

FINANCIAL DERIVATIVES

Subject Code	: 14MBA FM411	IA Marks	: 50
No. of Lecture Hours / Week	: 04	Exam Hours	: 03
Total Number of Lecture Hours	: 56	Exam Marks	: 100
Practical Component	: 01 Hour / Week		

Objectives:

1. To describe the characteristics of the relevant financial derivative instruments
2. To explain how the instruments covered can be used to implement basic market risk management strategies, appropriate for corporate applications
3. Explain the use of options and futures contracts for tactical portfolio strategies purpose
4. To provide an understanding of pricing financial derivatives, including familiarity with some central techniques, like the binomial model, and the Black-Scholes model
5. To explain the fundamentals of credit risk management and Value at Risk

Module 1:

(4 Hours)

Financial Derivatives - Introduction, economic benefits of derivatives - Types of financial derivatives - Features of derivatives market - Factors contributing to the growth of derivatives - functions of derivative markets - Exchange traded versus OTC derivatives - traders in derivatives markets - Derivatives market in India

Module 2:

(10 Hours)

Futures and forwards - differences-valuation of futures, valuation of long and short forward contract. Mechanics of buying & selling futures, Margins, Hedging using futures - specification of futures - Commodity futures, Index futures, interest rate futures - arbitrage opportunities.

Module 3:

(8 Hours)

Financial Swaps - features and uses of swaps - Mechanics of interest rate swaps – valuation of interest rate swaps – currency swaps – valuation of currency swaps.

Module 4:

(12 Hours)

Options: Types of options, option pricing, factors affecting option pricing – call and put options on dividend and non-dividend paying stocks put-call parity - mechanics of options - stock options - options on stock index - options on futures – interest rate options. Concept of exotic option. Hedging & Trading strategies involving options, valuation of option: basic model, one step binomial model, Black and Scholes Model, option Greeks. Arbitrage profits in options.

Module 5:

(7 Hours)

Commodity derivatives: commodity futures market-exchanges for commodity futures in India, Forward Market Commissions and regulation-commodities traded – trading and settlements – physical delivery of commodities.

Module 6:**(7 Hours)**

Interest rate markets - Type of rates, Zero rates, Bond pricing, Determining Zero rates, Forward rules, Forward rate agreements (FRA), Treasury bond & Treasury note futures, Interest rate derivatives.

Module 7:**(8 Hours)**

Credit risk - Bond prices and the probability of default, Historical default experience, reducing exposure to Credit risk, Credit default swaps, Total return swaps, Credit spread options, Collateralized debt obligation.

Value at Risk (VAR) - Measure, Historical simulation, Model building approach, linear approach, Quadratic model, Monte Carlo simulation, stress testing and back testing

Practical Components:

1. Students can visit a financial institution dealing in commodity derivatives and study the products offered by him.
2. Students should individually select various futures or options and watch the behaviour of these futures and options on a day to day for 15 days to see how futures and options might help mitigate the risks of investors.

RECOMMENDED BOOKS:

1. Options Futures & Other Derivatives - John C. Hull, 6/e, Pearson Education.
2. Options & Futures- Vohra & Bagri, 2/e, TMH
3. Derivatives- Valuation & Risk Management - Dubofsky & Miller, Oxford University Press, 2005.
4. Financial Derivatives- Bishnupriya Mishra and Sathya Swaroop Debashish, Excel BOOKS, 2007
5. Derivatives and Risk Management, Rajiv Srivastava, Oxford University Press, 2010

REFERENCE BOOKS:

1. Risk Management & Insurance – Harrington & Niehaus, 2/e, TMH.
2. Risk Management & Derivative – Shulz, Cengage Learning.
3. Principles of Risk Management & Insurance – George E. Rejda, 11/e, Pearson Education, 2011.
4. Introduction to Derivatives and Risk Management – Don M. Chance, Cengage Learning, 2008.
5. Introduction to Risk Management & Insurance – Mark S. Dorfman, 9/e, Pearson, 2008
6. International Risk & Insurance –Skipper, TMH
7. Options & Futures –Edwards & Ma, 1/e, McGraw Hill.
8. Derivatives & Financial Innovations – Bansal, TMH.
9. Credit Risk Management – Andrew Fight, 1/e, Elsevier.
10. Financial Derivatives –Kumar S. S. S, PHI, 2007.
11. Risk Management – Kotreshwar, HPH.
12. Futures, Options and Swaps – Robert W. Kolb, 5/e, Wiley India Pvt. Ltd. 2011.
13. Risk Management and Insurance, Treishumann, James S., 12/e, Cengage Learning.
14. Risk Accounting & Risk Management for Accountants – Chorafas D, 1/e, Elsevier.