



THE FRANK J. FABOZZI SERIES

# THE HANDBOOK *of* TRADITIONAL *and* ALTERNATIVE INVESTMENT VEHICLES

*Investment Characteristics  
and Strategies*

MARK J. ANSON • FRANK J. FABOZZI • FRANK J. JONES

# The Handbook of Traditional and Alternative Investment Vehicles

Investment Characteristics and Strategies

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*MJPA*

To my wife Mary,  
my children Madeleine and Marcus,  
and our two cats, Scout and Fuffy—  
two important members of our family

*FJF*

To my wife Donna  
and my children Patricia, Karly, and Francesco

*FJJ*

To my wife Sally for her good humor and patience

# Preface

**T**he financial industry has grown tremendously in terms of size and sophistication over the last 30 years. The great bull stock market that began in the early 1980s combined with the birth of enormous computing power led to a growth in the financial markets that no one could have predicted. So, it was a bit of a daunting task to produce a one-volume handbook to the financial instruments that exist in the global marketplace.

At the outset of this book, we decided to take a pragmatic approach—mixing a little theory with a lot of real world examples. As authors, we thought it better to provide you with a user-friendly reference guide than to provide you with a theoretical treatise. Not that we are beyond being academic—indeed we have all been professors at one point in our careers. However, we thought a better approach would be to dazzle the reader less with our academic credentials and instead, to provide a more descriptive textbook.

In this book we provide a “soup to nuts” approach to describing the various financial instruments there are in the marketplace. We start with the basics: common stock and basic bonds. We then move on to municipal bonds, agency passthrough securities, collateralized mortgage obligations, and the more specialized structured products in the credit industry. We also cover the fastest growing part of the asset management industry: exchange-traded funds. Over the past decade, exchange-traded funds have grown at a cumulative average growth rate of over 40% per year—stronger growth than the alternative asset market.

This brings us to the next part of the book. We provide an in depth review of the major segments of the alternative asset market. We start with real estate and then move on to publicly traded real estate investment trusts. We then venture into the world of hedge funds, providing both a descriptive overview of the many types and styles of hedge funds as well as providing a “how to” guide to investing in these vehicles. We also cover the world of private equity—dedicating a chapter to each of the four parts of the private equity world: leveraged buyouts, venture capital, mezzanine debt, and distressed debt. Last, we include commodities. Over the last 20 years, commodities have developed as an investable asset class.

In summary, our goal in this book is not to display our command of the arcane nomenclature associated with the financial markets, but instead, to provide the reader with a thoughtful guide to financial instruments. If you pull this book down from your bookshelf from time to time to consult how the market works for a particular financial instrument, we consider this a successful effort.

Mark J. P. Anson  
Frank J. Fabozzi  
Frank J. Jones

## About the Authors

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# Contents

<b>Preface</b>	<b>xiii</b>
<b>About the Authors</b>	<b>xv</b>
<b>CHAPTER 1</b>	
<b>Introduction</b>	<b>1</b>
Risks Associated with Investing	1
Asset Classes	7
Super Asset Classes	11
Strategic vs. Tactical Allocations	13
Efficient vs. Inefficient Asset Classes	14
Beta and Alpha Drivers	15
Financial Instruments and Concepts Introduced in this Chapter	16
<b>CHAPTER 2</b>	
<b>Investing in Common Stock</b>	<b>17</b>
Earnings	18
Dividends	22
Stock Repurchases	28
The U.S. Equity Markets	29
Trading Mechanics	31
Trading Costs	37
Financial Instruments and Concepts Introduced in this Chapter	38
<b>CHAPTER 3</b>	
<b>More on Common Stock</b>	<b>41</b>
Pricing Efficiency of the Stock Market	41
Stock Market Indicators	42
Risk Factors	46
Tracking Error	49
Common Stock Investment Strategies	54
Financial Instruments and Concepts Introduced in this Chapter	67

**CHAPTER 4**

<b>Bond Basics</b>	<b>68</b>
Features of Bonds	69
Yield Measures and Their Limitations	77
Interest Rate Risk	83
Call and Prepayment Risk	86
Credit Risk	87
Financial Instruments and Concepts Introduced in this Chapter	95

**CHAPTER 5**

<b>U.S. Treasury and Federal Agency Securities</b>	<b>97</b>
Treasury Securities	97
Federal Agency Securities	104
Financial Instruments and Concepts Introduced in this Chapter	109

**CHAPTER 6**

<b>Municipal Securities</b>	<b>111</b>
Tax-Exempt and Taxable Municipal Securities	111
Types of Municipal Securities	114
Tax-Exempt Municipal Bond Yields	123
Risks Associated with Investing in Municipal Bonds	125
Build America Bonds	125
Financial Instruments and Concepts Introduced in this Chapter	126

**CHAPTER 7**

<b>Corporate Fixed Income Securities</b>	<b>127</b>
Corporate Bonds	127
Medium-Term Notes	132
Commercial Paper	134
Preferred Stock	135
Convertible Security	138
Financial Instruments and Concepts Introduced in this Chapter	145

**CHAPTER 8**

<b>Agency Mortgage Passthrough Securities</b>	<b>147</b>
Mortgages	147
Mortgage Passthrough Securities	151
Types of Agency Mortgage Passthrough Securities	152
Prepayment Conventions and Cash Flows	153
Factors Affecting Prepayment Behavior	159
Prepayment Models	162

Yield	162
A Closer Look at Prepayment Risk	164
Trading and Settlement Procedures for Agency Passthroughs	165
Stripped Mortgage-Backed Securities	167
Financial Instruments and Concepts Introduced in this Chapter	170
<b>CHAPTER 9</b>	
<b>Agency Collateralized Mortgage Obligations</b>	<b>173</b>
The Basic Principle of CMOs	173
Agency CMOs	174
CMO Structures	174
Yields	199
Financial Instruments and Concepts Introduced in this Chapter	200
<b>CHAPTER 10</b>	
<b>Structured Credit Products</b>	<b>201</b>
Private Label Residential MBS	202
Commercial Mortgage-Backed Securities	206
Nonmortgage Asset-Backed Securities	209
Auto Loan-Backed Securities	210
Collateralized Debt Obligations	215
Financial Instruments and Concepts Introduced in this Chapter	222
<b>CHAPTER 11</b>	
<b>Investment-Oriented Life Insurance</b>	<b>223</b>
Cash Value Life Insurance	223
Stock and Mutual Insurance Companies	224
General Account vs. Separate Account Products	226
Overview of Cash Value Whole Life Insurance	227
Taxability of Life Insurance	229
Products	230
Financial Instruments and Concepts Introduced in this Chapter	242
<b>CHAPTER 12</b>	
<b>Investment Companies</b>	<b>243</b>
Types of Investment Companies	243
Fund Sales Charges and Annual Operating Expenses	248
Advantages of Investing in Mutual Funds	253
Types of Funds by Investment Objective	254
The Concept of a Family of Funds	256
Taxation of Mutual Funds	259

Structure of a Fund	260
Financial Instruments and Concepts Introduced in this Chapter	260
<b>CHAPTER 13</b>	
<b>Exchange-Traded Funds</b>	<b>263</b>
Review of Mutual Funds and Closed-End Funds	263
Basics of Exchange-Traded Funds	264
ETF Mechanics: The ETF Creation/Redemption Process	267
ETF Sponsors	270
Mutual Funds vs. ETFs: Relative Advantages	272
Uses of ETFs	274
The New Generation of Mutual Funds	274
Financial Instruments and Concepts Introduced in this Chapter	276
<b>CHAPTER 14</b>	
<b>Investing in Real Estate</b>	<b>277</b>
The Benefits of Real Estate Investing	277
Real Estate Performance	278
Real Estate Risk Profile	280
Real Estate as Part of a Diversified Portfolio	282
Core, Value-Added, and Opportunistic Real Estate	285
Financial Instruments and Concepts Introduced in this Chapter	298
<b>CHAPTER 15</b>	
<b>Investing in Real Estate Investment Trusts</b>	<b>298</b>
Advantages and Disadvantages of REITs	299
Different Types of REITs	302
REIT Rules	304
Economics of REITs	306
Financial Instruments and Concepts Introduced in this Chapter	312
<b>CHAPTER 16</b>	
<b>Introduction to Hedge Funds</b>	<b>313</b>
Hedge Funds vs. Mutual Funds	313
Growth of the Hedge Fund Industry	315
Categories of Hedge Funds	316
Hedge Fund Strategies	318
Financial Instruments and Concepts Introduced in this Chapter	342
<b>CHAPTER 17</b>	
<b>Considerations in Investing in Hedge Funds</b>	<b>343</b>
Hedge Fund Performance	343

Is Hedge Fund Performance Persistent?	345
A Hedge Fund Investment Strategy	347
Selecting a Hedge Fund Manager	354
Financial Instruments and Concepts Introduced in this Chapter	360
<b>CHAPTER 18</b>	
<b>Investing in Capital Venture Funds</b>	<b>361</b>
The Role of a Venture Capitalist	362
The Business Plan	367
Venture Capital Investment Vehicles	374
The Life Cycle of a Venture Capital Fund	378
Specialization within the Venture Capital Industry	380
Stage of Financing	382
Historical Performance	386
Financial Instruments and Concepts Introduced in this Chapter	388
<b>CHAPTER 19</b>	
<b>Investing in Leveraged Buyouts</b>	<b>389</b>
A Theoretical Example of a Leveraged Buyout	389
How LBOs Create Value	392
LBO Fund Structures	402
Profile of an LBO Candidate	406
Venture Capital vs. Leveraged Buyouts	408
Risks of LBOs	410
Financial Instruments and Concepts Introduced in this Chapter	411
<b>CHAPTER 20</b>	
<b>Investing in Mezzanine Debt</b>	<b>413</b>
Overview of Mezzanine Debt	413
Examples of Mezzanine Financing	418
Mezzanine Funds	421
Venture Capital and the Distinction Between Mezzanine Financing and Different Forms of Private Equity	423
Advantages of Mezzanine Debt to the Investor	424
Advantages to the Company/Borrower	425
Negotiations with Senior Creditors	426
Market Performance	428
Financial Instruments and Concepts Introduced in this Chapter	429
<b>CHAPTER 21</b>	
<b>Investing in Distressed Debt</b>	<b>431</b>
Vulture Investors and Hedge Fund Managers	432

Distressed Debt Is an Inefficient and Segmented Market	432
Distressed Debt and Bankruptcy	434
Distressed Debt Investment Strategies	438
Risks of Distressed Debt Investing	450
Market Performance	452
Financial Instruments and Concepts Introduced in this Chapter	453
<b>CHAPTER 22</b>	
<b>Investing in Commodities</b>	<b>455</b>
Gaining Exposure to Commodities	457
Commodity Prices Compared to Financial Asset Prices	462
Economic Rationale	463
Commodity Futures Indexes	471
Financial Instruments and Concepts Introduced in this Chapter	485
<b>APPENDIX A</b>	
<b>Arithmetic Mean vs. Geometric Mean</b>	<b>487</b>
<b>APPENDIX B</b>	
<b>Measures of Risk</b>	<b>491</b>
Range and Location	491
Moments of the Distribution	494
<b>INDEX</b>	<b>499</b>

# Introduction

**T**here is a wide range of financial instruments. The most general classification of financial instruments is based on the nature of the claim that the investor has on the issuer of the instrument. When the contractual arrangement is one in which the issuer agrees to pay interest and repay the amount borrowed, the financial instrument is said to be a *debt instrument*. In contrast to a debt instrument, an *equity instrument* represents an ownership interest in the entity that has issued the financial instrument. The holder of an equity instrument is entitled to receive a pro rata share of earnings, if any, after the holders of debt instruments have been paid. Common stock is an example of an equity claim. A partnership share in a business is another example.

Some financial instruments fall into both categories in terms of their attributes. Preferred stock, for example, is an equity instrument that entitles the investor to receive a fixed amount of earnings. This payment is contingent, however, and due only after payments to holders of debt instrument are made. Another hybrid instrument is a convertible bond, which allows the investor to convert a debt instrument into an equity instrument under certain circumstances. Both debt instruments and preferred stock are called *fixed income instruments*.

In this chapter, we'll provide some basics about financial instruments, the general types of risks associated with investing, and characteristics of asset classes.

## **RISKS ASSOCIATED WITH INVESTING**

There are various risks associated with investing and these will be described throughout the book. Here we will provide a brief review of the major risks associated with investing.

## **Total Risk**

The dictionary defines risk as “hazard, peril, exposure to loss or injury.” With respect to investing, investors have used a variety of definitions to describe risk. Today, the most commonly accepted definition of risk is one that involves a well-known statistical measure known as the variance and is referred to as the *total risk*. The variance measures the dispersion of the outcomes around the expected value of all outcomes. Another name for the expected value is the average value.

In applying this statistical measure to the returns for a financial instrument, which we refer to as an asset for our discussion here, the observed returns on that asset over some time period are first obtained. Appendix A explains how returns for an asset are calculated. From those observed returns, the average return (which is the average or mean value) can be computed and using that average value, the variance can be computed. The square root of the variance is the standard deviation.

Despite the dominance of the variance (or standard deviation) as a measure of total risk, there are problems with using this measure to quantify the total risk for many of the assets we describe in this book. The first problem is that since the variance measures the dispersion of an asset’s return around its expected value, it considers the possibility of returns above the expected return and below the average return. Investors, however, do not view possible returns above the expected return as an unfavorable outcome. In fact, such outcomes are viewed as favorable. Because of this, it is argued that measures of risk should not consider the possible returns above the expected return. Various measures of downside risk, such as risk of loss and value at risk, are currently being used by practitioners.

The second problem is that the variance is only one measure of how the returns vary around the expected return. When a probability distribution is not symmetrical around its expected return, then another statistical measure known as *skewness* should be used in addition to the variance. Skewed distributions are referred to in terms of *tails* and *mass*. The tails of a probability distribution for returns is important because it is in the tails where the extreme values exist. An investor should be aware of the potential adverse extreme values for an investment and an investment portfolio. The statistical measures important for understanding risk, skewness and kurtosis, are explained in Appendix B.

## **Diversification**

One way of reducing the total risk associated with holding an individual asset is by diversifying. Often, one hears financial advisors and professional



money managers talking about diversifying their portfolio. By this it is meant the construction of a portfolio in such a way as to reduce the portfolio's total risk without sacrificing expected return. This is certainly a goal that investors should seek. However, the question is, how does one do this in practice?

Some financial advisors and the popular press might say that a portfolio can be diversified by including assets across all asset classes. (We'll explain in more detail what we mean by an asset class below.) Although that might be reasonable, two questions must be addressed in order to construct a diversified portfolio. First, how much of the investor's wealth should be invested in each asset class? Second, given the allocation, which specific assets should the investor select?

Some investors who focus only on one asset class such as common stock argue that such portfolios should also be diversified. By this they mean that an investor should not place all funds in the stock of one company, but rather should include stocks of many companies. Here, too, several questions must be answered in order to construct a diversified portfolio. First, which companies should be represented in the portfolio? Second, how much of the portfolio should be allocated to the stocks of each company?

Prior to the development of portfolio theory by Harry Markowitz in 1952,<sup>1</sup> while financial advisors often talked about diversification in these general terms, they never provided the analytical tools by which to answer the questions posed here. Markowitz demonstrated that a diversification strategy should take into account the degree of correlation (or covariance) between asset returns in a portfolio. The correlation of asset returns is a measure of the degree to which the returns on two assets vary or change together. Correlation values range from  $-1$  to  $+1$ .

Indeed, a key contribution of what is now popularly referred to as "Markowitz diversification" or "mean-variance diversification" is the formulation of an asset's risk in terms of a portfolio of assets, rather than the total risk of an individual asset. Markowitz diversification seeks to combine assets in a portfolio with returns that are less than perfectly positively correlated in an effort to lower the portfolio's total risk (variance) without sacrificing return. It is the concern for maintaining expected return while lowering the portfolio's total risk through an analysis of the correlation between asset returns that separates Markowitz diversification from other approaches suggested for diversification and makes it more effective.

The principle of Markowitz diversification states that as the correlation between the returns for assets that are combined in a portfolio decreases, so does the variance of the portfolio's total return. The good news is that

<sup>1</sup>Harry M. Markowitz, "Portfolio Selection," *Journal of Finance* 7, no. 1 (1952): 77-91.