obtain a historical perspective on capital markets. These data are then analyzed from an economic point of view to provide the foundation for sensible financial advice.

Whether they be institutional money managers or individuals, investors all face the same basic dilemma: making the best return on their money. Many devote significant amounts of time and effort to choosing particular stocks or selecting bonds with the best yields. Surprisingly, though, the decision having the biggest impact on an investor's profit is the percentage of funds allocated to various asset classes, not the choice of individual securities. Emphasizing stocks as opposed to bonds in the boom years of the 1950s was far more important to an investor's overall performance than the specific stocks selected. Likewise, in the inflationary 1970s, buying real estate rather than other financial assets usually boosted an investor's returns, regardless of which particular properties were purchased.

Many investors have also sought to reduce the risk of their portfolios through diversification. Yet diversification, when properly understood, does not just mean holding a variety of stocks. To gain the performance advantage, investors are advised to take the global approach; they should diversify across asset classes and across the world, as well as across the securities of a particular asset class. The principal asset classes are stocks, bonds, cash equivalents, real estate, monetary metals, and tangible assets; securities are simply investments or assets within these classes. Broad diversification can dramatically reduce the risk of a portfolio.

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Three Investment Approaches

Most investors try to make high returns by identifying and acquiring undervalued securities. The work of Benjamin Graham and David Dodd provides rules for ascertaining value, and has become the basis for traditional security analysis. A few renowned investors, such as Lord Keynes, relied on psychological interpretation of market movements, while others, such as Warren Buffett, use their unusual insights about future economic trends. Implicit in these quests are attempts to assign a true value to a security, business, property, or activity.

Modern portfolio theory, with its emphasis on efficient markets and risk, has shifted the focus of some investors from value analysis to risk diversification. Investing in accordance with this theory is the second investment approach. According to its most literal interpretation, skill at identifying value cannot be acquired. Except by luck, no investor can gain an advantage over others. Instead, the theory suggests, investors should buy and hold a diversified set of securities.

Many of the tenets of modern portfolio theory have been proven empirically. Few economists question that there are gains from diversification, or that taking risk is rewarded on average. However, some economists doubt that all securities are priced appropriately. Because investors incur different costs and because capital markets are imperfect, the prices of securities may depart from their underlying values. In such cases, more knowledgeable investors can expect to outperform less knowledgeable ones.

A third investment approach, based on a mix of theory and practice, is the orientation of this book. In this approach, the existence of some underpriced securities is recognized, but because most markets are largely efficient, bargains are believed to be the exception, not the rule. Furthermore, investors may need special skills to identify such securities. The cost of acquiring the skills and information necessary to identify bargain securities must be compared with the expected profits from transacting in these securities. This strategy also incorporates the primary thesis of modern portfolio theory—that investors should usually buy and hold a diversified portfolio. However, diversification here takes on a broader meaning: that investors should diversify not only within an asset class, but also across asset classes and across countries. Furthermore, the weight of these classes should be selectively varied over time in accordance with economic trends and profit opportunities. Finally, this strategy emphasizes that investors must recognize the characteristics that make their situation unique, and tailor their portfolios accordingly.

Investing in Multiple Asset Classes

Today's investment alternatives are many. In this book, nontraditional assets as well as the more traditional stocks and bonds are viewed as essential for both individual and institutional investors. Economic trends such as an increase in inflation rates or an oil crisis can change the attractiveness of some asset classes relative to others; for example, increasing inflation reduces the attractiveness of existing bonds, written at old interest rates, relative to stocks or floating-rate cash equivalents. Hence, investing in various asset classes, including stocks, bonds, cash equivalents, real estate, monetary metals, and tangibles, spreads the risks from such economic changes and increases the overall profit potential of an investor's portfolio. Let's look preliminarily at the past profits on both traditional and nontraditional assets.

Traditional Assets

When most people think of investments, they identify the traditional asset classes of U.S. stocks, bonds, and cash equivalents.

U.S. Stocks. Over the very long run, U.S. stocks have topped the charts as the asset with the highest returns. One dollar invested in 1789 would have earned over an 8 percent annual return, and the money would have doubled roughly every 9 years. Through the magic of compounding, investors would have made almost *5 million* times their money in such equities. Since World War II, returns on the riskiest equities, over-the-counter (OTC) stocks, have even surpassed those of the more sedate New York Stock Exchange (NYSE).

U.S. Bonds. In the United States, bonds beat inflation historically, but they had substantially lower returns than stocks. And following World War II, U.S. Treasuries and long-term U.S. corporate bonds had negative real returns, or returns lower than inflation over the period. After this dismal record, bond returns have made a dramatic comeback in the mid-1980s.

Cash Equivalents. Investors' attitudes toward cash have changed. Cash holdings used to be considered only a temporary parking place for funds until they could be invested in other assets. Since the 1970s, with deregulation of interest rates and high rates of inflation, cash has become a more prominent investment vehicle, with returns that closely match inflation.

Nontraditional Assets

Less traditional asset classes are real estate, tangible assets, and monetary metals.

Real Estate. Over the long run, investors in real estate have achieved capital gains at about the inflation rate, after allowing for depreciation. (Capital appreciation excludes the rent income and expenses like maintenance, property taxes, etc.) The unleveraged postwar returns on U.S. real estate were almost as high as those of U.S. equities. With leverage, real estate had stellar returns, outshining even stocks. In addition, holding real estate reduces the risk of a portfolio and hedges inflation. Also, under the U.S. tax code, real estate investments have traditionally received preferential treatment, enhancing their after-tax returns. The 1986 tax bill removes some of these preferences and may dampen after-tax real estate returns.

Monetary Metals. Gold and silver had very high (though volatile) returns in the 1970s, but in the 1980s their prices (and hence returns) have plunged. Over the long term, most gold investors have only broken even in real terms. In general, gold's price fluctuates wildly, adding to risk, but this asset does provide portfolio diversification and a hedge against inflation. Silver, the second most important monetary metal, is traded in a much smaller market than gold, and its prices are even more volatile, and the asset even more risky.

Tangible Assets. Tangible assets like paintings, furniture, and coins may be attractive to investors who appreciate both their pecuniary and nonpecuniary returns. The nonpecuniary returns are the enjoyment, prestige, and psychological income that holding such assets gives their owners. However, those who do not appreciate both types of benefits will have overpaid for the asset.

During inflationary periods, tangibles often have high financial returns. During deflation, financial returns are low. In addition, tangibles have high maintenance, search, and transaction costs. The numbers say that unless the investor enjoys their nonpecuniary benefits, tangibles are not smart investments.

Use of Options and Futures to Manage Risk

Options and futures provide investors with new ways to manage risk. Although commodity futures have been traded for more than a century,

new varieties of financial options and futures are being continuously introduced, and trading activity is rapidly increasing. Options and futures are typically used in combination with traditional and nontraditional assets to hedge, to speculate, or to time the market.

Investing Internationally

Why Invest Internationally?

The world's political borders impose costs on all of us by impeding the flow of resources, capital, and people. Investors who allocate money to international as well as domestic assets surmount the barriers which others hesitate to climb. Thus they may capture profits that others miss, and reduce the risk of losing their capital because of local political and economic circumstances.

American investors have traditionally believed that the United States alone provided an adequate range of investment possibilities. But this has become less and less true. Today, foreign economies make up about half of the investment value of the developed world. The amount of U.S. investment in foreign capital markets now runs in the tens of billions of dollars. Furthermore, the proportion of U.S. funds invested abroad is likely to soar in the future.

International Assets

To achieve a truly diversified portfolio, investors should hold assets from the major industrial countries. The investor who has the sophistication and knowledge (or who hires those with knowledge) to handle international investments will be at an advantage over others in the years to come. Let's look briefly at the historical record of such returns.

Foreign Stocks. In the past quarter century, returns on foreign equity markets surpassed returns on the markets of the United States. For example, Asian equities had a compound annual return of over 16 percent per year, compared with about 10 percent on the NYSE. Over the last 200 years, however, many foreign equity markets were wiped out by wars or government upheavals. Many investors who bet on only one country lost everything. Thus, history suggests that international diversification is essential.

Foreign Bonds. Since World War II, investors in foreign bonds have been rewarded with higher returns than investors holding U.S. bonds. Although accelerating inflation generally dampened bond returns, some bond markets, such as Japan, have done extremely well.

Economic Changes and Investment Opportunities

Economic changes have significant effects on different asset classes. Two important changes are shifts in the level of business activity and changes in the inflation rate. Investors should vary the percentage of holdings in different asset classes depending on economic conditions. Likewise, investors will want to adjust their portfolios to take advantage of special investment opportunities.

Inflation

In the postwar period, inflation appeared to be inevitable. But in the 1980s, inflation has moderated in almost every country. Sustained inflation is a relatively recent phenomenon. Over the last several centuries, there has been very little inflation, except during wars or economic expansion. The period since World War II is unusual because inflation persists throughout the world.

Inflation has significant effects on equity returns. If decreases in the rate of inflation could be predicted even 1 year in advance, potential gains to the prognosticator would be large. Both stocks and (especially) bonds do well during falling inflation. Gold and silver are good but unpredictable hedges against rising inflation. Cash equivalents and real estate largely track inflation; both are less volatile than monetary metals.

Level of Business Activity

The degree of expansion or recession in the economy has an important effect on the returns of certain assets. Equities, in particular, are sensitive to the level of activity in the economy as a whole. U.S. stocks dramatically rise and fall upon changing expectations of corporate profits. Likewise, returns on Japanese stocks have reflected the tremendous growth of the Japanese economy. Human capital, or the collective skills and knowledge of human beings, is also higher in countries that have enjoyed more economic success. Even for workers with the same skills, wages are higher in the developed than in the underdeveloped world.

Special Opportunities

Some types of stocks have consistently outperformed the average. That is, some sectors of the equity market have offered extraordinary returns for their level of risk. For example, stocks of companies with smaller capitalizations have had higher risk-adjusted returns than those with

larger capitalization. New equity issues (initial public offerings) are another case in point. When these have been bought at the offering price, investors in the past have achieved extraordinarily high returns. While investors have taken advantage of such special opportunities to earn high returns, financial economists do not always understand why such returns exist. Unfortunately, there is no guarantee that such high returns will continue in future periods.

The Global Perspective

Investing across asset classes and across borders can be thought of as a global approach to investing. The word *global* is used here to mean more than "across geographical space"; it describes a comprehensive or all-encompassing perspective on investment markets. In Figure 1.1, the global approach is portrayed; the three "dimensions" of the global perspective are

- Assets
- Geography
- Time

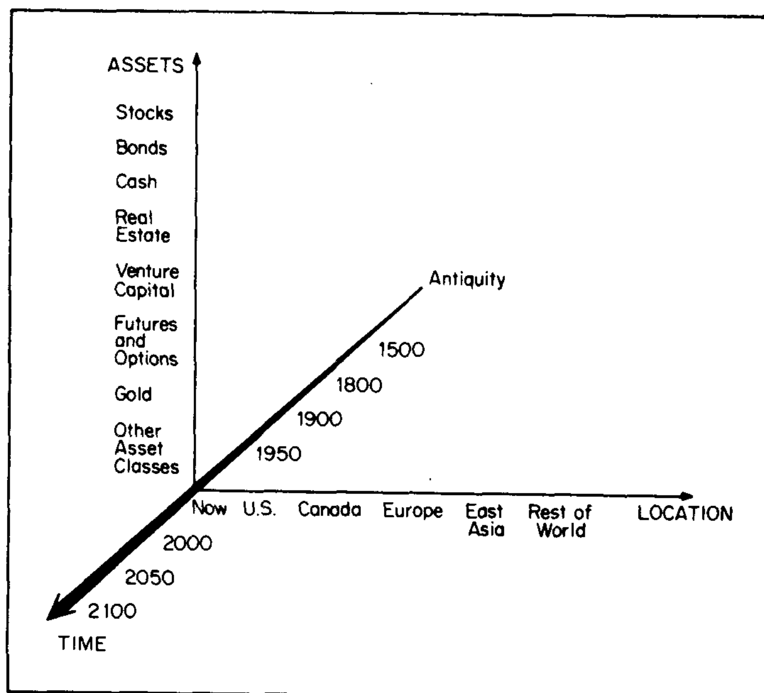

Figure 1.1. The three dimensions of investment knowledge.

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