Fixed Income

LEARNING OUTCOMES

Fixed-Income Instrument Features

The candidate should be able to:

- □ describe the features of a fixed-income security
- □ describe the contents of a bond indenture and contrast affirmative and negative covenants

Fixed-Income Cash Flows and Types

The candidate should be able to:

- □ describe common cash flow structures of fixed-income instruments and contrast cash flow contingency provisions that benefit issuers and investors
- □ describe how legal, regulatory, and tax considerations affect the issuance and trading of fixed-income securities

Fixed-Income Issuance and Trading

The candidate should be able to:

- □ describe fixed-income market segments and their issuer and investor participants
- □ describe types of fixed-income indexes
- □ compare primary and secondary fixed-income markets to equity markets

Fixed-Income Markets for Corporate Issuers

The candidate should be able to:

- compare short-term funding alternatives available to corporations and financial institutions
- describe repurchase agreements (repos), their uses, and their benefits and risks
- contrast the long-term funding of investment-grade versus high-yield corporate issuers

Fixed-Income Markets for Government Issuers

The candidate should be able to:

- describe funding choices by sovereign and non-sovereign governments, quasi-government entities, and supranational agencies
- contrast the issuance and trading of government and corporate fixed-income instruments

Fixed-Income Bond Valuation: Prices and Yields

The candidate should be able to:

- calculate a bond's price given a yield-to-maturity on or between coupon dates
- identify the relationships among a bond's price, coupon rate, maturity, and yield-to-maturity
- describe matrix pricing

Yield and Yield Spread Measures for Fixed-Rate Bonds

The candidate should be able to:

- calculate annual yield on a bond for varying compounding periods in a year
- compare, calculate, and interpret yield and yield spread measures for fixed-rate bonds

Yield and Yield Spread Measures for Floating-Rate Instruments

The candidate should be able to:

- calculate and interpret yield spread measures for floating-rate instruments
- calculate and interpret yield measures for money market instruments

The Term Structure of Interest Rates: Spot, Par, and Forward Curves

The candidate should be able to:

- define spot rates and the spot curve, and calculate the price of a bond using spot rates
- define par and forward rates, and calculate par rates, forward rates from spot rates, spot rates from forward rates, and the price of a bond using forward rates
- compare the spot curve, par curve, and forward curve

Interest Rate Risk and Return

The candidate should be able to:

- calculate and interpret the sources of return from investing in a fixed-rate bond;
- describe the relationships among a bond's holding period return, its Macaulay duration, and the investment horizon;
- define, calculate, and interpret Macaulay duration.

Yield-Based Bond Duration Measures and Properties

The candidate should be able to:

- □ define, calculate, and interpret modified duration, money duration, and the price value of a basis point (PVBP)
- □ explain how a bond's maturity, coupon, and yield level affect its interest rate risk

Yield-Based Bond Convexity and Portfolio Properties

The candidate should be able to:

- □ calculate and interpret convexity and describe the convexity adjustment
- □ calculate the percentage price change of a bond for a specified change in yield, given the bond's duration and convexity
- □ calculate portfolio duration and convexity and explain the limitations of these measures

Curve-Based and Empirical Fixed-Income Risk Measures

The candidate should be able to:

- □ explain why effective duration and effective convexity are the most appropriate measures of interest rate risk for bonds with embedded options
- □ calculate the percentage price change of a bond for a specified change in benchmark yield, given the bond's effective duration and convexity
- □ define key rate duration and describe its use to measure price sensitivity of fixed-income instruments to benchmark yield curve changes
- □ describe the difference between empirical duration and analytical duration

Credit Risk

The candidate should be able to:

- □ describe credit risk and its components, probability of default and loss given default
- □ describe the uses of ratings from credit rating agencies and their limitations
- □ describe macroeconomic, market, and issuer-specific factors that influence the level and volatility of yield spreads

Credit Analysis for Government Issuers

The candidate should be able to:

- □ explain special considerations when evaluating the credit of sovereign and non-sovereign government debt issuers and issues

Credit Analysis for Corporate Issuers

The candidate should be able to:

- □ describe the qualitative and quantitative factors used to evaluate a corporate borrower's creditworthiness
- □ calculate and interpret financial ratios used in credit analysis
- □ describe the seniority rankings of debt, secured versus unsecured debt and the priority of claims in bankruptcy, and their impact on credit ratings

Fixed-Income Securitization

The candidate should be able to:

- □ explain benefits of securitization for issuers, investors, economies, and financial markets
- □ describe securitization, including the parties and the roles they play

Asset-Backed Security (ABS) Instrument and Market Features

The candidate should be able to:

- describe characteristics and risks of covered bonds and how they differ from other asset-backed securities
- describe typical credit enhancement structures used in securitizations
- 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

Mortgage-Backed Security (MBS) Instrument and Market Features

The candidate should be able to:

- define prepayment risk and describe time tranching structures in securitizations and their purpose
- describe fundamental features of residential mortgage loans that are 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
- describe characteristics and risks of commercial mortgage-backed securities