

**The CIPM Program  
2010 Principles Study Sessions**

**Ethical and Professional Standards (Study Session I)**

The candidate should be able to summarize the importance of ethical standards to the investment profession, demonstrate ethically sound reasoning, and identify and explain the responsibilities required by the CIPM Association Code of Ethics and Standards of Professional Conduct.

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**Performance Evaluation: Measurement, Attribution, and Appraisal (Study Sessions II–V)**

The candidate should be able to calculate rates of return; explain and apply analytical techniques to determine the sources of returns relative to appropriate benchmarks; and calculate and interpret basic risk measures.

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**Global Investment Performance Standards (GIPS®) (Study Sessions VI–X)**

The candidate should be able to explain the need for global performance presentation standards, outline the role of the GIPS Executive Committee, and state, explain, and apply the provisions of the GIPS standards.

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We may provide a reading and indicate those parts that are not required as “optional.” The CIPM exam is based only on the required segments, and the optional segments are provided only when they might help you better understand the required segments (by seeing the required material in its full context).

## **Study Session I: Ethical and Professional Standards**

### Purpose of the Study Session

The readings in this study session set forth the provisions of the CIPM Association Code of Ethics (the Code) and Standards of Professional Conduct (the Standards) and illustrate the practical application of the Code and Standards in investment practice.

CIPM candidates and members of the CIPM Association are subject to the Code and Standards. The Code articulates the ethical principles governing the investment profession. The Standards set forth the responsibilities of covered persons in the areas of professionalism; integrity of capital markets; duties to clients; duties to employers; investment analysis, recommendations, and action; conflicts of interest; and responsibilities as a CIPM Association member or CIPM candidate.

“Ethics in Practice: CIPM” considers the nature of a profession, discusses the relationship between ethics and the law, offers guidelines for ethical reasoning, and explains the rationale behind the provisions of the Code and Standards.

### Reading Assignments

1. CIPM Association Code of Ethics and Standards of Professional Conduct (CFA Institute, 2006).
2. “Ethics in Practice: CIPM,” Philip Lawton (CFA Institute, 2009).

### Learning Outcome Statements

The candidate should be able to:

- A. characterize the investment profession;
- B. explain the relationship between ethics and the law;
- C. state and explain the provisions of the CIPM Association Code of Ethics and Standards of Professional Conduct; and
- D. determine potential violations of the CIPM Association Code of Ethics and Standards of Professional Conduct and select appropriate preventive or corrective actions.

## **Study Session II: Performance Evaluation: Measurement and Benchmark Analysis**

### Purpose of the Study Session

The three components of performance evaluation are performance measurement, attribution, and appraisal.

Fund sponsors use the techniques of performance evaluation to assess the fund's investment results relative to its financial objectives and to determine the sources of returns. Investment managers apply the techniques of performance evaluation to assess the effectiveness of various elements of their research and decision-making processes. For both fund sponsors and investment managers, performance evaluation can be a productive feedback and control mechanism.

Performance measurement—the calculation of rates of return—quantifies an account's investment results. The first reading introduces the concept of total return and discusses the difference between money-weighted and time-weighted rates of return. It also explains how to calculate time-weighted returns for a single period, link returns across multiple periods, and annualize returns.

Performance evaluation is a relative concept, and investment results are accordingly appraised in comparison to a benchmark. The first reading also introduces the concept of a benchmark, sets forth the properties of a valid benchmark, discusses and critiques various types of benchmarks, and presents tests of benchmark quality.

After-tax performance measurement is rendered difficult by the diversity and complexity of tax codes, differences in individuals' tax situations, the lack of commercially available benchmarks, and the uncertain timing and amount of future tax liabilities. Based upon provisions of the GIPS Guidance Statement for Country-Specific Taxation Issues, the second reading discusses two approaches to after-tax performance measurement.

Portfolio mandates are often style-specific. For example, a plan sponsor may hire an investment manager specifically to invest in large capitalization value stocks. Analyzing investment styles and appraising results in comparison with style-appropriate benchmark returns has become an integral part of performance evaluation. The third reading introduces the concept of investment style, traces the evolution of style investing, and presents returns-based and holdings-based approaches to portfolio classification.

### Reading Assignment

1. "Evaluating Portfolio Performance," Ch. 1, Jeffery V. Bailey, Thomas M. Richards, and David E. Tierney, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).

2. “Global Investment Performance Standards,” Ch. 41, Philip Lawton and W. Bruce Remington, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).
3. “U.S. Equity Style Indexes,” Ch. 8, *Benchmarks and Investment Management*, Laurence B. Siegel (The CFA Institute Research Foundation, 2003).

### Learning Outcome Statements

Reading Assignment #1 (“Evaluating Portfolio Performance”) – The candidate should be able to:

- A. summarize the importance of performance evaluation to fund sponsors and investment managers;
- B. explain the basic components of portfolio evaluation (measurement, attribution, and appraisal);
- C. interpret and contrast time-weighted and money-weighted rates of return, and explain the effect of external contributions and withdrawals in the calculations;
- D. calculate time-weighted rates of return;
- E. calculate annualized rates of return;
- F. characterize potential data quality issues as they relate to calculating rates of return;
- G. demonstrate the analysis of portfolio returns into components due to market, style, and active management;
- H. identify and explain the properties of a valid benchmark;
- I. discriminate among the types of benchmarks and explain each type’s advantages and disadvantages;
- J. summarize the steps in constructing a custom security-based benchmark;
- K. identify and explain the tests of benchmark quality;
- L. explain the difficulties in assigning benchmarks to hedge funds;

Reading Assignment #2 (“Global Investment Performance Standards”) – The candidate should be able to:

- M. explain the major issues surrounding after-tax performance measurement;
- N. explain approaches to selecting or devising after-tax benchmarks;
- O. compare and contrast the pre-liquidation and mark-to-liquidation methods for calculating after-tax performance;

Reading Assignment #3 (“U.S. Equity Investment Styles”) – The candidate should be able to:

- P. explain the concept and uses of equity investment style;
- Q. compare and contrast Sharpe’s return-based style analysis and Fama and French’s three-factor model; and
- R. summarize the comparative advantages and disadvantages of returns-based and holdings-based style analysis.

## **Study Session III: Performance Evaluation: Attribution**

### Purpose of the Study Session

Performance attribution analyzes the sources of an account's returns relative to a benchmark.

Fund sponsors can apply macro attribution to determine how much of a fund's results are due to their own actions, on one hand, and the investment managers' decisions, on the other. The reading presents and illustrates an approach to macro attribution.

Micro attribution analyzes the investment results of a single portfolio relative to a designated benchmark. The basic principle of micro attribution is that impact equals weight times return. Managers can add value relative to a benchmark by overweighting sectors and securities that perform well and by underweighting sectors and securities that perform poorly.

The reading presents arithmetic sector weighting/security selection micro attribution for a single measurement period, explaining and applying the equations for the pure sector allocation effect, the within-sector selection effect, and allocation/selection interaction. The reading also describes fundamental factor-model micro attribution and presents an approach to fixed-income micro attribution.

The introduction to attribution analysis given here provides a foundation for more advanced techniques (including multi-period, multi-currency, and geometric attribution analysis) that are presented in the Expert curriculum.

### Reading Assignment

1. "Evaluating Portfolio Performance," Ch.1, Jeffery V. Bailey, Thomas M. Richards, and David E. Tierney, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).

### Learning Outcome Statements

The candidate should be able to:

- A. distinguish between macro and micro performance attribution;
- B. identify and explain the inputs that are necessary for a macro performance attribution;
- C. calculate and interpret the incremental-return and incremental-value contributions to the ending value of a fund at the following macro attribution levels: net contributions, risk-free asset, asset category, benchmarks, investment managers, and allocation tactics;
- D. calculate and interpret the micro attribution impact from pure sector allocation, within-sector selection, and allocation/selection interaction, given data on the portfolio's and benchmark's sector weights and returns

- E. explain fundamental factor model micro attribution;
- F. distinguish between the effect of the interest rate environment and the effect of active management on fixed-income portfolio returns; and
- G. explain the results of a fixed-income performance attribution analysis.

## **Study Session IV: Performance Evaluation: Portfolio Characteristics Analysis**

### Purpose of the Study Session

Portfolios differ from one another due to differences in investment strategy, reflecting the investor's or the client's objectives and constraints. Portfolios also change over time due to changes in the investment manager's capital market expectations. With attention to practical data- and calculation-related issues, this study session explains how performance professionals can use portfolio characteristics analysis in monitoring managers' implementation of their equity investment mandate, conducting holdings-based style analysis, and determining the sources of return.

### Reading Assignment

1. "Equity Portfolio Characteristics in Performance Analysis," Stephen C. Gaudette and Philip Lawton (CFA Institute, 2007).

### Learning Outcome Statements

The candidate should be able to:

- A. identify and explain the uses of portfolio characteristics analysis in performance evaluation;
- B. apply and interpret various methods of calculating the mean of a distribution that includes outliers;
- C. calculate the weighted arithmetic mean and the weighted harmonic mean of a portfolio using security-level characteristic values;
- D. calculate and interpret the following equity characteristics: economic sector and industry membership; beta; debt-to-equity (D/E) ratio; return on equity (ROE); market capitalization; price-to-book (P/B) ratio; price-to-earnings (P/E) ratio; dividend yield (D/P); price-to-sales (P/S) ratio; price-to-cash flow (P/CF) ratio; relative strength; liquidity; and volatility;
- E. classify characteristics as macroeconomic, company fundamental, and company share-related;
- F. infer the investment style of a portfolio, given pertinent data such as the market capitalization, price-to-earnings (P/E) and price-to-book (P/B) ratios, dividend yield (D/P), and growth characteristics of the portfolio and one or more style indexes;
- G. compare and contrast holdings-based and returns-based style analysis; and
- H. compare and contrast single-factor and fundamental multifactor attribution models.

## Study Session V: Performance Evaluation: Appraisal

### Purpose of the Study Session

Fund sponsors are concerned with whether a manager has displayed investment skill, as opposed to luck, and whether the manager is likely to sustain the ability to outperform an appropriate benchmark consistently over time.

The reading presents risk-adjusted performance appraisal measures and quality control charts as means of assessing a manager's value-added. It also explains the need for qualitative as well as quantitative information for manager selection decisions, discusses the "noisiness" of performance data, and introduces manager continuation policies as guidelines for conducting manager evaluations.

The risk-adjusted performance appraisal measures summarily covered in the reading include *ex post* alpha (also known as Jensen's alpha), Treynor, Sharpe,  $M^2$ , and the information ratio. The reading compares and contrasts these measures, explaining how they are calculated and what they mean. The reading further indicates their limitations.

Quality control charts are an effective way of presenting performance appraisal data. A quality control chart plots a portfolio manager's performance over time relative to a benchmark within a statistically derived confidence band.

Using past performance to evaluate existing managers is statistically problematic. Fund sponsors may develop manager continuation policies to ensure consistent procedures are employed and to balance the risk of terminating a superior manager against the risk of retaining inferior managers.

### Reading Assignment

1. "Evaluating Portfolio Performance," Ch.1, Jeffery V. Bailey, Thomas M. Richards, and David E. Tierney, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).

### Learning Outcome Statements

The candidate should be able to:

- A. calculate, interpret, and contrast the following risk-adjusted performance appraisal measures: *ex post* alpha, Treynor measure, information ratio, Sharpe ratio, and  $M^2$ ;
- B. compare and contrast the information ratio, Treynor measure, and Sharpe ratio and explain how a portfolio's alpha and beta are reflected in these measures;
- C. explain the use of performance quality control charts in performance appraisal;
- D. explain the issues involved in manager continuation policy decisions, including the costs of hiring and firing investment managers; and

- E. contrast Type I and Type II errors in manager continuation decisions, given the null hypothesis that managers have no skill.

## Study Session VI: GIPS Standards: Foundations

### Purpose of the Study Session

The Global Investment Performance Standards (GIPS<sup>®</sup>) are ethical standards for performance presentation. The GIPS standards were developed to ensure fair representation and full disclosure of a firm's performance history.

The first reading, which should be used in conjunction with the text of the Standards, discusses the need for and benefits of global investment performance standards, sketches the historical development of the GIPS standards, and explains the GIPS governance structure.

The reading also introduces the fundamentals of compliance, discusses required and recommended input data, and explains the provisions related to portfolio and composite return calculations. A composite is an aggregation of individual portfolios representing a similar investment mandate, objective, or strategy.

### Reading Assignments

1. "Global Investment Performance Standards," Ch. 41, Philip Lawton and W. Bruce Remington, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).
2. "Global Investment Performance Standards (GIPS<sup>®</sup>)," (CFA Institute, 2005).

### Learning Outcome Statements

The candidate should be able to:

- A. summarize the reasons for the creation of the GIPS standards, the Standards' evolution, and their benefits to prospective clients and investment managers;
- B. summarize the objectives, key characteristics, and scope of the GIPS standards;
- C. explain the fundamentals of compliance with the GIPS standards, including the definition of the firm, the conditions under which an investment management firm can claim compliance, and the correct wording of the GIPS compliance statement;
- D. state the requirements and recommendations of the GIPS standards with respect to input data, including accounting policies related to asset valuation and performance measurement;
- E. summarize and explain the requirements of the GIPS standards with respect to return calculation methodologies;
- F. calculate a portfolio's estimated time-weighted total return using the Modified Dietz method;
- G. explain the potential impact of large external cash flows on total returns calculated with an estimation method;

- H. explain why the GIPS standards require the inclusion of returns from cash and cash equivalents in total return calculations;
- I. define trading expenses and explain why the GIPS standards require performance to be calculated after the deduction of actual trading expenses;
- J. state the requirements and recommendations of the GIPS standards with respect to composite return calculations, including methods for asset-weighting portfolio returns; and
- K. calculate composite returns by asset-weighting individual portfolio returns using beginning-of-period asset market values and using a method that reflects both beginning-of-period values and external cash flows.

## **Study Session VII: GIPS Standards: Composite Construction**

### Purpose of the Study Session

A composite is an aggregation of individual portfolios representing a similar investment mandate, objective, or strategy. In accordance with the GIPS standards, all actual, fee-paying, discretionary portfolios must be included in at least one composite. The first reading discusses the meaning of the term “discretionary” and the definition of investment strategies for the purpose of composite construction.

Further provisions of the GIPS standards govern the timeframe for including new portfolios in composites and excluding terminated portfolios from composites. In addition, the Standards include requirements and recommendations for the treatment of single asset classes carved out of multiple asset class portfolios.

As before, the first reading should be read in conjunction with the pertinent sections of the GIPS standards.

### Reading Assignments

1. “Global Investment Performance Standards,” Ch. 41, Philip Lawton and W. Bruce Remington, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).
2. “Global Investment Performance Standards (GIPS®),” (CFA Institute, 2005).

### Learning Outcome Statements

The candidate should be able to:

- A. 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 in accordance with the GIPS standards;
- B. explain the role of investment mandates, objectives, or strategies in the construction of composites in accordance with the GIPS standards;
- C. state the requirements and recommendations of the GIPS standards with respect to composite construction, including switching portfolios among composites and the timing of the inclusion of new portfolios in composites and of the exclusion of terminated portfolios from composites; and
- D. state the requirements and recommendations of the GIPS standards for asset class segments carved out of multi-class portfolios.

## **Study Session VIII: GIPS Standards: Disclosures and Presentations**

### Purpose of the Study Session

The provisions of the GIPS standards having to do with disclosures and performance presentations are intended to ensure that prospective clients are given adequate information to interpret the firm's performance record.

The first reading, which should be used in conjunction with the pertinent sections of the GIPS standards themselves, summarizes and explains the required and recommended disclosures and presentation elements.

The pertinent provisions of the GIPS standards are set forth in the second reading, along with sample GIPS-compliant performance presentations.

### Reading Assignments

1. "Global Investment Performance Standards," Ch.41, Philip Lawton and W. Bruce Remington, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).
2. "Global Investment Performance Standards (GIPS®)," (CFA Institute, 2005).

### Learning Outcome Statements

The candidate should be able to:

- A. state the requirements and recommendations of the GIPS standards with respect to disclosures, including fees; the use of leverage and derivatives; conformity with local laws and regulations that conflict with the GIPS standards; and non-compliant performance records;
- B. state the requirements and recommendations of the GIPS standards with respect to presentation and reporting, including the required timeframe of compliant performance records, annual returns, composite market values, and benchmarks;
- C. explain the conditions under which the performance record of a past firm or affiliation must be linked to or used to represent the historical record of a new firm or affiliation in accordance with the GIPS standards;
- D. evaluate the relative merits of high/low, interquartile range, and standard deviation as measures of the dispersion of portfolio returns within a composite; and
- E. identify errors and omissions in given performance presentations in accordance with the GIPS standards.

## **Study Session IX: GIPS Standards: Real Estate and Private Equity**

### Purpose of the Study Session

Real estate and private equity investments are major asset classes with distinctive characteristics. The GIPS standards stipulate certain exceptions to the main provisions and set forth additional requirements and recommendations for real estate and private equity.

The first reading presents the provisions specifically governing real estate performance presentations, including return calculation methodologies. The reading then discusses the principles of fair valuation for private equity investments, the relevant disclosures, and the elements of private equity performance presentations.

The second reading presents the pertinent provisions of the GIPS standards; sample GIPS-compliant real estate and private equity performance presentations; and the GIPS private equity valuation principles.

### Reading Assignments

1. “Global Investment Performance Standards,” Ch.41, Philip Lawton and W. Bruce Remington, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).
2. “Global Investment Performance Standards (GIPS®),” (CFA Institute, 2005).

### Learning Outcome Statements

The candidate should be able to:

- A. identify the types of investments that are subject to the GIPS standards for real estate and private equity;
- B. state and explain the provisions of the GIPS standards for real estate, and calculate total return, income return, and capital return for real estate assets;
- C. state and explain the provisions of the GIPS standards for private equity;
- D. explain the private equity valuation principles, including the hierarchy of fair valuation methodologies for private equity investments in accordance with the GIPS standards; and
- E. identify errors and omissions in given real estate and private equity performance presentations in accordance with the GIPS standards.

## **Study Session X: GIPS Standards: Verification and the Advertising Guidelines**

### Purpose of the Study Session

Verification is the review of a firm's performance measurement processes and procedures by a qualified, independent third party. Verification tests whether the firm has complied with all the composite construction requirements on a firm-wide basis, and whether the firm's processes and procedures are designed to calculate and present performance in compliance with the GIPS standards.

The GIPS Advertising Guidelines are ethical standards for firms that claim compliance with the GIPS standards and/or present performance information in an advertisement that does not accommodate a complete performance presentation.

The first reading summarizes the procedures required to support a verification report and explains the GIPS advertising guidelines.

The second reading consists of Section III of the GIPS standards (Verification); the GIPS Advertising Guidelines, including sample GIPS-compliant advertisements; and the GIPS Glossary.

### Reading Assignment:

1. "Global Investment Performance Standards," Ch.41, Philip Lawton and W. Bruce Remington, *Investment Performance Measurement: Evaluating and Presenting Results*, Philip Lawton and Todd Jankowski, eds. (Wiley, 2009).
2. "Global Investment Performance Standards (GIPS®)," (CFA Institute, 2005).

### Learning Outcome Statements

The candidate should be able to:

- A. explain the purpose and scope of verification in accordance with the GIPS standards;
- B. summarize the pre-verification and verification procedures that must be conducted before a verification report can be issued in accordance with the GIPS standards;
- C. state and explain the requirements for compliance with the GIPS Advertising Guidelines;
- D. identify errors and omissions in given advertisements in accordance with the GIPS standards; and
- E. recognize and understand the terms presented in the GIPS Glossary.