



## Fundamentals of Alternative Investments

# Syllabus

### LESSON 1

#### Traditional vs. Alternative Investments

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In this lesson, we explore the differences between traditional and alternative investments and the typical structures of alternative investments. We show how alternative investments may fit into an investment portfolio from an asset allocation standpoint and highlight the diversification potential of such investments. Finally, we discuss the means of access to the markets for alternative investments, from private placements to registered products.

### LESSON 2

#### Investment Returns and Risk (Benchmarking)

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In the context of alternative investments, benchmarking is a crucial component of evaluating the performance of an investment. In this lesson, we address various methods of benchmarking and its role in the process of evaluating an investment manager. We discuss the fundamental tradeoff between risk and return, noting the centrality of that tradeoff to the structure of benchmarking measures. We conclude with observations on the challenges of selecting appropriate benchmarks.

### LESSON 3

#### Correlation and Efficient Frontiers

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In this lesson, we discuss covariance, autocorrelation, and beta and assess how the use of correlation can help an investor create an effectively diversified portfolio. We examine the challenges in performing statistical analysis of alternative investments and offer an ideal protocol for proper statistical testing. We conclude with observations on performance persistence, the methods that may be used to distinguish luck from skill, and the difficulties in performing such assessments.

### LESSON 4

#### Portfolio Management and Asset Allocation

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In this lesson, we examine ten ways for asset allocators to construct, manage, and monitor their portfolios. We review the foundations of asset allocation, providing details on the Capital Asset Pricing Model and the endowment model, as well as mean variance and other moment models. We cover the concept of risk budgeting and assess other models that take a range of factors into consideration, including some popular approaches to asset allocations that include alternative investments.

### LESSON 5

#### Due Diligence

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Due diligence is defined as a set of processes directed toward making informed decisions about investment managers. In this lesson, we explore performance reviews, including investment objectives and the generation of alpha. We cover both structural and strategic reviews and provide an example of the due diligence process for a convertible arbitrage trading strategy. The lesson comments on best practices as put forth by the President's Working Group on Financial Markets, which identified key areas where due diligence efforts could result in a reduction of systemic risk and increase investor protection.

### LESSON 6

#### Risk Management

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In this lesson, we examine a range of risk management issues, including investment strategy risk, market and tail risk, investment process risk, and operational risk. We look at various internal control procedures and assess some of the sources of liquidity risk in the alternative investment context. We discuss risk mitigation practices and offer a current look at typical causes for fund failures. Risk management is a necessary and powerful component to successful investing in alternative asset classes.

### LESSON 7

#### Hedge Funds 1: *Structure, Categories, and Biases*

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We discuss the characteristics of hedge funds, including recent statistics on the growth of the industry and an overview of funds by age, domicile, and concentrations across the hedge fund universe. We look at hedge fund industry performance and the dynamics of particular investment strategies. Finally, we cover issues with hedge fund industry databases, noting the role of indices, the presence of biases, and the implications of imperfections in the performance measurement process.

### LESSON 8

#### Hedge Funds 2: *Relative Value and Event Driven Strategies*

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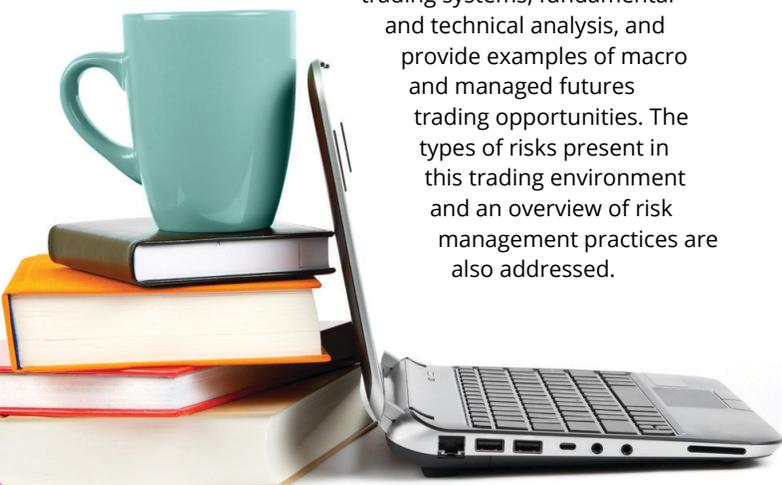
This lesson covers event-driven and relative value hedge funds, addressing strategies to profit from corporate events, including mergers and acquisitions, spin-offs, bankruptcies, and reorganizations. Relative value hedge fund strategies include convertible bond, fixed-income, ABS and MBS arbitrage and involve complex valuation processes. While these strategies face special risks and challenges, complexity premiums and other sources of alpha may be found by managers with superior research skills, deep market experience, and strong financial models.

### LESSON 9

#### Hedge Funds 3: *Macro and Managed Futures Strategies*

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This lecture examines global macro and managed futures strategies, which focus on the big picture, placing trades predominantly in futures, forwards, and swaps markets that attempt to benefit from anticipating price level movements in major sectors or exploiting potential inefficiencies at sector and country-wide levels. We cover discretionary and systematic trading systems, fundamental and technical analysis, and provide examples of macro and managed futures trading opportunities. The types of risks present in this trading environment and an overview of risk management practices are also addressed.



### LESSON 10

#### Hedge Funds 4: *Funds of Funds*

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Funds of funds are hedge funds with an underlying portfolio of other hedge funds. The primary purposes of funds of funds are to reduce idiosyncratic risk through diversification, to tap into the potential skill of the fund of funds manager in selecting investments, and to rely on fund of funds teams in monitoring and managing portfolios of hedge fund investments. Funds of funds can be a valuable approach for many investors to obtain professionally managed access to an array of individual hedge funds.

### LESSON 11

#### Hedge Funds 5: *Equity Strategies*

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This lesson covers equity hedge funds, which provide opportunities for directional market risk exposure, as well as stock selection through fundamental analysis and other styles of evaluation. Equity hedge funds differ from more traditional investments in their use of short sales and leverage, offering potentially improved combinations of risks and returns regardless of short-term market dynamics. However, selecting equity hedge funds, understanding the risks inherent in the strategies, and evaluating the performance properly all require specialized knowledge and attention.

### LESSON 12

#### Real Assets 1: *Timberland, Farmland, and Intellectual Property*

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In this lesson, we evaluate the properties of real asset investments. We begin with a discussion of land, timberland, and farmland, and examine the common properties and ownership methods of those investments. We address investment in infrastructure and highlight the ways in which exposure to these asset classes may be obtained. We then discuss intellectual property and one of its subclasses, art, and conclude with an example of intellectual property valuation.

### LESSON 13

#### Real Assets 2: *Real Estate Equity and Markets*

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This lesson analyzes the advantages and disadvantages in making real estate part of an investment portfolio. We characterize real estate investment based on type, including real estate investment trusts, commingled funds, syndications, and exchange-traded funds, and examine the risks that are specific to these asset classes. Finally, we assess the market for mortgage backed securities and the use of collateralized mortgage obligations and other debt-related securities in an investment portfolio.

**LESSON 14***Private Equity 1: Introduction and Performance Analysis*

This lesson covers a range of topics related to private equity investment, including what private equity investment is and why it is useful in a portfolio. We look at the structure and life cycle of private equity funds and analyze the cash flows and fees that are characteristic of such funds. We examine various performance measures and walk through calculations related to the measurement of returns. Finally, we provide an overview of the main risks in private equity and its role in a portfolio context.

**LESSON 15***Private Equity 2: LBO, VC, and Debt Strategies*

In this lesson, we discuss private equity investments, including venture capital funds, buyout funds, and fixed income funds, which encompass mezzanine debt and distressed debt. We provide insight into the life cycle and performance of venture capital funds and present a framework for the private equity investment process, from the development of portfolio objectives, through liquidity management, and manager selection. We conclude with a look at the risks involved in private equity investments.

**LESSON 16***Commodities 1: Markets and Inflation Protection*

Commodities may serve as an important element of an investment portfolio. In this lesson, we provide a definition of commodities as an asset class, explore the historical performance of commodities, and comment on their role in asset allocation and inflation protection. We compare the differences between commodities and financial assets. Various methods of obtaining exposure to commodities are evaluated, and we conclude with a discussion of futures based commodities investments.

**LESSON 17***Commodities 2: Beta Products, Alpha Products, and Benchmarks*

In this lesson, we explore methods for delivery commodity alpha and beta. We evaluate fundamental and quantitative directional strategies, as well as a range of relative value strategies for commodity alpha. For commodity beta, we cover both direct and indirect ownership of commodities. We also provide commentary on the sources of commodity returns and the features of both traditional (first generation) and enhanced major commodity indices.

**LESSON 18***Structured Products 1: Credit Default Swaps (CDS)*

Structured products are complex instruments that can provide unique dimensions to an investment portfolio. In this lesson, we describe Credit Default Swaps, including the forms of payment, categories of trigger events, and valuation; we also look at the economic role of CDS in the broader investment landscape. Finally, we consider the life cycle of CDS and discuss CDS Indexes, a popular form of exposure to this asset class. CDS can be a valuable tool for transferring and managing credit risk; however, a thorough understanding is necessary to reaping the benefits of this form of alternative investment.

**LESSON 19***Structured Products 2: Collateralized Debt Obligations (CDO)*

In this lecture, we offer an overview of CDOs: what they are, how the cash flows work, how default losses are allocated, and how the credit ratings system affects their structure and performance. We examine the structure of tranches and seniority, the varieties of CDOs, and their economic roles in the world of investments. Finally, we provide key terms and definitions associated with CDOs and outline the main principles of risk management and analysis.

**LESSON 20***Capstone: The Risks and Rewards of Alternative Investments*

This lesson summarizes the material covered in all of the previous lessons, with a particular focus on the risks and rewards of incorporating alternative investments into both individual and institutional portfolios.

**BONUS TOPIC***Liquid Alternatives*

Historically, alternative investments were only available to institutional and high net worth investors. In this private placement world, managers had significant investment discretion with regards to disclosure, fees, liquidity, leverage and derivatives positions. In recent years, a growing number of investment managers have made products available in a "liquid alternatives" format, the emerging topic covered in this FAI module. The discussion includes the significant regulatory differences of liquid alternatives from private placement products, despite their wide availability to retail investors. The differences in performance and due diligence requirements are also discussed.