CFAspace

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Academy of Professional Finance 专业金融学院

CFA Level I

FIXED INCOME:

Introduction

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Contents

1. Weight of Fixed Income in Level I

CFA Exam Topic Area Weights

Topic Area	Level I	Level II	Level III
Ethical and Professional Standards (total)	**15**	**10**	**10**
Investment Tools (total)	**50**	**30-60**	**0**
Corporate Finance	8	5-15	0
Economics**	10	5-10	0
Financial Reporting and Analysis	20	15-25	0
Quantitative Methods	12	5-10	0
Asset Classes (total)	**30**	**35-75**	**35-45**
Alternative Investments	3	5-15	5-15
Derivatives	5	5-15	5-15
Equity Investments	10	20-30	5-15
Fixed Income	12	5-15	10-20
Portfolio Management and Wealth Planning (total)	**5**	**5-15**	**45-55**
Total	**100**	**100**	**100**

2. Overview

READING	INTERPRETATION
Fixed-Income Securities: Defining Elements	Features of Fixed Income Securities
Fixed-Income Markets: Issuance, Trading, and Funding	Classification of Fixed Income Securities
Introduction to Fixed-Income Valuation	Valuation of Fixed Income Securities
Introduction to Asset-Backed Securities	Asset-Backed Securities
Understanding Fixed Income Risk and Return	Return Components and Interest Rate Risk
Fundamentals of Credit Analysis	Credit Analysis of Fixed Income Securities

2. Overview

READING	INTERPRETATION
Fixed-Income Securities: Defining Elements	Features of Fixed Income Securities
Introdu	s
Introdu	
Understanding Fixed Income Risk and Return	Return Components and Interest Rate Risk
Fundamentals of Credit Analysis	Credit Analysis of Fixed Income Securities

1. Basic features of *a fixed-income security*: issuer, maturity, par value, coupon, currency
2. *Bond* Indenture: affirmative and negative covenants
3. How legal, regulatory and tax considerations affect *FI securities*
4. Cash flow structures of *fixed-income securities*
5. Contingency provisions in *a fixed-income security*

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Introdu	
Underst	ate Risk
Fundam	curities

1. Classification of FI markets: by issuer, credit quality, maturity, coupon structure, etc.
2. Coupon structure: reference rate for floating rate bonds
3. Primary market issuing and secondary market trading
4. Types of Issuer: gov. and gov.-related bonds; corporate bonds
5. Funding: Short-term funding alternatives for banks and repurchase agreement

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Underst	ate Risk
Fundam	urities

1. Calculate the price of a bond given a market discount rate or spot rates
2. Relationship between Bond Price and Bond Characteristics
3. Calculate the flat price, accrued interest, and the full price of a bond
4. Describe matrix pricing
5. Yield measures
6. Spot rates, forward rates and the conversion between the two
7. Yield spread: G-spread or I-spread; Z-spread; Option-adjusted spread

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- Securitization
- Asset Backed Securities
  - Residential Mortgage Backed Securities
    - Residential Mortgage Loans
    - Agency RMBS and Non Agency RMBS
    - Collateralized Mortgage Obligations
  - Commercial Mortgage Backed Securities
  - Non Mortgage Asset Backed Securities
- Collateralized Debt Obligations (CDO)

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Fundamentals of Credit Analysis	Credit Analysis of Fixed Income Securities

1. Calculate and interpret the sources of returns in investing in a fixed-rate bond
2. Duration: Measure of *Interest Rate Risk* –Three Types of Duration
3. How maturity, coupon, embedded option, yield level affect *interest rate risk*
4. Portfolio Duration
5. Money Duration and Price Value of a Basis Point (PVBP)
6. Convexity: Supplement to explain *price sensitivity*
7. How duration and convexity can be used to estimate the price effect of changes in credit spread and liquidity
8. How term structure of yield volatility affect *interest rate risk*

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1. Review of Credit Risk
2. Priority of Claims
3. Credit Rating
4. Traditional Credit Analysis: 4Cs — 4.1 Financial Ratios and Credit Analysis — 4.2 Credit Ratings based on Financial Ratios
5. Yield Spread and Credit Analysis
6. Credit Analysis of High Yield, Sovereign, Municipal Debt Issuers and Issues

3. Sample Questions

1. Which of these embedded options *most likely* benefits the investor?

A.The floor in a floating-rate security

B. An accelerated sinking fund provision

C. The call option in a fixed-rate security

3. Sample Questions

2. Given two otherwise identical bonds, when interest rates rise, the price of Bond A declines more than the price of Bond B. Compared to Bond B, Bond A most likely:

A.is callable.

B. has a lower coupon.

C. has a shorter maturity.

3. Sample Questions

3. A bond has duration of 5.4 and convexity of -41.30. If interest rates increase by 0.5%, the percentage change in the bond's price will be *closest* to:

A. -2.85%
B. -2.80%
C. -2.75%

B is correct because when convexity is known, the percentage change in a bond's price
$= (-\text{duration} \times \Delta y \times 100) + (C \times (\Delta y)^2 \times 100)$
$= (-5.4 \times 0.005 \times 100) + (-41.30 \times 0.005^2 \times 100)$
$= -2.80$

Thank You!

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