

**FIRM-WIDE RISK  
MANAGEMENT  
PROGRAM**

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# **Outline for Firm-wide Risk Management Program, a 2-Day Program**

## **Chapter 0: Introduction**

## **Chapter 1: Concept of Value-at-Risk**

- 1.1 Introduction To Value-at-Risk (VaR)
- 1.2 VaR Confidence Levels and Horizons
  - 1.2.1 VaR Confidence Levels
  - 1.2.2 VaR Horizons
- 1.3 Back Testing
- 1.4 Stress Testing To Complement VaR
- 1.5 Conditional Value-at-Risk (C-VaR)

## **Chapter 2: Types of Financial Risk**

- 2.1 Systematic Risk
  - 2.1.1 General Market Risk
    - Directional Risk
    - Non-Directional Risk
- 2.2 Non-systematic Risk
  - 2.2.1 Credit Risk
  - 2.2.2 Event Risk
  - 2.2.3 Liquidity Risk
- 2.3 Risk Interaction

## **Chapter 3: Sources of Market Risk**

- 3.1 Interest Rate Instruments
- 3.2 Foreign Exchange Instruments

- 3.3 Equity Instruments
  - Single-Index Model
  - Multi-Index Model
- 3.4 Commodity Instruments
- 3.5 Summary

## **Chapter 4: Credit Risk**

- 4.1 Settlements Risk
  - The Failure of Bankhaus Herstatt (1974)
  - Bank of Credit and Commerce International (BCCI) (1991)
- 4.2 Core Principles for Systemically Important Payment Systems
  - 4.2.1 Handling Settlements Risk
- 4.3 Pre-Settlement Risks
  - 4.3.1 Elements of Credit Risk
    - Probability of Default
    - Definition of a Credit Default
    - Exposure Given Default
    - Loss Given Default
- 4.4 Principles For The Management of Credit Risk
  - Establishing An Appropriate Credit Risk Environment
  - Operating Under A Sound Credit Granting Process
  - Maintaining An Appropriate Credit Administration, Measurement and Monitoring Process
  - Ensuring Adequate Controls Over Credit Risk
  - The Role of Supervisors

## **Chapter 5: Operational Risk**

- 5.1 Example of Operational Risk
  - Barings Futures Singapore Fiasco
- 5.2 Operational Risk Classification Scheme
- 5.3 Some Operational Risk Mitigating Strategies
  - Training
  - Systems
  - Insurance
  - Outsourcing

- 5.4 Sound Practices For The Management And Supervision Of Operational Risk
  - Developing an Appropriate Risk Management Environment
  - Risk Management: Identification, Measurement, Monitoring, and Control
  - Role of Supervisors
  - Role of Disclosure

## **Chapter 6: Good Risk Management Practices**

- 6.1 Group of 30's Report and Recommendations On The Use Of Financial Derivatives
  - The Group of Thirty
  - The Report
  - The Global Derivatives Study
- 6.2 Recommended Risk Management Organizational Structure and The Role of The Chief Risk Officer (CRO)

## **Chapter 7: The Basel Capital Accord**

- 7.1 The Basel Committee
- 7.2 History Of The Basel Capital Standards
  - The 1988 Basel Capital Accord
  - The 1996 Amendment
  - The June 1999 proposal
  - The Proposed New Accord
- 7.3 Structure Of The New Accord
  - The First Pillar: Minimum Capital Requirement
  - The Second Pillar: Supervisory Review Process
  - The Third Pillar: Market Discipline

## Program Facilitator

Dr. Jeffrey C. K. Lim, Ph.D., C.Sci., C.Math., FIMA, FRM, PRM

Dr. Jeffrey C. K. Lim, certified Financial Risk Manager (FRM<sup>1</sup>) and certified Professional Risk Manager (PRM<sup>2</sup>), is currently the Managing Director of PI ETA Consulting Company, a Treasury & Financial Risk Management Consulting Company.

A Chartered Scientist (C.Sci.<sup>3</sup>), a Chartered Mathematician (C.Math.<sup>4</sup>) and an elected Fellow of the Institute of Mathematics and Its Applications (IMA), U.K. (FIMA), Jeff earned his Ph.D. in Stochastic Financial Modeling from the University of Cambridge in England. Jeff's research interest at Cambridge was in the area of Arbitrage Opportunities occurring in the Mispricing of Financial Options, and his original research culminated in the publication of his doctoral dissertation entitled: "Multi-period Mean-Variance Option Portfolio Strategies".

Jeff was an authorized Securities & Financial Derivatives Representative in London, having been certified by The Securities and Futures Authority (SFA) in England, where he started his career as a Derivatives Analyst with Nomura International in London, England. He subsequently joined NatWest Markets from London to become its Head of Currency Structured Products for South and South-East Asia. Jeff then moved to American Express Bank to become its Director of Structured Products, prior to assuming his current position.

Jeff has also contributed to the development and enhancement of talent and infrastructure for Singapore's financial center as a guest Professor at the National University of Singapore's Center for Financial Engineering, where he was responsible for the curriculum of its Master of Science degree program's core modules in Financial Derivatives and Treasury Management.

At PI ETA Consulting Company, Jeff was Principal Inventor in two of the Patents that the company currently holds – one in Treasury & Financial Risk Management Systems, and the other in Knowledge Management Systems.

Professionally, Jeff is a Fellow of both the Global Association of Risk Professionals (GARP), U.S.A. and the Professional Risk Managers International Association (PRMIA), U.S.A. He is also a Fellow of the Cambridge Philosophical Society, U.K.. Jeff is also honoured to be a Fellow of The Cambridge Commonwealth Society, U.K., having been previously awarded the Cambridge Commonwealth Trust and the Shell Group of Companies Doctoral Research Scholarship.

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<sup>1</sup> The *Financial Risk Manager* (FRM) designation is awarded by The Global Association of Risk Professionals (GARP), U.S.A.

<sup>2</sup> The *Professional Risk Manager* (PRM) designation is awarded by The Professional Risk Managers International Association (PRMIA), U.S.A.

<sup>3</sup> The *Chartered Scientist* (C.Sci.) designation is awarded by The Science Council, U.K.

<sup>4</sup> The *Chartered Mathematician* (C.Math.) designation is awarded by The Institute of Mathematics and Its Applications (IMA), U.K.