This study session examines the fundamental elements underlying bond returns and risks with a specific focus on interest rate and credit risk. Duration, convexity, and other key measures for assessing a bond’s sensitivity to interest rate risk are introduced. An explanation of credit risk and the use of credit analysis for risky bonds concludes the session.

**READING ASSIGNMENTS**

| Reading 46 | Understanding Fixed-Income Risk and Return by James F. Adams, PhD, CFA, and Donald J. Smith, PhD |
| Reading 47 | Fundamentals of Credit Analysis by Christopher L. Gootkind, CFA |

**LEARNING OUTCOMES**

**READING 46. 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 47. 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.