CHARTERED INSTITUTE FOR SECURITIES & INVESTMENT

FINANCIAL DERIVATIVES
EXAMINABLE FROM JUNE 2007

AIM

To enable candidates to have a detailed understanding of the main characteristics of financial derivatives including forwards, futures, swaps, options and others, and their relationships with the underlying cash securities: to appreciate the use of these instruments in a wide range of trading and investment objectives; to understand how to control the risks of financial derivatives and derivatives portfolios.

OBJECTIVES

Candidates should be able to:

i) demonstrate a knowledge of the regulatory framework for financial derivatives;

ii) demonstrate a knowledge of the operations of derivatives exchanges, and be able to compare and contrast Exchange Traded and Over The Counter (OTC) instruments;

iii) demonstrate a detailed knowledge of the different types of forwards, futures, swaps, options and other financial derivatives, the principal differences between them, and where and how they are traded;

iv) demonstrate a detailed understanding of the variables (inputs) which influence the value of such derivatives, and the relationship of financial derivatives to their underlying assets;

v) present the alternative derivatives strategies that would be appropriate for different market circumstances, and describe the advantages and disadvantages of each;

vi) demonstrate the uses of all financial derivatives, either alone, or in conjunction with underlying assets, to realise investment, hedging and trading objectives;

vii) demonstrate an understanding of the risks of all types of financial derivatives and derivatives portfolios, and efficient ways of reporting and managing those risks.

ASSESSMENT STRUCTURE

A 3-hour paper divided into three sections:

SECTION A: Five short answer questions drawn from the entire syllabus. Students will be expected to justify their answers. This section will carry 20% of the marks.

SECTION B: Six problem-style questions assessing derivative applications and presenting quantitative solutions.

SECTION C: Four essay questions, which may be drawn from the whole syllabus, testing derivatives analysis and marketing, and awareness of current issues.

Students must answer a total of 4 questions from Sections B and C; at least 2 questions must be selected from Section B and 1 question from Section C. The remaining question may be answered from either Section B or C.

Each question in Sections B and C will carry 20% of the marks.

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CONTENT

1. Principles of derivatives regulation

2. Exchange traded derivatives

Registration of Trades
Clearing and Settlement
Pricing Conventions
Margining Systems
Option Exercise Procedures
Futures Delivery and Settlement
Guarantees
Exchange Structures
Market Characteristics

3. Futures Contracts

Types of Futures Contracts

Characteristics of Futures

Pricing and Valuation of Futures Contracts

Hedging and Investment Uses of Futures

- Creating a Futures Hedge
- Evaluation of Exposure
- Hedge Ratios and Managing Basis Risk
- Futures as Synthetic Investment

Trading and Arbitrage

- Common Trading Strategies
- Outright and Spread Trading
- Basis Trading and Arbitrage

4. Option Contracts

Types of Options Contracts

Characteristics of Option Contracts

Inputs into Option Pricing

- Arbitrage Relationships
- The Black + Scholes Model
- The Binomial Model
- Assumptions behind the Models
- Interest Rate Derivatives Models
- Advantages and Disadvantages of Different Models

Option Risk Sensitivities (the Greeks) and How to Use Them

Applications of Options
- Analysing Option Strategies
- Option Combinations
- Risk and Return Characteristics
- Impact of Volatility and Time
- Option Hedging: One-off and Delta Hedging
- Designing Option Hedges
- Using Options in Investment Strategies

5. Over the Counter Derivatives

Warrants:	Equity, Interest Rate, Currency, Baskets
Forwards:	Currency, FRAs, Bond Repos and Forwards, Equity
Swaps:	Interest Rate, Currency, Asset and Basis, Equity
Interest Rate Options:	Caps and Floors, Collars, Swaptions
Exotic Derivatives:	Special Profiles, Path Dependent, Multi-Asset
Hybrid Securities:	Convertibles, Callable and Puttable Bonds, Dual Currency Bonds, (Mortgages)?, Option-Adjusted Spread Analysis
Credit Derivatives:	Credit Default Swaps, Total Return Swaps, Credit Spread Products, Credit-Linked Notes, Basket Credit Derivatives, Collateralised Debt and Bond Obligations
Structured Products:	Capital Guaranteed Bonds, Index-Linked Products, Cliquets, Range and Power Products, Locks and Ladders, Quantos, Basket Products

6. Derivatives Risk Management

Types of Risks
- Market Risk
- Credit Risk
- Liquidity Risk
- Operational Risk
- Enterprise Risk

Individual Derivatives Risks
- Risk Profiles
- Dynamic Hedging
- Delta, Gamma and Vega Hedging
- Exotic Derivative Risks

Derivative Portfolio Risks

- Aggregating Derivative Risks
- Value at Risk (VAR) Analysis
- Average and Worse Case Risk Analysis
- Risk Mapping
- Multi-Asset And Correlation Risks
- Role of Regulatory Capital
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Scenario and Stress testing

6. Current topics

Candidates will be required to have an appreciation of current trends in the derivatives industry, new derivatives products, and events, legal cases, market developments and so on, which impact on derivatives markets. Candidates will gain insight into the types of current topics required by reviewing previous Section C questions.

READING LIST

RECOMMENDED

Mastering Derivatives Markets
Francesca Taylor, FT Pitman/Prentice Hall

Mastering Credit Derivatives
Andrew Kasapi, FT Pitman/Prentice Hall

Options, Futures and Other Derivatives
John C. Hull, Prentice Hull

JOURNALS AND PERIODICALS

Financial Times
Risk Magazine
Journal of Derivatives
Journal of Futures Markets