



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
Pilani Campus

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
INSTRUCTION DIVISION
FIRST SEMESTER 2015-16
Course Handout Part II

Date: 30/07/2015

In addition to Part-I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the course.

Course No. : ECON F354/ FIN F311
Course Title : DERIVATIVES & RISK MANAGEMENT
Instructor-in-charge : ARUN KUMAR VAISH

1. Scope & Objective:

The objective of the course is to provide knowledge about derivatives and mechanics of derivative market. The course includes understanding of interest rate, term structure, and time value of money, pricing of bonds, computation of yield, bond-price volatility, duration, modified duration and convexity. The course covers option pricing and the variables affecting option pricing. Students are exposed to various types of risks namely Market Risk, Credit Risk, Operational Risk, Liquidity risk & Model Risk.

2. Text book:

Rajiv Srivastava: Derivatives & Risk Management. Oxford University Press

3. Reference books:

R1. Futures, Options and Other Derivatives by John C Hull, 7th Edition

4. Course Plan:

| Lecture No. | Learning Objectives | Topics to be covered | Reference (Chapter number) |
|-------------|---|--|----------------------------|
| 1-4 | Overview of Derivatives | Basic financial calculations, interest rates: simple, compounding, nominal and effective | Class notes |
| 5-7 | Brief overview of derivative markets and instruments. | <ul style="list-style-type: none">Markets, players and instruments Types of risks – price risk, interest rate risk, exchange rate risk, etc.Derivatives – Product, Participants and Functions.Types of derivatives: Exchange Traded and Over-the-Counter Derivatives.OTC vs. Exchange-Traded Derivatives. (Benefits of an Exchange-Traded and Clearing House Guaranteed Model)Cost and Benefits of DerivativesDerivative markets in India | Chapter-1 |



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|-------|--|---|---------------------------------|
| 8-20, | Determination of Forwards/futures prices, Swaps and Option prices. | Pricing and cost of carry in case of future & forwards. Binomial option pricing & Black Scholes option pricing formula prices. | Class notes+ Ch.2-4 and 8-12 |
| 21-30 | Risks and mitigation/hedging techniques | Types of risks. Risk management using forward & futures. Hedging. | Class notes+ Chapter-12-16 & 20 |
| 31-42 | Introduction to fixed income securities. Learning relationship between bond price and yield. | Concept of interest rates, time value of money, concept of discounting, annuities & term-structure. Bonds basics and dynamics of bond price. Forward rates and its role in anticipating term structure. Various determinants of bond prices: term, yield and coupon | Class notes |

6. Evaluation Component

| S. No. | Evaluation Component | Duration | Max. Marks | Date & Time | Remarks |
|--------|--|----------|------------|-----------------------|---------|
| 1 | Mid-Semester Examination | | 30 | 7/10 10:00 - 11:30 AM | OB |
| 2 | Surprise Quizzes | | 20 | | CB |
| 3 | Case Study /Article Presentations Or Project | | 10 | | |
| 4 | Comprehensive Examination | | 40 | 7/10 10:00 - 11:30 AM | CB |

7. **Chamber Consultation Hour:** 11 AM -Wednesday

8. **Notice:** All notices will be displayed on **Economics & Finance Notice Board.**

Instructor-In-Charge



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