NANYANG TECHNOLOGICAL UNIVERSITY

SEMESTER 1 EXAMINATION 2023-2024

BR3208 – Operational Risk Management

BR3211 – Operational Risk and Resiliency

December 2023 Time Allowed: 2½ hours

INSTRUCTIONS

1. This paper contains **SIX(6)** questions and comprises **SEVEN(7)** pages.
2. Answer all **SIX(6)** questions on the answer book.
3. Begin your answer to each question on a separate page of the answer book.
4. This is a **CLOSED-BOOK** examination.
5. The number of marks allocated is shown at the end of each question.
6. Answers will be graded for content and appropriate presentation.

Note: Exam Questions begin on Page 2.

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Question 1

This question consists of **FIVE (5)** multiple-choice questions. Choose the correct answer from the alternatives given. In your **ANSWER BOOK**, write the correct answer (i), (ii), (iii) or (iv) next to the question number and the part. Write in one column. Each multiple-choice question carries **TWO (2)** marks.

(a) Which of the following event is not a risk event under the Basel II operational risk event category – Clients, Products, and Business Practices?

(i) Market manipulation.

(ii) Discrimination at workplace.

(iii) Model errors.

(iv) Disputes over performance of advisory activities.

(b) Which of the following action is used to restrict a financial institution to get too big under Dodd-Frank Act 2009?

Requiring a financial institution to:

(i) avoid paying excessive compensation to management.

(ii) disclose clear, accurate information to consumers.

(iii) meet stringent capital requirement.

(iv) identify and address systemic risk.

(c) Which of the following statement is not one of the roles and responsibilities of the board of directors?

(i) Implementing and maintaining the risk management policies.

(ii) Establishing, reviewing, and approving the risk management framework.

(iii) Overseeing activities conducted by the senior management.

(iv) Approving and reviewing risk appetite statements.

(d) Which of the following action(s) is(are) used to mitigate strategic risk?

(i) Putting a monitoring process to identify market trend.

(ii) Having regular discussion on the strategies adopted by the company.

(iii) Carrying out scenario analysis to understand the exposure to strategic risk.

(iv) All of the above.

Note: Question No. 1 continues on page 3

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Question 1 (continued)

(e) Which of the following financial consequence is not a consequent of an operational risk?

(i) Fines by regulator due to breach of regulation.

(ii) Loss of key personnel of the company.

(iii) Financial loss due to system failure.

(iv) None of the above.

(TOTAL: 10 marks)

Question 2

InsureProtect, a fast-growing, aggressive life insurance company, was established ten years ago. Recently, the management of the company would like to conduct a full review of the company's risk governance framework which remains unchanged since the establishment of the company.

The existing status of the company's risk governance framework is as follows:

- The Enterprise Risk Management Framework Policy and Risk Appetite Framework Policy were reviewed and approved by the board of directors five years ago.
- There is no dedicated Internal Audit Function.
- The enterprise-wide risks are identified, measured, managed, monitored and managed by the business and support functions.
- The risk management function is led by the Chief Financial Officer (CFO) who focuses on business growth only.
- Management Risk Committee (MRC) and Board Risk Committee (BRC) are established to serve as the forums for the management and board of directors to share risk-related information, discuss on risk-related matters, and make decisions to improve on the risk management processes.
- Each business/support function submits a separate risk report to the MRC and BRC for information sharing, discussion, and decision-making.

The management of the company has tasked you, a senior risk manager, to improve the existing risk governance framework. Specifically, you are required to:

(a) Identify four key weaknesses of the company's existing risk governance framework, and explain clearly the impact of each weakness on the financial institution.

(6 marks)

Note: Question No. 2 continues on page 4

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Question 2 (continued)

(b) Explain clearly one action needed to address each weakness identified in Part (a).

(8 marks)

Apparently, the employees of the company do not have clear understanding on their respective roles and responsibilities within the risk management framework as this is not stated clearly in the Enterprise Risk Management Framework Policy. The management has requested you to:

(c) Explain how a "Three Lines of Defense" model can help the employees to better understand their roles and responsibilities within the risk management framework.

(6 marks)

The management also would like to know how to strengthen the company's risk culture via marketing and training activities. You are requested to:

(d) Explain three key goals of the marketing activities in promoting risk management within the company.

(3 marks)

(e) Describe two types of workshops that can be used to promote the awareness of risk management within the company.

(2 marks)

(TOTAL: 25 marks)

Question 3

InvestSecure, a matured asset management company, has been collecting the internal operational risk event data over the past few years.

A newly joined non-executive director is interested in knowing more about the internal operational risk event data collected by the company. Therefore, she has approached you, an operational risk manager, for help. In particular, she would like you to:

(a) List down the Basel II operational risk event categories.

(3 marks)

(b) Explain four practical uses of the internal operational risk event data.

(4 marks)

Note: Question No. 3 continues on page 5

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Question 3 (continued)

(c) Discuss who should be responsible for the collection of the internal operational risk event data.

(3 marks)

She also would like to know how external operational risk event data can be used to supplement the internal operational risk event data in risk management. Specifically, she would like you to:

(d) Describe three benefits of using external operational risk event data on top of the internal operational risk event data in risk management.

(3 marks)

(e) Explain one advantage and one disadvantage of using consortium database, ORX.

(2 marks)

(TOTAL: 15 marks)

Question 4

Alex, a junior risk analyst, is tasked to review the key risk indicators (KRIs) used by the company to track the operational risk exposures. Before carrying out the task, he has approached you, an operational risk manager, for advice. Specifically, he would like you to:

(a) Explain the risk of having too many KRIs, and one action that the company can take to resolve the risk.

(2 marks)

(b) Define key performance indicators (KPIs) and key control indicators (KCIs).

(2 marks)

(c) Explain how KPI or KCI can be used to track the operational risk exposures by using TWO examples.

(2 marks)

(d) Clearly describe two best practices of selecting and maintaining the KRIs.

(4 marks)

In addition, Alex is tasked to conduct the Risk and Control Self-Assessment (RCSA) exercise. He would like you to:

Note: Question No. 4 continues on page 6

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Question 4 (continued)

(e) Critically assess the use of questionnaire approach for RCSA exercise.

(6 marks)

(f) List down four types of information which can be used to support the risk identification and measurement in RCSA exercise.

(2 marks)

(g) Explain how the information identified in Part (f) can be used to support the risk identification and measurement in RCSA exercise by using two examples.

(2 marks)

(TOTAL: 20 marks)

Question 5

The CEO of a financial institution would like to understand the risk exposure to business disruption due to fire on the office building. He would like to know how to use scenario analysis to assess the risk exposure.

He has approached you, a senior operational risk manager, to understand how to conduct the scenario analysis. In particular, he has requested you to:

(a) Discuss how a scenario can be set to assess the risk exposure to business disruption in which the scenario can be accepted by both the management and the board.

(5 marks)

(b) Describe three actions that the company can take to mitigate the risk of business disruption, assuming the risk of loss of the scenario exceeds the risk tolerance of the financial institution.

(3 marks)

(c) Explain two possible biases that can occur during the scenario analysis, and explain one action which can be taken to address these biases.

(3 marks)

The CEO has heard that a capital model can be established to assess the risk exposure of the event. Specifically, he has requested you to:

(d) Describe how capital modelling can be used to estimate the risk exposure of the event, assuming an LDA approach is adopted.

(4 marks)

(TOTAL: 15 marks)

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Question 6

A newly joined risk analyst would like to understand the risk reporting and monitoring processes adopted by the company. He has approached you, a senior risk analyst, for guidance. In particular, he would like you to:

(a) Explain why it is important of having timely risk information.

(2 marks)

(b) Explain why it is important of having comprehensive, but succinct risk information.

(2 marks)

(c) List down six characteristics of good quality risk information.

(3 marks)

(d) Explain three types of tools which can be used for risk monitoring and reporting.

(3 marks)

In addition, he would like to know how a GRC tool can facilitate the risk reporting and monitoring activities within the company. In particular, he would like you to:

(e) Explain the key objective of having a GRC tool.

(2 marks)

(f) Describe three issues of using non-converged approach to risk assessment.

(3 marks)

(TOTAL: 15 marks)

– END OF PAPER –

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Please read the following instructions carefully:

1. **Please do not turn over the question paper until you are told to do so. Disciplinary action may be taken against you if you do so.**

2. You are not allowed to leave the examination hall unless accompanied by an invigilator. You may raise your hand if you need to communicate with the invigilator.

3. Please write your Matriculation Number on the front of the answer book.

4. Please indicate clearly in the answer book (at the appropriate place) if you are continuing the answer to a question elsewhere in the book.

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