Fundamentals of Alternative Investments

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Syllabus

LESSON 1

Traditional vs. Alternative Investments

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.

- Traditional Investments
- Structures in Alternative Investments
- Traditional vs. Alternative Investments
- Types of Alternative Investments
- Drivers of Asset Allocation
- Registered Products vs. Private Placements

LESSON 2

Investment Returns and Risk (Benchmarking)

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 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.

- Investment Returns
- The Normal Distribution
- Return Attribution
- Benchmarking with Peer Groups
- Benchmarking with Betas
- Risk and Standard Deviation
- Autocorrelation
- Other Measures of Risk
- Risk-Adjusted Performance

LESSON 3

Correlation and Efficient Frontiers

In this lesson, we discuss covariance, autocorrelation, and beta and assess how the use of correlation can help an investor to 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.

- Covariance
- Diversification
- Autocorrelation
- Beta as a Measure of Systematic Risk
- Challenges of Statistical Analysis

LESSON 4

Portfolio Management and Asset Allocation

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.

- Asset Allocation
- Questionnaires and Model Portfolios
- The CAPM and Passive Indexing
- The Endowment Model
- Mean-Variance and Higher Moment Models
- Risk Budgeting Models
- Multi-Factor Models
- Liability-Driven Models
- Risk-Parity Models
- Scenario-Based Models
- Core vs. Non-Core Models

LESSON 5

Due Diligence

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.

- Introduction to Due Diligence
- The Investment Objective of the Fund
- The Fund Investment Process
- Value Added by Fund Managers
- The Structural Review
- The Strategic Review
- Strategy-Specific Due Diligence: Convertible Arbitrage
- Best Practices: President's Working Group on Financial Markets

LESSON 6

Risk Management

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.

- Risk Management
- Stated Investment Strategy Risks
- Managing Market Risk
- The Three Fund Functions
- Investment Process Risk
- Operational Risk
- Internal Control Procedures
- Potential Interaction of Operational Errors and Market Risks

LESSON 7

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

In this lesson, 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 performance measurement process.

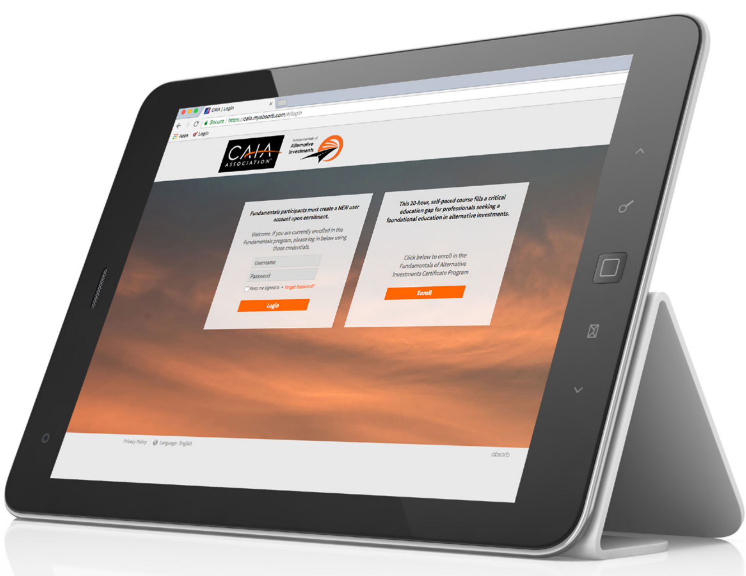
- Overview of Hedge Funds
- Hedge Fund Industry: Growth
- Hedge Fund Industry: Overall Performance
- Hedge Fund Industry: Investment Strategies
- Dynamics of Hedge Funds
- Issues with Hedge Fund Data

LESSON 8

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

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.

- Introduction to Event-Driven Hedge Funds
- Sources of Event-Driven Strategy Returns
- Activist Investing
- Merger Arbitrage
- Distressed Debt Funds
- Capital Structure Arbitrage
- Other Types of Event-Driven Funds
- Relative Value Hedge Funds
- Convertible Bond Arbitrage
- Fixed Income Arbitrage
- ABS and MBS Strategies
- Relative Value Multi-Strategy Funds



LESSON 9

Hedge Funds 3: *Macro and Managed Futures Strategies*

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 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.

- Introduction to Macro and Managed Futures Funds
- Discretionary vs. Systematic Trading
- Technical Analysis
- Fundamental Analysis
- Macro Funds
- Managed Funds
- Systematic Trading Rules
- Asset Returns
- Conditional Correlation
- Maximum Drawdown
- Portfolio Effects

LESSON 10

Hedge Funds 4: *Funds of Funds*

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.

- Introduction to Funds of Funds
- Internal Management & Multi-Strategy Funds
- Four Functions of Funds of Funds
- Benefits of Funds of Funds
- Disadvantages of Funds of Funds
- Value Added by Fund of Funds Managers
- Manager Allocation and Selection Process
- Portfolio Construction Considerations
- Evaluating Fund of Funds Performance

LESSON 11

Hedge Funds 5: *Equity Strategies*

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.

- Introduction to Equity Hedge Funds
- Equity Hedge Fund Strategies
- Differentiating Equity Hedge Funds
- Equity Long/Short Funds
- Equity Market-Neutral Funds
- Short-Bias Funds
- Short Selling Risks and Returns
- Performance Attribution
- Fundamental vs. Quantitative Managers
- Quantitative Strategies
- Fundamental Strategies
- Momentum-Based Equity Approaches
- Anomalies and Anomaly Strategies

LESSON 12

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

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.

- Introduction to Real Assets
- Types of Lots
- Timberland Investment Characteristics
- Farmland Investment Characteristics
- Infrastructure Investment
- Intellectual Property Characteristics
- Art Characteristics
- A Simplified Model of IP Valuation

LESSON 13

Real Assets 2: *Real Estate Equity and Markets*

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.

- Real Estate Characteristics
- Real Estate Valuation
- Real Estate Investment Opportunities
- Real Estate Indices
- Real Estate Securitization

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.

- What is Private Equity?
- Why Private Equity?
- Private Equity Fund Structure
- Cash Flows, Fees & Waterfall
- Common Performance Measures
- IRR Calculation
- TVPI, DPI, and RVPI Calculations
- Performance Measures
- Risks Associated with Private Equity

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.

- Venture Capital Funds
- Performance Measures
- Buyout Funds
- Mezzanine Debt
- Distressed Debt
- Private Equity Investment Process
- Liquidity Management
- Manager Selection

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.

- Introduction to Commodities
- Long-Term Commodity Returns
- Commodities vs. Financial Assets
- The Role of Emerging Markets
- Ways to Gain Exposure to Commodities
- Contango and Backwardation

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.

- Alpha and Beta Strategies
- Alpha: Directional Strategies
- Alpha: Relative Value Strategies
- Relative Value: Calendar Spreads
- Relative Value: Correlation Spreads
- Intra-Market Relative Value Strategies
- Fundamental Analysis
- Commodity Beta
- Commodity Futures Indices
- Enhanced Commodity Futures Indices
- 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.

- Introduction to Credit Default Swaps
- Major CDS Concepts
- Trigger Events
- Valuing a CDS
- Users and Uses of CDS
- The Economic Role of CDS
- CDS vs. Total Return Swaps
- Lifecycle of a CDS
- Additional Details about CDS
- CDS Indexes

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.

- What is a CDO?
- CDO Balance Sheet
- CDO Cash Flow Waterfall
- Posting of Default Losses
- Credit Ratings of CDOs
- Economic Roles of CDOs
- Terminology and Practices of CDOs
- CDO Risk Management

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.

- Fundamentals Retrospective
- Diversification across Idiosyncratic Risks
- Diversification across Risk Factors
- Diversification across Scenarios
- Return Enhancement through Liquidity Premiums
- Return Enhancement through Complexity Risk Premiums
- Return Enhancement through Alternative Beta Opportunities
- Return Enhancement through Investor Asymmetries
- Return Enhancement through Persistent Alpha
- The Challenges of Alternative Investment Management
- The Risks and Rewards of Alternative Investments

BONUS TOPICS

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. 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.

Opportunities in Private Credit Investing

Since 2008, credit has been harder to come by for many borrowers, as banks have backed away from many types of lending due to the stress tests and capital adequacy requirements imposed after the bank bailouts. As a result, the private credit market has exploded from $200 billion in AUM in 2008 to over $600 billion today as borrowers turn to non-bank lenders to meet their credit needs. The yield potential and risk factors of direct lending, mezzanine and distressed investments are discussed.

- Fixed-rate vs. floating-rate debt
- Investment grade vs. high yield debt
- Capital structure and covenants
- Credit ratings and credit spreads
- Bankruptcy, defaults and recovery rates
- Distressed debt
- Mezzanine debt
- Direct lending
- Interval funds and BDCs
- Private debt in hedge funds and private equity funds

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