

## STUDY SESSION

# 12

## Portfolio Management (1)

**T**his study session introduces the concept of a portfolio approach to investments. The needs of individual and institutional investors are each examined, along with the range of available investment solutions. The three main steps in the portfolio management process (planning, execution, and feedback) are outlined. Common measures of portfolio risk and return and the introduction of modern portfolio theory—a quantitative framework for asset pricing and portfolio selection—then follow.

### READING ASSIGNMENTS

<b>Reading 38</b>	Portfolio Management: An Overview by Robert M. Conroy, DBA, CFA, and Alistair Byrne, PhD, CFA
<b>Reading 39</b>	Portfolio Risk and Return: Part I by Vijay Singal, PhD, CFA
<b>Reading 40</b>	Portfolio Risk and Return: Part II by Vijay Singal, PhD, CFA

### LEARNING OUTCOMES

#### READING 38. PORTFOLIO MANAGEMENT: AN OVERVIEW

The candidate should be able to:

- a** describe the portfolio approach to investing;
- b** describe types of investors and distinctive characteristics and needs of each;
- c** describe defined contribution and defined benefit pension plans;

- d describe the steps in the portfolio management process;
- e describe mutual funds and compare them with other pooled investment products.

### READING 39. PORTFOLIO RISK AND RETURN: PART I

The candidate should be able to:

- a calculate and interpret major return measures and describe their appropriate uses;
- b describe characteristics of the major asset classes that investors consider in forming portfolios;
- c calculate and interpret the mean, variance, and covariance (or correlation) of asset returns based on historical data;
- d explain risk aversion and its implications for portfolio selection;
- e calculate and interpret portfolio standard deviation;
- f describe the effect on a portfolio's risk of investing in assets that are less than perfectly correlated;
- g describe and interpret the minimum-variance and efficient frontiers of risky assets and the global minimum-variance portfolio;
- h explain the selection of an optimal portfolio, given an investor's utility (or risk aversion) and the capital allocation line.

### READING 40. PORTFOLIO RISK AND RETURN: PART II

The candidate should be able to:

- a describe the implications of combining a risk-free asset with a portfolio of risky assets;
- b explain the capital allocation line (CAL) and the capital market line (CML);
- c explain systematic and nonsystematic risk, including why an investor should not expect to receive additional return for bearing nonsystematic risk;
- d explain return generating models (including the market model) and their uses;
- e calculate and interpret beta;
- f explain the capital asset pricing model (CAPM), including its assumptions, and the security market line (SML);
- g calculate and interpret the expected return of an asset using the CAPM;
- h describe and demonstrate applications of the CAPM and the SML;
- i calculate and interpret the Sharpe ratio, Treynor ratio,  $M^2$ , and Jensen's alpha.