

Module 4 – Advanced Operational Risk Management

Syllabus (from HKMA)	HKIB Module Outline			Further elaboration		
	Chapter	Section	Topics	Corresponding chapters of the two reference books mapped with Syllabus / Module Outline		Other reference
				The Hong Kong Institute of Bankers (2013). Operational Risk Management (1 st digital ed.) (ISBN 13: 978-0-470-82768-0). WILEY.	Ariane Chapelle (2018). Operational Risk Management: Best Practices in the Financial Services Industry (1st digital ed.) (ISBN 13: 978-1-119-54907-9). WILEY.	Circular
1	• Operational risk assessment	1	1.1 Operational Risk Assessment Methodology And New Products Risk Assessment - Introduction 1.2 - Risk Assessment Criteria 1.3 - Risk Taxonomy 1.4 - New Process Change Risk Assessment 1.5 - Challenges and Solutions	Chapter 5 Risk Identification	Chapter 3 Risk Definition and Taxonomy Chapter 6 Risk and Control Self-Assessments Chapter 17 Project Risk Management	<ul style="list-style-type: none"> • Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011 • ORX, ORX Reference Taxonomy November 2020 • Risk Assessment in Practice. Committee of Sponsoring Organizations of the Treadway Commission; October 2012
2	• Scenario modelling and analysis, sensitivity testing - Stress testing (Value at Risk, Extreme Market Conditions)	2	2.1 Scenario Analysis And Stress Testing - Introduction 2.2 - Stress Testing 2.3 - Scenario Analysis 2.4 - Selection Of The Scenarios 2.5 - Execution And Analysis 2.6 - Benchmarking With The Industry 2.7 - Regulatory Guideline	Chapter 9 Related Technologies	Chapter 2 Scenario Identification Process Chapter 3 Risk Definition and Taxonomy, Chapter 7 Scenario Assessment	<ul style="list-style-type: none"> • Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
3	• Key risk indicators (KRIs), Key performance indicators (KPIs), Key control indicators (KCI) and respective metrics	3	3.1 Key Risk Indicators - Introduction 3.2 - Difference Between Key Risk Indicator, Key Control Indicator And Key Performance Indicator 3.3 - Design 3.4 - Analysis 3.5 - Reporting 3.6 - Validation	Chapter 4 Methods and Tools Chapter 5 Risk Identification Chapter 8 Risk Reporting Chapter 11 Risk Governance	Chapter 3 Risk Definition and Taxonomy Chapter 14 Key Risk Indicators	<ul style="list-style-type: none"> • Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
4	• Capital requirements for operational risk – approaches under the Basel framework (including the existing approaches - Basic Indicator Approach (BIA), Standardised Approach (SA), Alternative Standardised Approach (ASA) and Advanced Measurement Approach (AMA), and the Revised Standardised Approach that is scheduled to come into effect from 2022 based on the	4	4.1 Capital Requirements For Operational Risk - Introduction 4.2 - Basic Indicator Approach (BIA) 4.3 - Standardized Approach (SA) 4.4 - Alternative Standardized Approach (ASA)	Chapter 10 Regulatory Requirements	Chapter 3 Risk Definition and Taxonomy Chapter 8 Regulatory Capital and Modeling	<ul style="list-style-type: none"> • Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011 • Basel Committee: Basel III: Finalising Post-Crisis Reforms;

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		4.5	- Advanced Measurement Approach (AMA)			December 2017
		4.6	- Revised Standardized Approach (RSA)			
5	5	5.1	Risk Control Self-Assessment - Introduction	Chapter 4 Methods and Tools Chapter 5 Risk Identification Chapter 11 Risk Governance	Chapter 3 Risk Definition and Taxonomy Chapter 6 Risk Control Self Assessment Chapter 15 Risk Reporting	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
		5.2	- Operational Risk Process and Key Control Analysis			
		5.3	- Process Risk Mapping And Control			
		5.4	- Business Process Management Tool			
		5.5	- Quantification of Potential Exposure			
		5.6	- Residual Risk Assessment and Treatment			
		5.7	- Operational Risk Reporting And Dashboards			
6	1	1.5	Operational Risk Assessment Methodology And New Products Risk Assessment - New Product Risk Assessment Cycle	Chapter 5 Risk Identification	Chapter 3 Risk Definition and Taxonomy Chapter 17 Project Risk Management	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011 ORX, ORX Reference Taxonomy November 2020 Risk Assessment in Practice. Committee of Sponsoring Organizations of the Treadway Commission; October 2012
		1.6	- Offboarding and Periodic Review			
7	6	6.1	Operational Risk Events - Introduction	Chapter 4 Methods and Tools Chapter 5 Risk Identification Chapter 6 Risk Measurement and Assessment	Chapter 3 Risk Definition and Taxonomy Chapter 11 Root Cause Analysis and Action Plans Chapter 13 Incident Data Collection	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
		6.2	- Different Types Of Risk Events			
		6.3	- Root Cause Analysis			
		6.4	- Data Collection			
		6.5	- Escalation			
		6.6	- Treatment Of Boundary Loss			
		6.7	- Lesson Learnt And Corrective Actions			
8	7	7.1	Regulatory And Supervisory Frameworks - Introduction	Chapter 1 Overview and Definition Chapter 4 Methods and Tools Chapter 10 Regulatory Requirements Chapter 11 Risk Governance	Chapter 3 Risk Definition and Taxonomy Chapter 16 Valuable ORM	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Basel Committee: Principles For The Sound Management
		7.2	- Compliance With Regulatory Standards			
		7.3	- Supervisory Approach Of Regulators			

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		7.4	- On-Site Examination And Prudential Meetings			Of Operational Risk; June 2011
9	• Building contingency, business continuity and recovery planning	8	8.1 Contingency, Business Continuity And Recovery Planning - Introduction 8.2 - Types Of Resilience Risk 8.3 - Resiliency Risk Framework 8.4 - Effective Tools Of Planning, Execution And Testing 8.5 - Regulatory Requirements 8.6 - Integration Into Operational Risk	Chapter 5 Risk Identification	Chapter 3 Risk Definition and Taxonomy Chapter 20 Resiliency and Reputation	• Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011 • Basel Committee: Consultative Document Principles For Operational Resilience; August 2020
10	• Guidelines from the BCBS - Principles for the Sound management of Operational risk	7	7.5 Regulatory And Supervisory Frameworks - Guidelines From The BCBS 7.6 - Regulatory Focus	Chapter 1 Overview and Definition Chapter 4 Methods and Tools Chapter 10 Regulatory Requirements Chapter 11 Risk Governance	Chapter 3 Risk Definition and Taxonomy Chapter 16 Valuable ORM	• Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
11	• Associated operational risks related to the key areas for future banking including green and sustainable banking, and digital banking services	10	10.1 Operational Risks Related To The Key Areas For Future Banking - Introduction 10.2 - Green And Sustainable Banking 10.3 - Digital Banking Services	Chapter 10 Regulatory Requirements	Chapter 3 Risk Definition and Taxonomy Chapter 18 Information Security Risks	• Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
12	• Key components of successful operational risk management implementation - Importance and application of trainings in Operational risk management - Communication and engagement plan of Operational risk management in the workplace - Communication with senior management On Operational risk topics	9	9.3 Risk Culture, Awareness And Key Components Of Successful Operational Risk Management Implementation - Importance And Application Of Trainings In Operational Risk Management 9.4 - Communication And Engagement Plan Of Operational Risk Management In The Workplace 9.5 - Communication With Senior Management On Operational Risk Topics	Chapter 2 Operational Risk Framework Chapter 7 Risk Control and Mitigation Chapter 8 Risk Reporting	Chapter 3 Risk Definition and Taxonomy Chapter 12 Conduct and Culture	• Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 • Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 • Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 • Hong Kong Monetary Authority, Bank Culture Reform; March 2011 • Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011

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13	9	9.6	Risk Culture, Awareness And Key Components Of Successful Operational Risk Management Implementation - Oversight, Monitoring And Understanding Of Relevant Operational Risk Management Processes Taken Up By Subject Matter Experts	Chapter 2, Operational Risk Framework Chapter 7 Risk Control and Mitigation Chapter 8 Risk Reporting	Chapter 3 Risk Definition and Taxonomy Chapter 12 Conduct and Culture	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Hong Kong Monetary Authority, Bank Culture Reform; March 2011 Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
14	11	11.1 11.2 11.3 11.4	The Future and Challenges Of Operational Risk Management - Introduction - Competence Development - Emerging and Proactive Risk Management - Deployment of Artificial Intelligence	Chapter 11 Risk Governance	Chapter 3 Risk Definition and Taxonomy Conclusion	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011 Basel Committee: Sound Practices: Implications Of Fintech Developments For Banks And Bank Supervisors; February 2018
15	9	9.1 9.2	Risk Culture, Awareness And Key Components Of Successful Operational Risk Management Implementation - Introduction - Risk Culture And Awareness	Chapter 2, Operational Risk Framework Chapter 7 Risk Control and Mitigation Chapter 8 Risk Reporting	Chapter 3 Risk Definition and Taxonomy Chapter 12 Conduct and Culture	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Hong Kong Monetary Authority, Bank Culture Reform; March 2011 Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011
16	1 2 3	1.7 1.8 2.8 3.7 3.8	Operational Risk Assessment Methodology And New Products Risk Assessment - Case Studies - Best Practice Guidance Scenario Analysis And Stress Testing - Case Studies Key Risk Indicators - Case Studies - Best Practice Guidance	Chapter 3 Case Studies	Chapter 3 Risk Definition and Taxonomy Chapter 17 Project Risk Management	<ul style="list-style-type: none"> Hong Kong Monetary Authority, SA-1: Risk Management Framework; October 2017 Hong Kong Monetary Authority, OR-1: Operational Risk Management; November 2005 Hong Kong Monetary Authority, IC-1: Risk-based Supervisory Approach; October 2001 Hong Kong Monetary Authority, Operational Incidents Watch Basel Committee: Principles For The Sound Management Of Operational Risk; June 2011

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	4	4.7	Capital Requirements For Operational Risk - Case Studies			
		4.8	- Best Practice Guidance			
	5	5.8	Risk Control Self-Assessment - Case Studies			
		5.9	- Best Practice Guidance			
	6	6.8	Operational Risk Events - Case Studies			
		6.9	- Best Practice Guidance			
	7	7.7	Regulatory And Supervisory Frameworks - Case Studies			
		7.8	- Best Practice Guidance			
	8	8.7	Contingency, Business Continuity And Recovery Planning - Case Studies			
		8.8	- Best Practice Guidance			
	9	9.7	Risk Culture, Awareness And Key Components Of Successful Operational Risk Management Implementation - Case Studies			
		9.8	- Best Practice Guidance			
	10	10.5	Operational Risks Related To The Key Areas For Future Banking - Case Studies			
			- Best Practice Guidance			
		10.6				
	11	11.5	The Future and Challenges Of Operational Risk Management - Challenges and Solutions			
		11.6	- Case Studies			
			- Best Practice Guidance			
		11.7				
	12	12.1	Integrated Case Studies And Best Practices - Introduction			
		12.2	- Integrated Case Studies			
		12.3	- Best Practice Guidance			