

Part I
Introduction to Alpha Drivers
and Beta Drivers

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What Is an Alternative Asset Class?

Part of the difficulty of working with alternative asset classes is defining them. Are they a separate asset class or a subset of an existing asset class? Do they hedge the investment opportunity set or expand it? Are they listed on an exchange or do they trade in the over-the-counter market?

In most cases, alternative assets are a subset of an existing asset class. This may run contrary to the popular view that alternative assets are separate asset classes.¹ However, we take the view that what many consider separate classes are really just different investment strategies within an existing asset class.

Additionally, in most cases, they expand the investment opportunity set, rather than hedge it. Last, alternative assets are generally purchased in the private markets, outside of any exchange. While hedge funds, private equity, and credit derivatives meet these criteria, we will see that commodity futures prove to be the exception to these general rules.

Alternative assets, then, are just alternative investments within an existing asset class. Specifically, most alternative assets derive their value from either the debt or the equity markets. For instance, most hedge fund strategies involve the purchase and sale of either equity or debt securities. In addition, hedge fund managers may invest in derivative instruments whose value is derived from the equity or debt markets.

In this book, we classify five types of alternative assets: real estate, hedge funds, commodity and managed futures, private equity, and credit derivatives. Investments in real estate may be made directly, or indirectly through a fund. Hedge funds and private equity are the best known of the alternative asset world. Typically, these investments are accomplished through the purchase of limited partner units in a private limited partnership. Commodity futures can be either passive investing tied to a commodity futures index or active investing through a commodity pool or advisory account. Private equity is the investment strategy of investing in companies before they issue their securities publicly, or taking a public company private. Credit derivatives can be purchased through limited partnership units, as a tranche of a special purpose vehicle, or directly through the purchase of distressed debt securities.

We will explore each of these alternative asset classes in detail, providing practical advice along with useful research. We begin this chapter with a review of super asset classes.

SUPER ASSET CLASSES

There are three super asset classes: capital assets, assets that are used as inputs to creating economic value, and assets that are a store of value.²

Capital assets

Capital assets are defined by their claim on the future cash flows of an enterprise. They provide a source of ongoing value. As a result, capital assets may be valued based on the net present value of their expected returns.

¹ See, for example, Chapter 8 in David Swensen, *Pioneering Portfolio Management* (New York: Free Press, 2000).

² See Robert Greer, "What Is an Asset Class Anyway?" *Journal of Portfolio Management* 23 (1997), 83–91.

Under the classic theory of Modigliani and Miller, a corporation cannot change its value (in the absence of tax benefits) by changing the method of its financing.³ Modigliani and Miller demonstrated that the value of the firm is dependent on its cash flows. How those cash flows are divided up between shareholders and bondholders is irrelevant to firm value.

Capital assets, then, are distinguished not by their possession of physical assets, but rather by their claim on the cash flows of an underlying enterprise. Hedge funds, private equity funds, credit derivatives, and corporate governance funds all fall within the super asset class of capital assets because the values of their funds are all determined by the present value of expected future cash flows from the securities in which they invest.

As a result, we can conclude that it is not the types of securities in which they invest that distinguish hedge funds, private equity funds, credit derivatives, or corporate governance funds from traditional asset classes. Rather, it is the alternative investment strategies they pursue that distinguish them from traditional stock and bond investments.

Assets that can be used as economic inputs

Certain assets can be consumed as part of the production cycle. Consumable or transformable assets can be converted into another asset. Generally, this class of assets consists of the physical commodities: grains, metals, energy products, and livestock. These assets are used as economic inputs into the production cycle to produce other assets, such as automobiles, skyscrapers, new homes, and appliances.

These assets generally cannot be valued using a net present value analysis. For example, a pound of copper, by itself, does not yield an economic stream of revenues. Nor does it have much value for capital appreciation. However, the copper can be transformed into copper piping that is used in an office building or as part of the circuitry of an electronic appliance.

While consumable assets cannot produce a stream of cash flows, we will demonstrate in our section on commodities that this asset class has excellent diversification properties for an investment portfolio. In fact, the lack of dependency on future cash flows to generate value is one of the reasons why commodities have important diversification potential vis-à-vis capital assets.

Assets that store value

Art is considered the classic asset that stores value. It is not a capital asset because there are no cash flows associated with owning a painting or a sculpture. Consequently, art cannot be valued in a discounted cash flow analysis. It is also not an asset that is used as an economic input because it is a finished product.

Art requires ownership and possession. Its value can be realized only through its sale and transfer of possession. In the meantime, the owner retains the artwork with the expectation that it will yield a price that in real terms (i.e. adjusted by inflation) is at least equal to what the owner paid for it.

There is no rational way to gauge whether the price of art will increase or decrease because its value is derived purely from the subjective (and private) visual enjoyment that the right of ownership conveys. Therefore, to an owner, art is a store of value. It neither conveys economic benefits nor is used as an economic input, but retains the value paid for it.

Gold and precious metals are another example of a store of value asset. In the emerging parts of the world, gold and silver are a significant means of maintaining wealth. Residents of these countries

³ Franco Modigliani and Merton Miller, "The Cost of Capital, Corporation Finance, and the Theory of Investment," *American Economic Review* (June 1958), 433–443.

often do not have access to the same range of financial products that are available to residents of more developed nations. Consequently, they accumulate their wealth through a tangible asset as opposed to a capital asset.

However, the lines between the three super classes of assets can become blurred. For example, gold can be leased to jewelry and other metal manufacturers. Jewelry makers lease gold during periods of seasonal demand, expecting to purchase the gold on the open market and return it to the lessor before the lease term ends. The gold lease provides a stream of cash flows that can be valued using net present value analysis.

Precious metals can also be used as transformable or consumable assets because they have the highest levels of thermal and electrical conductivity among the metals. Silver, for example, is used in the circuitry of most telephones and light switches. Gold is used in the circuitry of TVs, cars, airplanes, computers, and rocket ships.

REAL ESTATE

We include real estate in our discussion of alternative assets even though real estate was an asset class long before stocks and bonds became the investment of choice. In fact, in times past, land was the single most important asset class. Kings, queens, lords, and nobles measured their wealth by the amount of property that they owned. “Land barons” were aptly named. Ownership of land was reserved for only the wealthiest of society.

However, over the past 200 years, our economic society changed from one based on the ownership of property to one based on the ownership of legal entities. This transformation occurred as society moved from the agricultural age to the industrial age. Production of goods and services became the new source of wealth and power.

Stocks and bonds were originated to support the financing needs of new enterprises that manufactured material goods and services. In fact, stocks and bonds became the alternatives to real estate instead of vice versa. With the advent of stock and bond exchanges and the general acceptance of owning equity or debt stakes in companies, it is sometimes forgotten that real estate was the original and primary asset class of society.

In fact, it was only 28 years ago in the United States that real estate was the major asset class of most individual investors. This exposure was the result of owning a primary residence. It was not until the long bull market started in 1983 that investors began to diversify their wealth into the “alternative” assets of stocks and bonds.

Given the long-term presence of real estate as an asset class, several treatises have been written concerning its valuation.⁴ Still, we believe a discussion of real estate is relevant within the framework of alternative assets. The reason is that other than a primary residence, real estate is often excluded from a diversified portfolio. Perhaps another way to look at real estate is as a fundamental asset class that should be included within every diversified portfolio. Therefore, it is an alternative asset class meant to diversify the stock and bond holdings within a portfolio context.

⁴ See, for example, Howard Gelbtuch, David Mackmin, and Michael Milgrim, eds., *Real Estate Valuation in Global Markets* (Chicago: Appraisal Institute, 1997); James Boykin and Alfred Ring, *The Valuation of Real Estate*, 4th ed. (Englewood Cliffs, NJ: Prentice Hall, 1993); Austin Jaffe and C. F. Sirmans, *Fundamentals of Real Estate Investment*, 3rd ed. (Englewood Cliffs, NJ: Prentice Hall, 1994); and Jack Cummings, *Real Estate Finance & Investment Manual* (Englewood Cliffs, NJ: Prentice Hall, 1997).

ASSET ALLOCATION

Asset allocation is generally defined as the allocation of an investor's portfolio across a number of asset classes.⁵ Asset allocation, by its very nature, shifts the emphasis from the security level to the portfolio level. It is an investment profile that provides a framework for constructing a portfolio based on measures of risk and return. In this sense, asset allocation can trace its roots to modern portfolio theory and the work of Harry Markowitz.⁶

Asset classes and asset allocation

Initially, asset allocation involved four asset classes: equity, fixed income, cash, and real estate. Within each class, the assets could be further divided into subclasses. For example, stocks can be divided into large-capitalization stocks, small-capitalization stocks, and foreign stocks. Similarly, fixed income can be broken down into U.S. Treasury notes and bonds, investment-grade bonds, high-yield bonds, and sovereign bonds.

The expansion of newly defined alternative assets may cause investors to become confused about the diversification properties of alternative assets and how they fit into an overall diversified portfolio. Investors need to understand the background of asset allocation as a concept for improving return while reducing risk.

For example, in the 1980s, the biggest private equity game was taking public companies private. Does the fact that a corporation that once had publicly traded stock but now has privately traded stock mean that it has jumped into a new asset class? We maintain that it does not. Furthermore, public offerings are the primary exit strategy for private equity; public ownership begins where private equity ends.⁷

Considered within this context, a separate asset class does not need to be created for private equity. Rather, this type of investment can be considered as just another point within the equity investment universe. Rather than hedging the equity class as altogether separate, private equity expands the equity asset class.

Similarly, credit derivatives expand the fixed income asset class, rather than hedging it. Hedge funds also invest in the stock and bond markets but pursue trading strategies that are very different from a traditional buy-and-hold strategy. Commodities fall into a different class of assets than equity, fixed income, or cash, and are treated separately in this book.

Strategic versus tactical allocations

Some alternative assets should be used in a tactical rather than strategic allocation. Strategic allocation of resources is applied to fundamental asset classes such as equity, fixed income, cash, and real estate. These are the basic asset classes that must be held within a diversified portfolio.

Strategic asset allocation is concerned with the long-term asset mix. The strategic mix of assets is designed to accomplish a long-term goal such as funding pension benefits or matching long-term liabilities. Risk aversion is considered when deciding the strategic asset allocation but current market conditions are not. In general, policy targets are set for strategic asset classes with allowable ranges

⁵ See William Sharpe, "Asset Allocation: Management Style and Performance Measurement," *Journal of Portfolio Management* 18, no. 2 (1992), 7–19.

⁶ See Harry Markowitz, *Portfolio Selection*, Cowles Foundation Monograph 16 (New Haven, CT: Yale University Press, 1959).

⁷ See Jeffrey Horvitz, "Asset Classes and Asset Allocation: Problems of Classification," *Journal of Private Portfolio Management* 2, no. 4 (2000), 27–32.

around those targets. Allowable ranges are established to allow flexibility in the management of the investment portfolio.

Tactical asset allocation is short-term in nature. This strategy is used to take advantage of current market conditions that may be more favorable to one asset class over another. The goal of funding long-term liabilities has been satisfied by the target ranges established by the strategic asset allocation. The goal of tactical asset allocation is to maximize return.

Tactical allocation of resources depends on the ability to diversify within an asset class. This is where alternative assets have the greatest ability to add value. Their purpose is not to hedge the fundamental asset classes, but rather to expand them. Consequently, alternative assets should be considered as part of a broader asset class.

As already noted, private equity is simply one part of the spectrum of equity investments. Granted, a different set of skills is required to manage a private equity portfolio compared to public equity securities. However, private equity investments simply expand the equity investment universe. Consequently, private equity is an alternative investment strategy within the equity universe as opposed to a new fundamental asset class.

Another example is credit derivatives. These are investments that expand the frontier of credit risk investing. The fixed income world can be classified simply as a choice between U.S. Treasury securities that are considered to be default-free and spread products that contain an element of default risk. Spread products include any fixed income investment that does not have a credit rating on a par with the U.S. government. Consequently, spread products trade at a credit spread relative to U.S. Treasury securities that reflects their risk of default.

Credit derivatives are a way to diversify and expand the universe for investing in spread products. Traditionally, fixed income managers attempted to establish their ideal credit risk and return profile by buying and selling traditional bonds. However, the bond market can be inefficient and it may be difficult to pinpoint the exact credit profile to match the risk profile of the investor. Credit derivatives can help to plug the gaps in a fixed income portfolio and expand the fixed income universe by accessing credit exposure in more efficient formats.

Efficient versus inefficient asset classes

Another way to distinguish alternative asset classes is based on the efficiency of the marketplace. The U.S. public stock and bond markets are generally considered the most efficient marketplaces in the world. These markets are often referred to as semistrong efficient. This means that all publicly available information regarding a publicly traded corporation, both past information and present, is fully digested in the price of that company's traded securities.

Yet, inefficiencies exist in all markets, both public and private. If there were no informational inefficiencies in the public equity market, there would be no case for active investment management. Nonetheless, whatever inefficiencies do exist, they are small and fleeting. The reason is that information is easy to acquire and disseminate in the publicly traded securities markets. Top-quartile active managers in the public equity market earn excess returns (over their benchmarks) of approximately 1% a year.

In contrast, with respect to alternative assets, information is very difficult to acquire. Most alternative assets (with the exception of commodities) are privately traded. This includes private equity, hedge funds, real estate, and credit derivatives. The difference between top-quartile and bottom-quartile performance in private equity can be as much as 25%.

Consider venture capital, one subset of the private equity market. Investments in start-up companies require intense research into the product niche the company intends to fill, the background of the management of the company, projections about future cash flows, exit strategies, potential

competition, beta testing schedules, and so forth. This information is not readily available to the investing public. It is time-consuming and expensive to accumulate. Further, most investors do not have the time or the talent to acquire and filter through the rough data regarding a private company. One reason why alternative asset managers charge large management and incentive fees is to recoup the cost of information collection.

This leads to another distinguishing factor between alternative investments and the traditional asset classes: the investment intermediary. Continuing with our venture capital example, most investments in venture capital are made through limited partnerships, limited liability companies, or special purpose vehicles. It is estimated that 80% of all private equity investments in the United States are funneled through a financial intermediary.

Last, investments in alternative assets are less liquid than their public markets counterparts. Investments are closely held and liquidity is minimal. Further, without a publicly traded security, the value of private securities cannot be determined by market trading. The value of the private securities must be estimated by book value, arrived at by appraisal, or determined by a cash flow model.

Constrained versus unconstrained investing

During the great bull market of 1983 to 2000, the asset management industry only had to invest in the stock market to enjoy consistent double-digit returns. During this heyday, investment management shops and institutional investors divided their assets between the traditional asset classes of stocks and bonds. As the markets turned sour at the beginning of the new millennium, asset management firms and institutional investors found themselves boxed in by these traditional asset class distinctions. They found that their investment teams were organized along traditional asset class lines and their investment portfolios were constrained by efficient benchmarks that reflected this “asset box” approach.

Consequently, traditional asset management shops have been slow to reorganize their investment structures. This has allowed hedge funds and other alternative investment vehicles to flourish because they are not bound by traditional asset class lines—they can invest outside the benchmark. These alternative assets are free to exploit the investment opportunities that fall in between the traditional benchmark boxes. The lack of constraints allows alternative asset managers a degree of freedom that is not allowed the traditional asset class shops. Further, traditional asset management shops remain caught up in an organizational structure that is bounded by traditional asset class lines. This provides another constraint because it inhibits the flow of information and investment ideas across the organization.

Asset location versus trading strategy

One of the first and best papers on hedge funds, by William Fung and David Hsieh,⁸ shows a distinct difference between how mutual funds and hedge funds operate. They show that the economic exposure associated with mutual funds is defined primarily by *where* the mutual fund invests. In other words, mutual funds gain their primary economic and risk exposures by the locations of the asset classes in which they invest. Thus, we get large-cap active equity funds, small-cap growth funds, Treasury bond funds, and the like.

Conversely, Fung and Hsieh show that hedge funds’ economic exposures are defined more by *how* they trade. That is, a hedge fund’s risk and return exposure is defined more by a trading strategy

⁸ William Fung and David Hsieh, “Empirical Characteristics of Dynamic Trading Strategies: The Case of Hedge Funds,” *Review of Financial Studies* 10, no. 2, 1997, 275–302.

within an asset class than it is defined by the location of the asset class. As a result, hedge fund managers tend to have much greater turnover in their portfolios than mutual funds have.

Asset class risk premiums versus trading strategy risk premiums

Related to the idea of trading strategy versus investment location is the notion of risk premiums. You cannot earn a return without incurring risk. Traditional investment managers earn risk premiums for investing in the large-cap value equity market, small-cap growth equity market, and high-yield bond market, in other words, based on the location of the asset markets in which they invest.

Conversely, alternative asset managers also earn returns for taking risk, but the risk is defined more by a trading strategy than it is by an economic exposure associated with the systematic risk contained within broad financial classes. For example, hedge fund strategies such as convertible arbitrage, statistical arbitrage, and equity market neutral can earn a so-called complexity risk premium.⁹

These strategies buy and sell similar securities, expecting the securities to converge in value over time. The complexity of implementing these strategies results in inefficient pricing in the market. In addition, many investors are constrained by the long-only restriction—their inability to short securities. This perpetuates inefficient pricing in the marketplace, which enables hedge funds to earn a return.

OVERVIEW OF THIS BOOK

This book is organized into six parts plus four appendices. The first part provides a framework to consider alternative assets within a broader portfolio context. Specifically, in Chapter 2 we expand on the concept of strategic versus tactical asset allocation and the use of beta drivers versus alpha drivers to achieve these goals. Chapter 3 discusses in detail the concept of beta. Just as the market for alternative assets has become more sophisticated over the years, the market for beta has advanced as well. The traditional capital asset pricing model (CAPM) beta is not sufficient to describe the many ways of systematic risk capture that exist in the financial markets today. Further, a discussion of beta will help ground us in the reality and examination of alpha. Chapter 4 examines the separation of alpha and beta in the asset management industry. As investors have become more advanced in their portfolio construction, asset management companies have had to respond by developing a clearer understanding and pricing of beta and alpha. Chapter 5 explains the calculus of active management, which provides a discussion of the Fundamental Law of Active Management.

The second part of the book turns to real estate. Real estate has long been a significant holding of both retail (homeowners) and institutional (commercial, retail, multifamily, industrial) investors. We start in Chapter 6 with a review of real estate investment trusts (REITs). Chapter 7 discusses the formation of the National Council of Real Estate Investment Fiduciaries (NCREIF) and the construction of its National Property Index, the most widely used benchmark in the real estate industry. Chapter 8 takes a step back to discuss the five reasons why real estate is a necessary part of any diversified portfolio. Chapter 9 provides a discussion on the differences between core, value-added, and opportunistic real estate, exploring their different risk profiles and return expectations.

The third part of the book reviews hedge funds. Chapter 10 begins with a brief history on the birth of hedge funds and an introduction to the types of hedge fund investment strategies. Chapter 11 provides some practical guidance as to how to build a hedge fund investment program. Chapter 12 is devoted to conducting due diligence, including both a qualitative and a quantitative

⁹ See Lars Jaeger, *Managing Risk in Alternative Investment Strategies* (Upper Saddle River, NJ: Prentice Hall/Financial Times, 2002).

review. In Chapter 13, we analyze the return distributions of hedge funds and begin to consider some risk management issues. In Chapter 14, we expand the discussion of hedge fund risks and highlight some specific examples of hedge fund underperformance. Chapter 15 provides an introduction to hedge fund benchmarks and discusses how these benchmarks impact the asset allocation decision with regard to hedge funds. In Chapter 16, we consider the fees charged by hedge fund managers, a key point of contention between hedge fund managers and their clients. Chapter 17 reviews some recent hedge fund explosions and implosions. We thought it worthwhile to look at recent exits of five hedge fund managers to determine what went wrong, to consider what might have been done to prevent their demise, and to see whether there are any other lessons learned. In the concluding Chapter 18, we have a bit of fun at the expense of the hedge fund industry and add a humorous note as we go through a top-ten list of hedge fund quotes (from actual hedge fund managers) and accompanying anecdotes.

Part IV is devoted to commodity and managed futures. We begin with a brief review in Chapter 19 of the economic value inherent in commodity futures contracts. Chapter 20 describes how an individual or institution may invest in commodity futures, including an introduction to commodity futures benchmarks. Chapter 21 considers commodity futures within a portfolio framework, while Chapter 22 examines the managed futures industry.

Part V covers the spectrum of private equity. In Chapter 23, we introduce venture capital, while Chapter 24 is devoted to leveraged buyouts. In Chapters 25 and 26, we show how two different forms of debt may be components of the private equity marketplace. In Chapter 27, we introduce alternative investment strategies within the private equity marketplace, and in Chapter 28, we review the economics associated with private equity investments.

Part VI is devoted to credit derivatives. In Chapter 29, we review the importance of credit risk and provide examples of how credit derivatives are used in portfolio management. In Chapter 30, we review the collateralized debt obligation market. Specifically, we review the design, structure, and economics of collateralized bond obligations and collateralized loan obligations. In Chapter 31, we discuss new developments.

Throughout this book, we attempt to provide descriptive material as well as empirical examples. In each chapter, you will find charts, tables, graphs, and calculations that serve to highlight specific points. Our goal is to both educate the reader with respect to these alternative investment strategies as well as provide a reference book for data and research. Along the way, we also try to provide a few anecdotes about alternative investing that, while providing some humor, also demonstrate some of the pitfalls of the alternative asset universe.

Appendices

The first three appendices cover essential material provided as a reference: Appendix A begins to apply some basic principles of return, compounding, expected return, and internal rate of return. Appendix B turns to measures of risk such as the variance, volatility, skewness, and kurtosis. These are risk measures that we use throughout the book with respect to each alternative investment class. Appendix C provides basic examples of correlation analysis and linear regression analysis. These deal with quantitative methods in finance. As the market has moved toward the separation of beta and alpha, more sophisticated mathematical concepts have been applied to accurately measure and manage alpha and beta. Last, Appendix D explores 130/30 funds, which are all the rage among both institutional and retail investors. Some consider 130/30 funds to be a poor man's hedge fund, but, in fact, these funds can play a vital part in portfolio construction.