

## STUDY SESSION

# 16

## Fixed Income Analysis of Risk

**T**his study session focuses on the analysis risks associated with fixed-income securities; emphasis is on interest rate and credit risks. The first reading describes the sources of return on fixed-income securities and measures and analysis of interest rate risk. The second reading introduces measures and analysis of credit risk of fixed-income securities.

### READING ASSIGNMENTS

<b>Reading 55</b>	Understanding Fixed-Income Risk and Return by James F. Adams, PhD, CFA, and Donald J. Smith, PhD
<b>Reading 56</b>	Fundamentals of Credit Analysis by Christopher L. Gootkind, CFA

### LEARNING OUTCOMES

#### READING 55. UNDERSTANDING FIXED-INCOME RISK AND RETURN

The candidate should be able to:

- a** calculate and interpret the sources of return from investing in a fixed-rate bond;
- b** define, calculate, and interpret Macaulay, modified, and effective durations;
- c** explain why effective duration is the most appropriate measure of interest rate risk for bonds with embedded options;
- d** define key rate duration and describe the use of key rate durations in measuring the sensitivity of bonds to changes in the shape of the benchmark yield curve;

- e** explain how a bond's maturity, coupon, and yield level affect its interest rate risk;
- f** calculate the duration of a portfolio and explain the limitations of portfolio duration;
- g** calculate and interpret the money duration of a bond and price value of a basis point (PVBP);
- h** calculate and interpret approximate convexity and distinguish between approximate and effective convexity;
- i** estimate the percentage price change of a bond for a specified change in yield, given the bond's approximate duration and convexity;
- j** describe how the term structure of yield volatility affects the interest rate risk of a bond;
- k** describe the relationships among a bond's holding period return, its duration, and the investment horizon;
- l** explain how changes in credit spread and liquidity affect yield-to-maturity of a bond and how duration and convexity can be used to estimate the price effect of the changes.

## READING 56. FUNDAMENTALS OF CREDIT ANALYSIS

The candidate should be able to:

- a** describe credit risk and credit-related risks affecting corporate bonds;
- b** describe default probability and loss severity as components of credit risk;
- c** describe seniority rankings of corporate debt and explain the potential violation of the priority of claims in a bankruptcy proceeding;
- d** distinguish between corporate issuer credit ratings and issue credit ratings and describe the rating agency practice of "notching";
- e** explain risks in relying on ratings from credit rating agencies;
- f** explain the four Cs (Capacity, Collateral, Covenants, and Character) of traditional credit analysis;
- g** calculate and interpret financial ratios used in credit analysis;
- h** evaluate the credit quality of a corporate bond issuer and a bond of that issuer, given key financial ratios of the issuer and the industry;
- i** describe factors that influence the level and volatility of yield spreads;
- j** explain special considerations when evaluating the credit of high yield, sovereign, and non-sovereign government debt issuers and issues.