

Course Outline
Risk Management
Xavier Institute of Management, Xavier University

Credits	1.5
Program	EMBA (BM)
Academic Year & Term	2020-21 batch, Term III
Faculty	Dr. Pratap Chandra Pati
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I. Course description

The course, as the name suggests, deals with the entire gamut of Risk Management. In particular, we shall deal with the issue of Financial Risk Management. Identifying, measuring and managing financial risk is an increasingly important aspect of corporate financial management. A company faces both financial and non-financial risks. Financial risk includes market risk, credit risk, liquidity risk. In general, market risk is the largest component of financial risk; hence, this course focuses on measuring and managing market risk. Further, derivative securities play an integral part in managing financial risk for multinational corporations, portfolio managers, and institutional investors, as well as provide opportunities for speculators around the world. Broadly, topics covered include measurement of market risk, Value-at-Risk (VaR), hedging equity risk using futures, optimal hedge ratio, classification of option, option trading strategies, put-call parity, Black-Scholes option pricing model, options Greeks, and interest rate risk management. These topics are essential for professionals involved in risk management, portfolio management, and regulatory supervision of financial institutions.

II. Learning outcomes

After successfully completing this course, students will be able to:

- Measure the volatility risk emanating from the fluctuations in market prices.
- Apply the Value at Risk (VaR) to quantify and monitor financial risk exposures.
- Appreciate theoretical and practical applications in real world of derivative securities.
- Implement option pricing models, such as Black & Scholes.
- Understand how to use these derivative securities for hedging and/or speculation purposes.
- Learn the trading strategies of derivative market in the volatile market.
- Apply option Greeks in equity risk management.
- Understand the concepts of duration, and convexity in interest rate risk management.

III. Required textbook

- *Risk Management and Financial Institutions* by J.C. Hull

Supplementary textbook

- *Financial Risk Manager Handbook*, by Philippe Jorion.
- *Fundamentals of Futures and Options Markets* by J.C. Hull
- *Introduction to derivative securities, financial markets and risk management* by Jarrow & Chatterjee.
- *An Introduction to Derivatives and Risk Management* by Don M. Chance & Robert Brooks.

IV. Evaluation components and weights

Components	Weightage (%)
Quizzes	35
Class Participation	15
Project	10
End Term Exam	40

V. Tentative session plan

Topics	Session Plan
<ul style="list-style-type: none">• Introduction to risk management• Identification of major type of risks and risk classification• Measurement of market risk and returns in equity market• Quantifying equity market risk using Value-at-Risk (VaR)	Session 1-3
<ul style="list-style-type: none">• Hedging market risk using futures contracts : Optimal hedge ratio	Session 4-5
<ul style="list-style-type: none">• Risk management using option strategies	Session 6
<ul style="list-style-type: none">• Black-Scholes option pricing model• Risk management using Options Greeks: Delta, Vega, Theta, Gamma, Rho	Session 7-8
<ul style="list-style-type: none">• Interest rate risk management• Malkeil's theorem, Duration, Convexity, Immunization	Session 9-10

* Based on the progress of the class, minor changes (additions or deletions) may be made. Extra sessions may be taken.

VI. Academic Integrity and Discipline

- Students are expected to demonstrate high order of academic integrity being attentive in the class and regularly read the prescribed reading material.