

FINANCIAL DERIVATIVES

Course Code	20MBAFM402	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:0	SEE Marks	60
Credits	03	Exam Hours	03

Course Objectives

1. To understand various concepts and terminologies used in various financial derivatives.
2. To explain and critically evaluate various financial derivatives such as forwards, futures, options, financial swaps, credit derivatives etc.
3. To apply various financial derivatives in hedging risk and analyse it.

Module-1 Financial Derivatives

5 hours

Meaning, benefits, types (both exchange traded and OTC traded) and features of financial derivatives-Factors causing growth of derivatives-functions of derivatives market-Derivative market players (Hedgers, speculators and arbitrageurs)-Derivatives market in India. (Theory).

Module -2 Futures and Forwards

7 hours

Futures and Forwards: Meaning, features and types of futures/forwards-Futures vs Forwards-Mechanics of buying and selling futures/forwards-Hedging through futures/forwards-Marking-to-market process-contract specifications of stock, index and commodity futures-valuation of futures/forwards using cost of carry model-Arbitrage process-Interest Rate Futures & options. (Numerical problems on MTM and valuation of futures/forwards). (Theory and Problems).

Module -3 Option Contracts

7 hours

Option Contracts: Meaning, features and types of option contracts-Options vs futures/forwards-Mechanics of buying and selling option contracts-contract specifications of stock, index and commodity options-Option pricing-factors affecting option pricing-Valuation of option contracts using Black Scholes model and Binomial model-Put-call parity theory-Option Greeks-Option Trading strategies-Interest rate options-Exotic options. (Numerical problems on all aspects except exotic options). (Theory and Problems).

Module -4 Financial Swaps

7 hours

Meaning, features and advantages of financial swaps-Types of financial swaps (Interest rate swap, currency swap, equity swap and commodity swap)-Mechanics of interest rate swaps- Triangular swap (Numerical problems only on interest rate swap including triangular swap)-valuation of interest rate swaps- Only theory. (Theory and Problems).

Module -5 Commodity Derivative Market

7 hours

Commodity Derivative Market: Meaning of commodity derivatives-Commodity derivative exchanges (with commodities traded) in India-Trading and settlement system of commodity derivatives-SEBI Guidelines for commodity market-commodities traded. (Theory).

Module -6 Credit Derivatives and VaR

7 hours

Credit Derivatives-Total Return Swap (TRS)-Credit Default Swap (CDS)-Types of CDS-Asset Backed Securities (ABS)-Collateralised Debt Obligation (CDO)-Sub-Prime Crisis-2007-Credit Spread Options-Probability of Default- Forward Rate Agreement (FRA)-Interest Rate Caps/Floors/Collars-Types of Interest Rates-Zero Rate-Forward Rate-Value-at-Risk-Meaning, VaR Models-Stress testing and back testing. (Numerical problems only on VaR, Zero Rate and Forward rate). (Theory and Problems).

Course outcomes:

At the end of the course the student will be able to:

- Understand the mechanism of forwards/futures, options, financial swaps, various credit derivatives and VaR with their features, merits and demerits.
- Assess the application of forwards/futures, options, financial swaps, various credit derivatives and VaR using numerical problems.
- Application of financial derivatives in risk management.
- Critically evaluate various financial derivatives.

Practical Component:

- Visit the website of FEDAI and understand the regulations for Commodity Exchanges
- Visit the MCX/NCDEX and understand the their trading and settlement
- Visit the banks and understand the their foreign exchange transactions.
- Understand how different types of quotations helpful to the participants in Forex

- Understand what is the implication of financial derivatives
- Compile and analyze few Futures, Forward Option contract documents
- Visit MCX portal and study its trading and settlement process
- Study the different types of option and Future contracts traded on NSE

CO-PO MAPPING

CO	PO				
	PO1	PO2	PO3	PO4	PO5
CO1	X				
CO2	X			X	
CO3	X			X	
CO4	X			X	

Question paper pattern:

The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 60.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks.
- Each full question will have sub question covering all the topics under a Module.
- The students will have to answer five full questions; selecting four full question from question number one to seven and question number eight is compulsory.
- 40 percent theory and 60 percent problems in SEE.

Textbooks

Sl. No.	Title of the book	Name of the Author/s	Publisher Name	Edition and year
1	Options, Futures & Other Derivatives	John C. Hull	Pearson Education	
2	Financial Derivatives-Text and Cases	Prakash Yaragol	Vikas Publishing House Pvt. Ltd.	1/e, 2019

Reference Books

1	Options & Futures	Vohra & Bagri	TMH	2/e
2	Derivatives-Principles and Practice	Sundaram & Das	McGraw Hill	
3	Derivatives and Risk Management	Rajiv Srivastava	Oxford University	2010

Signature

Head of the Department
Department of Applied Electronics
MVAR - EAT/23