LEARNING OUTCOMES

Fixed-Income Securities: Defining Elements
The candidate should be able to:

□ describe basic features of a fixed-income security
□ describe content of a bond indenture
□ compare affirmative and negative covenants and identify examples of each
□ describe how legal, regulatory, and tax considerations affect the issuance and trading of fixed-income securities
□ describe how cash flows of fixed-income securities are structured
□ describe contingency provisions affecting the timing and/or nature of cash flows of fixed-income securities and whether such provisions benefit the borrower or the lender

Fixed-Income Markets: Issuance, Trading, and Funding
The candidate should be able to:

□ describe classifications of global fixed-income markets
□ describe the use of interbank offered rates as reference rates in floating-rate debt
□ describe mechanisms available for issuing bonds in primary markets
□ describe secondary markets for bonds
□ describe securities issued by sovereign governments
□ describe securities issued by non-sovereign governments, quasi-government entities, and supranational agencies
□ describe types of debt issued by corporations
□ describe structured financial instruments
□ describe short-term funding alternatives available to banks
□ describe repurchase agreements (repos) and the risks associated with them

**Introduction to Fixed-Income Valuation**

*The candidate should be able to:*

□ calculate a bond’s price given a market discount rate
□ identify the relationships among a bond’s price, coupon rate, maturity, and market discount rate (yield-to-maturity)
□ define spot rates and calculate the price of a bond using spot rates
□ describe and calculate the flat price, accrued interest, and the full price of a bond
□ describe matrix pricing
□ calculate annual yield on a bond for varying compounding periods in a year
□ calculate and interpret yield measures for fixed-rate bonds and floating-rate notes
□ calculate and interpret yield measures for money market instruments
□ define and compare the spot curve, yield curve on coupon bonds, par curve, and forward curve
□ define forward rates and calculate spot rates from forward rates, forward rates from spot rates, and the price of a bond using forward rates
□ compare, calculate, and interpret yield spread measures

**Introduction to Asset-Backed Securities**

*The candidate should be able to:*

□ explain benefits of securitization for economies and financial markets
□ describe securitization, including the parties involved in the process and the roles they play
□ describe typical structures of securitizations, including credit tranching and time tranching
□ describe types and characteristics of residential mortgage loans that are typically securitized
□ describe types and characteristics of residential mortgage-backed securities, including mortgage pass-through securities and collateralized mortgage obligations, and explain the cash flows and risks for each type
□ define prepayment risk and describe the prepayment risk of mortgage-backed securities
□ describe characteristics and risks of commercial mortgage-backed securities
□ describe types and characteristics of non-mortgage asset-backed securities, including the cash flows and risks of each type
□ describe collateralized debt obligations, including their cash flows and risks
□ describe characteristics and risks of covered bonds and how they differ from other asset-backed securities

**Understanding Fixed-Income Risk and Return**

*The candidate should be able to:*

□ calculate and interpret the sources of return from investing in a fixed-rate bond
□ define, calculate, and interpret Macaulay, modified, and effective durations
□ explain why effective duration is the most appropriate measure of interest rate risk for bonds with embedded options
□ 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
□ explain how a bond’s maturity, coupon, and yield level affect its interest rate risk
□ calculate the duration of a portfolio and explain the limitations of portfolio duration
calculate and interpret the money duration of a bond and price value of a basis point (PVBP)
calculate and interpret approximate convexity and compare approximate and effective convexity
calculate the percentage price change of a bond for a specified change in yield, given the bond’s approximate duration and convexity
describe how the term structure of yield volatility affects the interest rate risk of a bond
describe the relationships among a bond’s holding period return, its duration, and the investment horizon
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
describe the difference between empirical duration and analytical duration

Fundamentals of Credit Analysis

The candidate should be able to:
describe credit risk and credit-related risks affecting corporate bonds
describe default probability and loss severity as components of credit risk
describe seniority rankings of corporate debt and explain the potential violation of the priority of claims in a bankruptcy proceeding
compare and contrast corporate issuer credit ratings and issue credit ratings and describe the rating agency practice of “notching”
explain risks in relying on ratings from credit rating agencies
explain the four Cs (Capacity, Collateral, Covenants, and Character) of traditional credit analysis
calculate and interpret financial ratios used in credit analysis
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
describe macroeconomic, market, and issuer-specific factors that influence the level and volatility of yield spreads
explain special considerations when evaluating the credit of high-yield, sovereign, and non-sovereign government debt issuers and issues