Asset Allocation

LEARNING OUTCOMES

Capital Market Expectations, Part 1: Framework and Macro Considerations

The candidate should be able to:

- □ discuss the role of, and a framework for, capital market expectations in the portfolio management process
- □ discuss challenges in developing capital market forecasts
- □ explain how exogenous shocks may affect economic growth trends
- □ discuss the application of economic growth trend analysis to the formulation of capital market expectations
- □ compare major approaches to economic forecasting
- □ discuss how business cycles affect short- and long-term expectations
- □ explain the relationship of inflation to the business cycle and the implications of inflation for cash, bonds, equity, and real estate returns
- □ discuss the effects of monetary and fiscal policy on business cycles
- □ interpret the shape of the yield curve as an economic predictor and discuss the relationship between the yield curve and fiscal and monetary policy
- □ identify and interpret macroeconomic, interest rate, and exchange rate linkages between economies

Capital Market Expectations, Part 2: Forecasting Asset Class Returns

The candidate should be able to:

- □ discuss approaches to setting expectations for fixed-income returns
- □ discuss risks faced by investors in emerging market fixed-income securities and the country risk analysis techniques used to evaluate emerging market economies

- ☐ discuss approaches to setting expectations for equity investment market returns
- ☐ discuss risks faced by investors in emerging market equity securities
- ☐ explain how economic and competitive factors can affect expectations for real estate investment markets and sector returns
- ☐ discuss major approaches to forecasting exchange rates
- ☐ discuss methods of forecasting volatility
- ☐ recommend and justify changes in the component weights of a global investment portfolio based on trends and expected changes in macroeconomic factors

Overview of Asset Allocation

The candidate should be able to:

- ☐ describe elements of effective investment governance and investment governance considerations in asset allocation
- ☐ formulate an economic balance sheet for a client and interpret its implications for asset allocation
- ☐ compare the investment objectives of asset-only, liability-relative, and goals-based asset allocation approaches
- ☐ contrast concepts of risk relevant to asset-only, liability-relative, and goals-based asset allocation approaches
- ☐ explain how asset classes are used to represent exposures to systematic risk and discuss criteria for asset class specification
- ☐ explain the use of risk factors in asset allocation and their relation to traditional asset class–based approaches
- ☐ recommend and justify an asset allocation based on an investor's objectives and constraints
- ☐ describe the use of the global market portfolio as a baseline portfolio in asset allocation
- ☐ discuss strategic implementation choices in asset allocation, including passive/active choices and vehicles for implementing passive and active mandates
- ☐ discuss strategic considerations in rebalancing asset allocations

Principles of Asset Allocation

The candidate should be able to:

- ☐ describe and evaluate the use of mean–variance optimization in asset allocation
- ☐ recommend and justify an asset allocation using mean–variance optimization
- ☐ interpret and evaluate an asset allocation in relation to an investor's economic balance sheet
- ☐ recommend and justify an asset allocation based on the global market portfolio
- ☐ discuss the use of Monte Carlo simulation and scenario analysis to evaluate the robustness of an asset allocation
- ☐ discuss asset class liquidity considerations in asset allocation
- ☐ explain absolute and relative risk budgets and their use in determining and implementing an asset allocation
- ☐ describe how client needs and preferences regarding investment risks can be incorporated into asset allocation
- ☐ describe the use of investment factors in constructing and analyzing an asset allocation
- ☐ describe and evaluate characteristics of liabilities that are relevant to asset allocation
- ☐ discuss approaches to liability-relative asset allocation
- ☐ recommend and justify a liability-relative asset allocation
- ☐ recommend and justify an asset allocation using a goals-based approach

- ◻ describe and evaluate heuristic and other approaches to asset allocation
- ◻ discuss factors affecting rebalancing policy

Asset Allocation with Real-World Constraints

The candidate should be able to:

- ◻ discuss asset size, liquidity needs, time horizon, and regulatory or other considerations as constraints on asset allocation
- ◻ discuss tax considerations in asset allocation and rebalancing
- ◻ recommend and justify revisions to an asset allocation given change(s) in investment objectives and/or constraints
- ◻ discuss the use of short-term shifts in asset allocation
- ◻ identify behavioral biases that arise in asset allocation and recommend methods to overcome them

Portfolio Construction

LEARNING OUTCOMES

Overview of Equity Portfolio Management

The candidate should be able to:

- ☐ describe the roles of equities in the overall portfolio
- ☐ describe how an equity manager's investment universe can be segmented
- ☐ describe the types of income and costs associated with owning and managing an equity portfolio and their potential effects on portfolio performance
- ☐ describe the potential benefits of shareholder engagement and the role an equity manager might play in shareholder engagement
- ☐ describe rationales for equity investment across the active management spectrum
- ☐ discuss considerations in choosing a benchmark for an equity portfolio

Overview of Fixed-Income Portfolio Management

The candidate should be able to:

- ☐ discuss roles of fixed-income securities in portfolios and how fixed-income mandates may be classified
- ☐ describe fixed-income portfolio measures of risk and return as well as correlation characteristics
- ☐ describe bond market liquidity, including the differences among market sub-sectors, and discuss the effect of liquidity on fixed-income portfolio management
- ☐ describe and interpret a model for fixed-income returns
- ☐ discuss the use of leverage, alternative methods for leveraging, and risks that leverage creates in fixed-income portfolios

- ☐ discuss differences in managing fixed-income portfolios for taxable and tax-exempt investors
- ☐ describe liability-driven investing
- ☐ describe the strategy of cash flow matching
- ☐ describe construction, benefits, limitations, and risk–return characteristics of a laddered bond portfolio

Asset Allocation to Alternative Investments

The candidate should be able to:

- ☐ explain the roles that alternative investments play in multi-asset portfolios
- ☐ compare alternative investments and bonds as risk mitigators in relation to a long equity position
- ☐ compare traditional and risk-based approaches to defining the investment opportunity set, including alternative investments
- ☐ discuss investment considerations that are important in allocating to different types of alternative investments
- ☐ discuss suitability considerations in allocating to alternative investments
- ☐ discuss approaches to asset allocation to alternative investments
- ☐ discuss the importance of liquidity planning in allocating to alternative investments
- ☐ discuss considerations in monitoring alternative investment programs

An Overview of Private Wealth Management

The candidate should be able to:

- ☐ discuss the different types of individual wealth and how wealth is created and distributed globally
- ☐ evaluate how changes in human capital, financial capital, and economic net worth across the financial stages of an individual's life influence their financial decision making
- ☐ justify how returns, risks, objectives, and constraints for individuals relate to their human and financial capital
- ☐ evaluate how various types of taxes imposed on individual investors and the impact of inflation influence investment decisions
- ☐ discuss the differences between private and institutional clients and formulate an appropriate Investment Policy Statement for private clients

Portfolio Management for Institutional Investors

The candidate should be able to:

- ☐ discuss common characteristics of institutional investors as a group
- ☐ discuss investment policy of institutional investors
- ☐ discuss the stakeholders in the portfolio, the liabilities, the investment time horizons, and the liquidity needs of different types of institutional investors
- ☐ describe the focus of legal, regulatory, and tax constraints affecting different types of institutional investors
- ☐ evaluate risk considerations of private defined benefit (DB) pension plans in relation to 1) plan funded status, 2) sponsor financial strength, 3) interactions between the sponsor's business and the fund's investments, 4) plan design, and 5) workforce characteristics
- ☐ evaluate the investment policy statement of an institutional investor
- ☐ evaluate the investment portfolio of a private DB plan, sovereign wealth fund, university endowment, and private foundation

- □ describe considerations affecting the balance sheet management of banks and insurers

Trading Costs and Electronic Markets

The candidate should be able to:

- □ explain the components of execution costs, including explicit and implicit costs
- □ calculate and interpret effective spreads and VWAP transaction cost estimates
- □ describe the implementation shortfall approach to transaction cost measurement
- □ describe factors driving the development of electronic trading systems
- □ describe market fragmentation
- □ identify and contrast the types of electronic traders
- □ describe characteristics and uses of electronic trading systems
- □ describe comparative advantages of low-latency traders
- □ describe the risks associated with electronic trading and how regulators mitigate them
- □ describe abusive trading practices that real-time surveillance of markets may detect

Case Study in Portfolio Management: Institutional (SWF)

The candidate should be able to:

- □ discuss financial risks associated with the portfolio strategy of an institutional investor
- □ discuss environmental and social risks associated with the portfolio strategy of an institutional investor
- □ analyze and evaluate the financial and non-financial risk exposures in the portfolio strategy of an institutional investor
- □ discuss various methods to manage the risks that arise on long-term direct investments of an institutional investor
- □ evaluate strengths and weaknesses of an enterprise risk management system and recommend improvements

Performance Measurement

LEARNING OUTCOMES

Portfolio Performance Evaluation

The candidate should be able to:

- ☐ explain the following components of portfolio evaluation and their interrelationships: performance measurement, performance attribution, and performance appraisal
- ☐ describe attributes of an effective attribution process
- ☐ contrast return attribution and risk attribution; contrast macro and micro return attribution
- ☐ describe returns-based, holdings-based, and transactions-based performance attribution, including advantages and disadvantages of each
- ☐ interpret the sources of portfolio returns using a specified attribution approach
- ☐ interpret the output from fixed-income attribution analyses
- ☐ discuss considerations in selecting a risk attribution approach
- ☐ identify and interpret investment results attributable to the asset owner versus those attributable to the investment manager
- ☐ discuss uses of liability-based benchmarks
- ☐ describe types of asset-based benchmarks
- ☐ discuss tests of benchmark quality
- ☐ describe the impact of benchmark misspecification on attribution and appraisal analysis
- ☐ describe problems that arise in benchmarking alternative investments
- ☐ calculate and interpret the Sortino ratio, the appraisal ratio, upside/downside capture ratios, maximum drawdown, and drawdown duration
- ☐ describe limitations of appraisal measures and related metrics
- ☐ evaluate the skill of an investment manager

Investment Manager Selection

The candidate should be able to:

- □ describe the components of a manager selection process, including due diligence
- □ contrast Type I and Type II errors in manager hiring and continuation decisions
- □ describe uses of returns-based and holdings-based style analysis in investment manager selection
- □ describe uses of the upside capture ratio, downside capture ratio, maximum drawdown, drawdown duration, and up/down capture in evaluating managers
- □ evaluate a manager's investment philosophy and investment decision-making process
- □ discuss how behavioral factors affect investment team decision making, and recommend techniques for mitigating their effects
- □ evaluate the costs and benefits of pooled investment vehicles and separate accounts
- □ compare types of investment manager contracts, including their major provisions and advantages and disadvantages
- □ describe the three basic forms of performance-based fees
- □ analyze and interpret a sample performance-based fee schedule

Overview of the Global Investment Performance Standards

The candidate should be able to:

- □ discuss the objectives and scope of the GIPS standards and their benefits to prospective clients and investors, as well as investment managers
- □ explain the fundamentals of compliance with the GIPS standards, including the definition of the firm and the firm's definition of discretion
- □ discuss requirements of the GIPS standards with respect to return calculation methodologies, including the treatment of external cash flows, cash and cash equivalents, and expenses and fees
- □ explain the recommended valuation hierarchy of the GIPS standards
- □ explain requirements of the GIPS standards with respect to composite return calculations, including methods for asset-weighting portfolio returns
- □ explain the meaning of "discretionary" in the context of composite construction and, given a description of the relevant facts, determine whether a portfolio is likely to be considered discretionary
- □ explain the role of investment mandates, objectives, or strategies in the construction of composites
- □ explain requirements of the GIPS standards with respect to composite construction, including switching portfolios among composites, the timing of the inclusion of new portfolios in composites, and the timing of the exclusion of terminated portfolios from composites
- □ explain requirements of the GIPS standards with respect to presentation and reporting
- □ explain the conditions under which the performance of a past firm or affiliation may be linked to or used to represent the historical performance of a new or acquiring firm
- □ discuss the purpose, scope, and process of verification

Derivatives and Risk Management

LEARNING OUTCOMES

Options Strategies

The candidate should be able to:

- □ demonstrate how an asset's returns may be replicated by using options
- □ discuss the investment objective(s), structure, payoff, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of a covered call position
- □ discuss the investment objective(s), structure, payoff, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of a protective put position
- □ compare the delta of covered call and protective put positions with the position of being long an asset and short a forward on the underlying asset
- □ compare the effect of buying a call on a short underlying position with the effect of selling a put on a short underlying position
- □ discuss the investment objective(s), structure, payoffs, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of the following option strategies: bull spread, bear spread, straddle, and collar
- □ describe uses of calendar spreads
- □ discuss volatility skew and smile
- □ identify and evaluate appropriate option strategies consistent with given investment objectives
- □ demonstrate the use of options to achieve targeted equity risk exposures

Swaps, Forwards, and Futures Strategies

The candidate should be able to:

- □ demonstrate how interest rate swaps, forwards, and futures can be used to modify a portfolio's risk and return
- □ demonstrate how currency swaps, forwards, and futures can be used to modify a portfolio's risk and return
- □ demonstrate how equity swaps, forwards, and futures can be used to modify a portfolio's risk and return
- □ demonstrate the use of volatility derivatives and variance swaps
- □ demonstrate the use of derivatives to achieve targeted equity and interest rate risk exposures
- □ demonstrate the use of derivatives in asset allocation, rebalancing, and inferring market expectations

Currency Management: An Introduction

The candidate should be able to:

- □ analyze the effects of currency movements on portfolio risk and return
- □ discuss strategic choices in currency management
- □ formulate an appropriate currency management program given financial market conditions and portfolio objectives and constraints
- □ compare active currency trading strategies based on economic fundamentals, technical analysis, carry-trade, and volatility trading
- □ describe how changes in factors underlying active trading strategies affect tactical trading decisions
- □ describe how forward contracts and FX (foreign exchange) swaps are used to adjust hedge ratios
- □ describe trading strategies used to reduce hedging costs and modify the risk–return characteristics of a foreign-currency portfolio
- □ describe the use of cross-hedges, macro-hedges, and minimum-variance-hedge ratios in portfolios exposed to multiple foreign currencies
- □ discuss challenges for managing emerging market currency exposures

Ethical and Professional Standards

LEARNING OUTCOMES

Code of Ethics and Standards of Professional Conduct

The candidate should be able to:

- ☐ describe the structure of the CFA Institute Professional Conduct Program and the disciplinary review process for the enforcement of the CFA Institute Code of Ethics and Standards of Professional Conduct
- ☐ explain the ethical responsibilities required by the Code and Standards, including the subsections of each standard

Guidance for Standards I–VII

The candidate should be able to:

- ☐ demonstrate a thorough knowledge of the CFA Institute Code of Ethics and Standards of Professional Conduct by interpreting the Code and Standards in various situations involving issues of professional integrity
- ☐ recommend practices and procedures designed to prevent violations of the Code and Standards

Application of the Code and Standards: Level III

The candidate should be able to:

- ☐ evaluate practices, policies, and conduct relative to the CFA Institute Code of Ethics and Standards of Professional Conduct
- ☐ explain how the practices, policies, or conduct does or does not violate the CFA Institute Code of Ethics and Standards of Professional Conduct

Asset Manager Code of Professional Conduct

The candidate should be able to:

- □ explain the purpose of the Asset Manager Code and the benefits that may accrue to a firm that adopts the Code
- □ explain the ethical and professional responsibilities required by the six General Principles of Conduct of the Asset Manager Code
- □ determine whether an asset manager's practices and procedures are consistent with the Asset Manager Code
- □ recommend practices and procedures designed to prevent violations of the Asset Manager Code

Private Wealth Pathway

LEARNING OUTCOMES

The Private Wealth Management Industry

The candidate should be able to:

- □ discuss the typical business models of private wealth management service providers and their segment-based strategies
- □ discuss typical fee, revenue, and compensation structures prevalent in the private wealth management industry
- □ discuss how various advisers, consultants, and professionals support private wealth managers and their clients
- □ describe and evaluate regulatory and compliance considerations influencing the private wealth management industry

Working With the Wealthy

The candidate should be able to:

- □ describe how family and human dynamics relate to wealth and its management
- □ describe skills needed in profiling, acquiring, advising, communicating with, and educating private clients
- □ describe the unique characteristics of ultra-high-net-worth individuals and how these characteristics distinguish them from other private wealth management clients
- □ recommend appropriate approaches to the development, implementation, adherence, and amendment of a common, long-term framework for joint family decision making

Wealth Planning

The candidate should be able to:

- □ formulate goals-based financial plans and recommend appropriate strategies to achieve an individual's goals-based financial plans
- □ recommend and justify methods to manage a family's financial exposures holistically across their lifetime and retirement
- □ evaluate how the principles of taxation and taxes influence goals-based planning and holistic financial plans for individual investors
- □ recommend appropriate liquidity strategies for goal-based planning and holistic financial plans

Investment Planning

The candidate should be able to:

- □ recommend and justify portfolio allocations and investments for a private client
- □ discuss the tax efficiency of investment across various asset types and recommend various tax management strategies for asset allocation
- □ discuss and recommend appropriate wealth management planning approaches for retirement from legal, taxation, and jurisdictional perspectives
- □ evaluate the success of an investment program for a private client based on portfolio reporting and review

Preserving the Wealth

The candidate should be able to:

- □ analyze the types of risks relevant to human capital
- □ describe and recommend strategies to manage risks to human capital
- □ recommend planning and investment strategies to mitigate the corrosive influence of inflation on preserving purchasing power
- □ describe how exchange rates influence asset allocation and planning as well as approaches to mitigate the exchange rate risk

Advising the Wealthy

The candidate should be able to:

- □ discuss and recommend appropriate citizenship, nationality, and legal residency approaches for private clients
- □ discuss and recommend appropriate private wealth management approaches that maximize the human capital, financial capital, and economic net worth of complex family situations
- □ discuss and recommend appropriate private wealth management approaches that maximize the human capital, financial capital, and economic net worth of entrepreneurs and business owners
- □ discuss and recommend appropriate private wealth management approaches that maximize the human capital, financial capital, and economic net worth of professionals, executives, and others

Transferring the Wealth

The candidate should be able to:

- □ discuss and recommend appropriate wealth management planning approaches for transferring wealth during the lifetime of the giver through gifts
- □ discuss and recommend appropriate wealth management planning approaches for transferring wealth at death through bequests and inheritance

- ☐ discuss and recommend appropriate wealth management planning approaches for the preservation of wealth across multiple generations through charitable giving and philanthropy