

Module Outline

Module Title:	Operational Risk Management
QF Level:	Reference is being taken and pitched to HKQF Level 6
QF Credit:	30 credits for Postgraduate Diploma for Certified Banker (15 contact hours and 3 examination hours)
Teaching/Training & Learning Activities:	Training Class
Pre-requisite:	N/A

Module Objective:

This module contributes to the achievement of the knowledge and skills embedded in the Programme Intended Learning Outcomes by integrating theory and real-life experience on a wide range of topics related to operational risk management. By utilizing tools and resources available, the learners would have an opportunity to develop research skills to map the latest market standard with internal operation. Such skills are crucial for shaping up the internal operations of an organization to meet external challenges, and they would enhance the learners' competence to develop investigative strategies which are vital for both individual and organizational development.

Module Intended Learning Outcome (MILO) & Unit of Competencies (UoCs)

Upon completion of the module, learners should be able to:

MILO1:	Critically evaluate the performance of a wide range of operational functions related to product, services and process operations in the perspectives of operational risk management;	
MILO2:	Exercise judgment in day-to-day management work activities to distinguish the nature of risk in operations functions and operational functions issues to formulate risk management solutions in compliance with regulatory requirement; and	
MILO3	Propose justified solutions and recommendations on operational functions enhancement based on analysis and synthesis of relevant information.	

Assessment Activity

Type of Assessment Activity	MILOs	Weighting (%)
Examination	MILO 1-3	100

Examination Format and Duration

Time allowed: 3 hours

The examination consists essay questions

Passing mark for this subject is 50%

Syllabus

Chapter 1: Operational Risk in Banking Industry	
1	Overview and definition of Operational Risk Mandates
1.1	- Introduction <ul style="list-style-type: none"> ▪ What is operational risk? ▪ Operational risk in financial institutions ▪ Operational risk causal factors ▪ Operational risk categories
1.2	- Important operational risk events <ul style="list-style-type: none"> ▪ Grouped losses vs single events ▪ Linked events ▪ Legal events ▪ Tax events
1.3	- Distinguished from other types of risk <ul style="list-style-type: none"> ▪ Risk positions - quantification and exposure measure ▪ Portfolio completeness ▪ Data frequency ▪ Modeling
1.4	- Distinguished from operation risk <ul style="list-style-type: none"> ▪ Back office operations ▪ Enterprise wide operation issue
1.5	- Boundary of operation risk <ul style="list-style-type: none"> ▪ Credit risk ▪ Market risk ▪ Interest rate risk ▪ Liquidity risk ▪ Legal risk ▪ Reputation risk ▪ Strategic risk
1.6	- Drivers of operational risk management <ul style="list-style-type: none"> ▪ Back office operations ▪ Strategy, appetite and policy ▪ Reassure from regulators ▪ Increasing merger and acquisition activity ▪ Integration of best risk practices ▪ Risk aggregation ▪ New product and service examination ▪ Performance and resources allocation measurement
1.7	- Related disciplines <ul style="list-style-type: none"> ▪ Financial risk management

	<ul style="list-style-type: none"> ▪ Audit and internal controls ▪ Reliability engineering
2	Operational risk management framework
2.1	<ul style="list-style-type: none"> - What are operational risk management frameworks <ul style="list-style-type: none"> ▪ Corporate structure ▪ Operational risk management process ▪ Components in operational risk management framework
3	Case studies
3.1	<ul style="list-style-type: none"> - Cases on different types of operational risks <ul style="list-style-type: none"> ▪ Fraud, Compliance, Systems, Reputation, Escalation, Monetary and Non-monetary losses ▪ People ▪ Process ▪ System ▪ External events
Chapter 2: Process of Operational Risk Management	
1	Methodologies and tools
1.1	- Building ORM process - Defining scope and objectives
1.2	<ul style="list-style-type: none"> ▪ Measurement ▪ RCSA ▪ KRI verification and setting up ▪ ILD building
	<ul style="list-style-type: none"> - Managing operational risk <ul style="list-style-type: none"> ▪ Risk identification and Assessment - Basel Committee on Banking Supervision (BCBS) principles for sound management of operational risk Principle 6, 7 ▪ Monitoring and Reporting – BCBS principles for sound management of operational risk Principle 8 ▪ Control and Mitigation – BCBS principles for sound management of operational risk Principle 9 ▪ Contingency and escalation ▪ Business Resilience and Continuity – BCBS principles for sound management of operational risk Principle 10
2	Risk identification
2.1	<ul style="list-style-type: none"> - Introduction <ul style="list-style-type: none"> ▪ Define unit of measure ▪ RCSA ▪ KRI verification and setting up ▪ ILD building ▪ Use of external loss data ▪ Implementation ▪ Practical issues in applications
2.2	<ul style="list-style-type: none"> - Risk and Control Self-Assessment <ul style="list-style-type: none"> ▪ Implementation ▪ Practical issues in applications

2.3	<ul style="list-style-type: none"> - Risk categorization <ul style="list-style-type: none"> ▪ Business line mapping ▪ Categorization of incidents and loss events ▪ Implementation ▪ Practical issues in applications
3	<p>Risk measurement and assessment</p> <p>3.1 - Impact and probability</p> <ul style="list-style-type: none"> ▪ Categorization of frequency and severity ▪ Aggregated loss distribution from frequency and severity distributions ▪ Expected loss and unexpected loss ▪ Inference of operational risk capital using value at risk methodology ▪ Background for Basel operational risk capital calculation methodology
4	<p>Risk control and mitigation</p> <p>4.1 - Risk response</p> <ul style="list-style-type: none"> ▪ Options and actions to reduce the likelihood or consequences of risk impact ▪ Actions taken to mitigate the risk ▪ Responsibilities assignment <p>4.2 - Incident management and loss data</p> <ul style="list-style-type: none"> ▪ Incident management processes ▪ Loss prediction ▪ Loss prevention ▪ Loss control ▪ Loss reduction <p>4.3 - Insurance</p> <ul style="list-style-type: none"> ▪ Operational risk insurance products ▪ Financial institutions operational risk insurance's coverage ▪ Limitation of insurance ▪ Alternatives to insurance <p>4.4 - Internal control</p> <ul style="list-style-type: none"> ▪ Definition ▪ Components of internal control ▪ Internal control objectives ▪ Internal control activities <p>4.5 - Key risk exposure control and mitigation</p> <ul style="list-style-type: none"> ▪ Risk assumption ▪ Risk avoidance ▪ Risk limitation ▪ Risk planning ▪ Research and acknowledgement ▪ Risk transference <p>4.6 - Contingency plan</p> <ul style="list-style-type: none"> ▪ Reliability ▪ Availability ▪ Plan maintainability

5	<p>Risk reporting</p> <p>5.1 - Introduction</p> <ul style="list-style-type: none"> ▪ Steps to generate reports ▪ Incident reports ▪ Risk reports ▪ Risk action reports ▪ Risk summary reports <p>5.2 - Heat map or operational risk profile business process mapping</p> <ul style="list-style-type: none"> ▪ Business value ▪ Performance ▪ Maturity ▪ Interconnectedness ▪ Compliance and Governance ▪ Processes <p>5.3 - Key risk indicators (Preventive / BAU data)</p> <ul style="list-style-type: none"> ▪ Definition ▪ Role and purpose ▪ Selecting risk indicators ▪ Thresholds, limits and escalation triggers <p>5.4 - Incidents and operational risk loss data reporting</p> <ul style="list-style-type: none"> ▪ Embedding - Under & over reporting ▪ Thematic review ▪ Timeliness ▪ Lessons Learned ▪ Confidence <p>5.5 - Escalation (e.g. report to management, regulators)</p> <ul style="list-style-type: none"> ▪ Escalations triggers ▪ Resources overhead ▪ Procedures
6	<p>Other related techniques</p> <p>6.1 - Scenario analysis (AMA in context)</p> <ul style="list-style-type: none"> ▪ Historical vs hypothetical events ▪ Probabilities and frequencies of occurrence of the event ▪ Business activities ▪ Maximum internal and external loss ▪ Possible mitigation techniques ▪ Methodology <p>6.2 - Stress testing</p> <ul style="list-style-type: none"> ▪ Extreme event ▪ Limitation of stress testing <p>6.3 - Operational risk models</p> <ul style="list-style-type: none"> ▪ Top-down vs bottom-up models ▪ Casual vs statistical models ▪ Selection of risk models <p>6.4 - Application of tools</p> <ul style="list-style-type: none"> ▪ Identifying and generating metrics ▪ Parameterizing, prioritizing and developing mitigations ▪ Tracking risks

	<ul style="list-style-type: none"> ▪ Example
Chapter 3: Regulatory Framework and Governance Structure	
1	<p>Regulatory requirements</p> <ul style="list-style-type: none"> 1.1 - Basel II Capital Accord on Operational Risk (BCBS 128) <ul style="list-style-type: none"> ▪ Business line mapping 1.2 - Basel Committee's Sound Practices for the Management of Operational Risk 1.3 - HKMA SPM OR-1 and Banking Capital Rules Basel III
2	<p>Risk governance</p> <ul style="list-style-type: none"> 2.1 - Structure <ul style="list-style-type: none"> ▪ BCBS-principles for sound management of operational risk Principles 1, 2, 3, 4 ▪ HKMA-elements for a sound risk management system ▪ Corporate governance 2.2 - Roles and responsibilities of different parties (e.g. committee) <ul style="list-style-type: none"> ▪ Use of specialized committee ▪ Role of internal control, compliance, risk management and internal audit 2.3 - Relationship between RCSA, KRI and Operational Risk Events <ul style="list-style-type: none"> ▪ Interaction and how they work together ▪ Action Plan and Reporting ▪ Example

Essential Readings:

- HKIB. Operational Risk Management (1st ed.). Wiley

Supplementary Readings:

- Abkowitz, Mark David. (2008). Operational Risk Management: A Case Study Approach to Effective Planning and Response. John Wiley & Sons.
- Carol Alexander. (2003). Operational Risk: Regulation, Analysis and Management. Prentice Hall.

For more details, please refer to further reading session at end of each chapter.