RISK MANAGEMENT

Aims:
i. To enable candidates to understand the meaning of risk and risk management, with focusing on financial market risk.
ii. To introduce basic risk management techniques and regulations in the banking sector
iii. To introduce the measurement of market risk.

THE SYLLABUS

Section A – Background

1. Risk Management: Introduction
   1.1 Definition of risks: market risk, credit risk and operational risk
   1.2 Modern risk management
   1.3 Concepts of risk financing, risk control, hedging and insurance
   1.4 The need for risk management

2. Process of Managing Different Risks
   2.1 Identification of risk factors
   2.2 Personal risk management
      2.2.1 Financial planning
      2.2.2 Insurance
   2.3 Financial risk management
      2.3.1 Non-insurable risk transfer
      2.3.2 Non-speculative risk management
      2.3.3 Speculative risk management: Hedging with financial instruments
   2.4 Corporation risk management
   2.5 Active and passive risk management

3. Backgrounds
   3.1 The Markowitz portfolio analysis of risk and return
   3.2 Capital Asset Pricing Model (CAPM)

Section B - Risk Management in Banking

1. Regulatory and Corporate Environment
   1.1 Group of 30 Policy Recommendation
   1.2 The BIS Accord
   1.3 Basel II
2. Structuring Risk Management Functions in Banks
   2.1 Three-Pillar Framework
   2.2 The Standardized Approach
   2.3 The Internal Models Approach

Section C - Market Risk Measures

1. Measuring Risk: A Historical Perspective
2. Definition of Value at Risk (VaR)
   2.1 Financial definition: Economic capitals
   2.2 Statistical definition: Quantile of a distribution
3. Normal VaR for an Asset
   3.1 Volatility estimates
   3.2 The VaR formula
   3.3 VaR increment
4. Normal VaR for a Portfolio
   4.1 Variance-covariance approach to VaR
   4.2 Back testing
   4.3 Stress testing
5. Capital Allocation and Performance Measurement
   5.1 Risk adjusted return on capital (RAROC)
   5.2 Measuring risk adjusted performance

THE EXAMINATION

Time allowed: Three hours

Examination format:

Five essay-type or extended questions. Each worth 20 marks

Calculators:

Silent, non-programmable calculators may be used in this examination.

Essential readings

(Note: Only up-to-date editions of the recommended textbooks should be used)

陳毅恒, 風險管理精義 (明報出版社)


Lau F, Derivatives in Plain Words (Hong Kong Monetary Authority)
Further readings

* C. Olsson, Risk Management in Emerging Markets (Prentice Hall)
* D.G. Luenberger, Investment Science (Oxford University Press, New York)
* D.M. Chance, In Introduction to Derivatives and Risk Management (Thomson, South-Western)
* P. Jorion, Value at Risk (McGraw-Hill, New Jersey)
* Banking Today [bi-monthly journal] (Hong Kong Institute of Bankers)