

Fixed Income

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