MODULE SPECIFICATIONS

Pasaran Kewangan Malaysia Certificate (PKMC)
Module IV — Risk Management & Basic Derivatives

Level of Study: Level 2
Effective date: August 2022
Version: 1.0

A. Module Aim

This module provides candidates with an understanding of the principles of risk management in general and in the context of a banking institution specifically. Invariably, risk management in the financial markets would also involve the use of derivatives, which were conceived with the original intention of hedging a future uncertain outcome in the financial markets. Nowadays, however, trading and speculative activities actually form the bulk of the volume seen in the derivatives market. Thus, an understanding of how and what factors impact the derivatives market becomes even more pertinent.

This module also explains the mechanics of the major categories of derivatives, which are forwards, swaps and options. candidates will gain a thorough understanding of the use of derivatives in various asset classes and how it applies to risk management in the financial markets.

B. Learning Outcomes (LO)

Upon completion of this module, candidates will be able to:

LO1	—	Describe the role of risk management within the financial and its participants
LO2	—	Differentiate between the different types of risks present within financial institutions
LO3	—	Evaluate the tools and procedures used to measure, manage and mitigate each type of risk
LO4	—	Describe the regulatory developments in the area of risk management for financial institutions
LO5	—	Analyze the features of derivatives and how it can be employed by financial institutions
LO6	—	Discuss the issues in pricing, valuation and accounting for derivatives
LO7	—	Discuss the credit risk that arises in derivative transactions
LO8	—	Analyze the use of forwards in managing risk exposure
LO9	—	Describe the general characteristics of futures and forwards
LO10	—	Apply currency futures to manage risk
LO11	—	Apply interest rate futures to manage risk
LO12	—	Appraise the use of interest rate swap in managing risk.
LO13	—	Appraise the use of other forms of swaps in managing risk.
LO14	—	Appraise the use of options in managing risk.
LO15	—	Describe the use of currency option, interest rate option and equity option in risk management.
LO16	—	Define the general characteristics and risk in structured products
LO17	—	Explain the principal protection component in the design of structured products
LO18	—	Explain the features which are unique to structured products compared to traditional investment products
LO19	—	Explain the role of structured products in investors' portfolio
LO20	—	Describe the characteristics of common structured products in the market
LO21	—	Describe the characteristics of other structured products in the market

C. Learning Method

Self-study – online materials available.

D. Assessment

Examination (Pearson-VUE Online)	MCQ	Written	Assignment (Moodle)
Duration	2.5 hours		
Format	80 MCQs		
Passing mark	75%		

E. Syllabus Outline

#	Learning topics	Learning outcomes (LO)	Assessment criteria
1	**Introduction to Financial Risk Management** 1.1 Concept of Risk and Risk Management 1.2 Risk Management Process 1.3 Roles and Responsibilities of All Stakeholders in the Risk Management Process 1.4 Issues and Challenges in the Risk Management Process 1.5 How a Bank's Risk Appetite is Related to Its Business Strategy	LO1 — Describe the role of risk management within the financial and its participants	1. Describe the concept of risk and risk management 2. Describe the risk management process 3. Explain the roles and responsibilities of all stakeholders in the risk management process 4. Describe a typical risk management organization within a financial institution 5. Identify issues and challenges that occur in the risk management process 6. Describe how a bank's risk appetite is related to its business strategy
2	**Major Types of Risk: Definition, Causes, Risk Measurement and Control** 2.1 Key Types of Risks Faced by Banks 2.2 How Each Type of Risks Can Occur 2.3 Impact of Each Type of Risks 2.4 Importance of Volatility in Risk Management 2.5 Application of Volatility and VaR in Risk Management 2.6 Measuring Risk Exposure of Financial Institutions 2.7 Using Duration to Measure Interest Rate Risk 2.8 Guidelines and Best Practices for Managing and Mitigating Each Type of Risks 2.9 Regulatory Developments	LO2 — Differentiate between the different types of risks present within financial institutions. LO3 — Evaluate the tools and procedures used to measure, manage and mitigate each type of risk. LO4 — Describe the regulatory developments in the area of risk management for financial institutions.	1. Describe the key types of risks 2. Explain how each type of risk can occur 3. Evaluate the impact of each type of risk to a financial institution 4. Describe the concept of volatility and its application in measuring risk 5. Describe how VaR is used to measure and manage market risk 6. Describe the different type of limits used to manage the credit exposure of financial institutions 7. Describe the concept of duration in measuring interest rate risk 8. Explain the changes introduced in Basel III to address risk management deficiencies in earlier guidelines 9. Describe the impact of the implementation of

			Basel III for financial institutions
3	**Introduction to Derivatives** 3.1 What is a Derivative? 3.2 Different Types of Derivatives 3.3 Role of Derivative Markets 3.4 Exchange-traded Versus Over-the-Counter Derivatives 3.5 Settlement of Derivatives 3.6 Pricing of Derivatives 3.7 Mark-to-Market Derivatives 3.8 Accounting Treatment for Derivatives 3.9 The International Swaps and Derivatives Association 3.10 Addressing Credit Risk via ISDA Documentation 3.11 Islamic Derivatives 3.12 Transition to Alternative Risk Free Rates	LO5 — Analyze the features of derivatives and how it can be employed by financial institutions. LO6 — Discuss the issues in pricing, valuation and accounting for derivatives LO7 — Discuss the credit risk that arises in derivative transactions.	1. Define the concept of a derivative 2. Describe the basic characteristics and differentiate between forwards, futures, options and swaps 3. Describe the role of derivative markets 4. Differentiate between the different mechanism for trading and settlement of derivative transactions 5. Describe the pricing of derivatives using the concepts of arbitrage and replication 6. Discuss the importance of mark-to-market of derivatives 7. Explain how derivatives are classified from an accounting perspective 8. Describe the role of ISDA in providing the framework for derivative transactions and addressing credit risk 9. Describe how Islamic derivatives are created
4	**Derivative Fundamentals: Forwards and Futures** 4.1 Forwards 4.2 Futures 4.3 Swaps	LO8 — Analyze the use of forwards in managing risk exposure. LO9 — Describe the general characteristics of futures and forwards. LO10 — Apply currency futures to manage risk. LO11 — Apply interest rate futures to manage risk. LO12 — Appraise the use of interest rate swap in managing risk.	1. Calculate FX forwards using spot rates and prevailing interest rates 2. Explain the characteristics and role of non-deliverable forwards 3. Describe the key features of forward rate agreements and derive forwards rates from spot rates 4. Calculate settlement proceeds for forward rate agreements by applying the appropriate quoted rates

		LO13 — Appraise the use of other forms of swaps in managing risk.	5. Describe the key features of a futures contract 6. Explain how margin requirements are calculated and why it is required in a futures contract 7. Explain how forward and futures prices may differ 8. Describe the mechanics of a currency futures contract 9. Demonstrate the use of currency futures in hedging currency risk 10. Explain the mechanics of an interest rate futures 11. Illustrate the use of interest rate futures in hedging interest rate risk 12. Explain the mechanics of a commodity futures contract 13. Describe the mechanics and uses of an interest rate swap 14. Analyze factors that impact the pricing of an interest rate swap 15. Describe the mechanics of a cross currency swap 16. Demonstrate the use of cross currency swap in hedging exchange rate risk 17. Explain the characteristics and functions of a credit default swap 18. Analyze factors that impact the pricing of a credit default swap 19. Explain the characteristics and functions of a total return swap
5	**Derivative Fundamentals: Options** 5.1 Terminology and Basic Features of Options	LO14 — Appraise the use of options in managing risk.	1. Explain the basic features of options including the strike price, maturity, exercise type

	5.2 Intrinsic Value and "Moneyness" 5.3 Payoff Diagrams for Options 5.4 Factors that Influence the Value of an Option 5.5 Time Value in the Valuation of Options 5.6 Option Greeks 5.7 Basic Option Strategies 5.8 Using Currency Option, Interest Rate Option and Equity Option in Risk Management	LO15 — Describe the use of currency option, interest rate option and equity option in risk management.	2. Define the concepts of intrinsic value and "moneyness" for an option 3. Interpret the payoff diagrams of various option positions 4. Recognize the factors that affect the pricing or valuation of an option 5. Define time value and explain its role together with intrinsic value in the valuation of options 6. Describe option Greeks are and how they are used in assessing and managing the risks of options 7. Understand how basic option strategies are structured and used 8. Explain how currency option, interest rate option and equity option function 9. Describe how options are used for risk management involving currency risk, interest rate risk and equity risk 10. Explain the impact of corporate exercises on the pricing of equity options
6	**Structured Products: Definition, Main Features, Uses, Mechanics and Application** 6.1 Definition and Features of Structured Products 6.2 Risks in Structured Products 6.3 Structured Product Issuance Medium 6.4 Risks in Structured Products 6.5 Structured Product Building Blocks 6.6 Call Options vs Callable Structures	LO16 — Define the general characteristics and risk in structured products LO17 — Explain the principal protection component in the design of structured products LO18 — Explain the features which are unique to structured products compared to traditional investment products	1. Define a structured product 2. Identify the risk present in structured products 3. Calculate the funding available for use in a principal protected product with a ZNID component 4. Explain the mechanics of various derivatives used as building blocks in structured products 5. Explain the rationale for incorporating callable,

	6.7 Making Options Cheaper 6.8 Common Structured Products in the Market	LO19 — Explain the role of structured products in investors' portfolio LO20 — Describe the characteristics of common structured products in the market LO21 — Describe the characteristics of other structured products in the market	KIKO, barrier features to a structured product 6. Discuss the role of structured products in balancing the risk and return requirements of investors 7. Identify the medium in which structured products are issued 8. Explain the mechanics of various common structured products 9. Discuss the factors that impact the pricing of common structured products 10. Discuss the risk arising from a CDO structure