

# ENTERPRISE RISK MANAGEMENT

Today's Leading Research and Best  
Practices for Tomorrow's Executives

Second Edition



*John R.S. Fraser, Rob Quail, and Betty Simkins*

*Foreword by Robert S. Kaplan, Senior Fellow  
and Marvin Bower Professor of Leadership  
Development, Harvard Business School*

# Table of Contents

[Cover](#)

[Title Page](#)

[Copyright](#)

[Foreword to the Second Edition](#)

[Foreword to the First Edition](#)

[PART I: Overview and Drivers of Enterprise Risk Management](#)

[CHAPTER 1: Enterprise Risk Management](#)

[WHAT IS ENTERPRISE RISK MANAGEMENT?](#)

[DRIVERS OF ENTERPRISE RISK MANAGEMENT](#)

[ABOUT THIS SECOND EDITION](#)

[SUMMARY OF THE BOOK CHAPTERS](#)

[FUTURE OF ERM AND UNRESOLVED ISSUES](#)

[ABOUT THE EDITORS](#)

[NOTES](#)

[CHAPTER 2: A Brief History of Risk Management](#)

[INTRODUCTION](#)

[RISK MANAGEMENT IN ANTIQUITY](#)

[AFTER THE MIDDLE AGES](#)

[THE PAST 100 YEARS](#)

[FINAL WORDS](#)

[ABOUT THE AUTHORS](#)

[NOTES](#)

[CHAPTER 3: Strategic Risk Management](#)

[INTRODUCTION](#)

THE FOUNDATION

THE FRAME

THE FINISH: STRUCTURE

THE FINISH: CULTURE

CONCLUSION

REFERENCES

ABOUT THE AUTHORS

NOTES

CHAPTER 4: The Role of the Board of Directors and Senior Management in Enterprise Risk Management

INTRODUCTION

GOVERNANCE EXPECTATIONS FOR BOARD OVERSIGHT OF RISK MANAGEMENT

DELEGATION OF RISK OVERSIGHT TO BOARD COMMITTEES

FORMALIZING RISK MANAGEMENT PROCESSES

SENIOR EXECUTIVE LEADERSHIP IN RISK MANAGEMENT

THE ROLE OF THE INTERNAL AUDIT FUNCTION IN ERM

EXTERNAL AUDIT AS AN INDEPENDENT SOURCE OF KEY RISK IDENTIFICATION

ERM IMPLEMENTATION STRATEGIES

ROLE OF THE AUDIT COMMITTEE

ROLE OF THE BOARD

TRAINING

BOARD COMPOSITION

REPORTING

COMPLIANCE

CULTURE

CONCLUSION

ABOUT THE AUTHOR

NOTES

CHAPTER 5: How to Teach Enterprise Risk Management

INTRODUCTION

PEDAGOGIC APPROACHES: INTRODUCING COURSE CONTENT

TRADITIONAL LECTURE

LEARNER-CENTERED TEACHING ( LCT ).  
FLIPPED-CLASSROOM

LEARNER-CENTERED ACTIVITIES (LCAS).

APPLYING LCA: APPLICATIONS AND ANALYSES

CONCLUSION

APPENDIX 5.A: LEARNER-CENTERED ACTIVITIES (LCAS).

REFERENCES

ABOUT THE AUTHORS

NOTES

CHAPTER 6: The Role of the Board in Risk Management Oversight

THE CHALLENGES

RISK MANAGEMENT METHODOLOGIES

ISO 31000

COSO ERM 2004

WHAT IS ENTERPRISE RISK MANAGEMENT?

ACCOUNTABILITY FOR BOARD OVERSIGHT

[OVERVIEW OF THE BOARD'S ROLE](#)  
[THE BOARD AND INTERNAL AUDIT](#)  
[CONCLUSION](#)  
[REFERENCES](#)  
[ABOUT THE AUTHOR](#)  
[NOTES](#)

[PART II: Enterprise Risk Management, Culture, and Control](#)

[CHAPTER 7: ERM Frameworks](#)

[INTRODUCTION](#)  
[FRAMEWORKS AND THEIR IMPORTANCE](#)  
[COSO ENTERPRISE RISK MANAGEMENT—  
INTEGRATING STRATEGY WITH  
PERFORMANCE \(COSO ERM\)](#)  
[ISO 31000:2018, RISK MANAGEMENT—  
GUIDELINES \(ISO 31000\)](#)  
[SIMILARITIES AND DIFFERENCES](#)  
[THE INFLUENCE OF THESE FRAMEWORKS](#)  
[ADVICE AND CLOSING REMARKS](#)  
[REFERENCES](#)  
[ABOUT THE AUTHORS](#)

[CHAPTER 8: Becoming the Lamp Bearer](#)

[THE ORIGINS OF THE CRO](#)  
[THE CRO AS COMPLIANCE CHAMPION](#)  
[THE CRO AS MODELING EXPERT](#)  
[THE CRO AS STRATEGIC CONTROLLER](#)  
[THE CRO AS STRATEGIC ADVISOR](#)  
[WHICH CRO ROLE TO PLAY?](#)  
[CONCLUSION](#)

ACKNOWLEDGMENTS

REFERENCES

ABOUT THE AUTHOR

NOTES

CHAPTER 9: Creating a Risk-Aware Culture

INTRODUCTION

WHAT IS RISK CULTURE?

HOW TO CREATE A RISK-AWARE CULTURE

LEVERAGING THE POWER OF RISK CULTURE  
IN A CHANGING ENVIRONMENT

CONCLUSION

REFERENCES

ABOUT THE AUTHORS

NOTE

CHAPTER 10: Key Risk Indicators

INTRODUCTION

WHAT IS A KRI?

HOW ARE KRIs DEVELOPED?

HOW AND WHEN SHOULD KRIS BE USED?

CONCLUSION

REFERENCE

ABOUT THE AUTHORS

CHAPTER 11: Decision Risk Management

INTRODUCTION

THE PROCESS OF DECISION MAKING

THE DANGER OF RELYING ON HUMAN  
PERCEPTIONS

TWO INTERLINKED PARTS OF A DECISION

IDENTIFYING DECISION UNCERTAINTIES

[ANALYZING UNCERTAINTIES AND  
PRIORITIZING/BALANCING EFFORTS  
REPORTING AND LEVERAGING RISK  
MANAGEMENT](#)

[FOLLOW THROUGH AND DRIVE  
INTELLIGENT RISK TAKING](#)

[REFERENCES](#)

[ABOUT THE AUTHOR](#)

[NOTES](#)

[CHAPTER 12: Increasing Adoption of Enterprise  
Risk Management in the U.S. Federal Government](#)

[INTRODUCTION](#)

[ORIGINS OF ERM IN THE U.S. FEDERAL  
GOVERNMENT](#)

[IMPLEMENTING ERM AT A FEDERAL  
AGENCY: THE IMPORTANCE OF CULTURAL  
ACCEPTANCE](#)

[DIFFERENCES BETWEEN ERM IN  
GOVERNMENT AND ERM IN A PRIVATE  
COMPANY](#)

[UNUSUAL CHARACTERISTICS OF THE  
GOVERNANCE FRAMEWORK OF THE UNITED  
STATES](#)

[NEXT STEPS FOR ERM IN THE U.S. FEDERAL  
GOVERNMENT](#)

[REFERENCES](#)

[ABOUT THE AUTHOR](#)

[NOTES](#)

[CHAPTER 13: Toolmaking in Risk Management](#)

[SUMMARY](#)

[INTRODUCTION](#)

FORMALIZING RISK APPETITE—CAN IT WORK?

FROM FATAL REMEDIES TO FORMALITY THAT WORKS—AND HOW NEW ACCOUNTING BEGINS

CONSTRUCTING RISK APPETITE: CASE STUDIES

DISCUSSION

CONCLUSION

APPENDIX 13.A: CONSULTING REPORTS: DEFINITIONS OF RISK APPETITE

REFERENCES

ABOUT THE AUTHOR

NOTES

CHAPTER 14: Incorporating Risk Acumen and Enterprise Risk Management into Innovation Approaches

INTRODUCTION

LEARNING TO LOOK AROUND THE CORNER

ENTERPRISE RISK MANAGEMENT SHOULD BE INVOLVED

TWO STAPLE TOPICS—CHANGE AND INNOVATION

USING TOOLS TO HELP IDENTIFY THE RISK AND UNCERTAINTY

EMBRACING RISK AND ENCOURAGING INNOVATION

INNOVATION PROCESSES

INNOVATION ESSENTIALS

A PORTFOLIO APPROACH TO INNOVATION

STAGES OF INNOVATION



TEST, NOT BET?

BUSINESS MODEL INNOVATION

THE IMPORTANCE OF RISK ASSESSMENTS  
IN INNOVATION

CHANGING THE THINKING AND  
CONCLUSION

REFERENCES

ABOUT THE AUTHOR

NOTES

CHAPTER 15: Scenario Planning as an Enrichment  
of Enterprise Risk Management

PURPOSE, SCOPE, AND PRACTICE OF  
SCENARIO PLANNING

METHODS FOR SCENARIO DEVELOPMENT

SCENARIO PLANNING, STRATEGIES, AND  
DECISIONS

EMBEDDING SCENARIO PLANNING  
PRACTICE

REFERENCES

WEBSITES

ABOUT THE AUTHOR

NOTES

CHAPTER 16: Unconscious Bias and Risk  
Management

INTRODUCTION

BIASES: CONSCIOUS VERSUS  
UNCONSCIOUS

BIASES EXIST AT ALL LEVELS OF AN  
ORGANIZATION

WHAT CAUSES COGNITIVE BIASES AND  
DECISION-MAKING ERRORS IN RISK  
MANAGEMENT?

EVIDENTIARY BIASES

DECISION-MAKING BIASES

PROBABILITY BIASES

REDUCING BIAS

CONCLUSION

REFERENCES

ABOUT THE AUTHOR

CHAPTER 17: Cognitive Bias

INTRODUCTION

STRATEGY 1: SLOW DOWN THINKING AND  
USE DETAILED RISK CRITERIA

STRATEGY 2: BROADEN THE CONTEXT

STRATEGY 3: USE PROBABILITY ESTIMATES  
CAUTIOUSLY

STRATEGY 4: ENGINEERED INTERACTION

CONCLUSION

REFERENCES AND FURTHER READING

ABOUT THE AUTHOR

PART III: ERM Tools and Techniques

CHAPTER 18: Risk Appetite and Tolerance in  
Competitive Strategy.

INTRODUCTION

CONSIDERING RISK APPETITE AND  
TOLERANCE

ABILITY TO TAKE RISK

STRATEGY AND GOVERNANCE

WILLINGNESS TO TAKE RISKS

[WHICH RISKS TO KEEP](#)

[KEY ELEMENTS IN THE ARTICULATION OF  
THE RISK APPETITE AND TOLERANCE](#)

[SUMMARY OF KEY ELEMENTS](#)

[ABOUT THE AUTHORS](#)

[NOTES](#)

[CHAPTER 19: How to Plan and Run a Risk  
Management Workshop](#)

[INTRODUCTION](#)

[WHAT IS A RISK WORKSHOP?](#)

[WHY USE WORKSHOPS?](#)

[HOW TO CONDUCT A RISK WORKSHOP](#)

[EXECUTION](#)

[TECHNIQUES FOR PLANNING AND  
FACILITATING EFFECTIVE RISK WORKSHOPS](#)

[CONCLUSION](#)

[APPENDIX 19.A: FACILITATING ONLINE  
WORKSHOPS](#)

[APPENDIX 19.B: “BLACK SWAN” WORKSHOPS](#)

[REFERENCE](#)

[ABOUT THE AUTHOR](#)

[CHAPTER 20: How to Prepare a Risk Profile](#)

[INTRODUCTION](#)

[DEFINITION AND USES OF A CORPORATE  
RISK PROFILE](#)

[HOW TO PREPARE A RISK PROFILE](#)

[ADVANTAGES AND DISADVANTAGES OF  
INFORMATION-GATHERING](#)

[METHODOLOGIES](#)

[CONCLUSION](#)

REFERENCES

ABOUT THE AUTHORS

NOTES

CHAPTER 21: How to Allocate Resources Based on Risk

INTRODUCTION

RISK POLICY AND A CENTER OF EXCELLENCE FOR RISK MANAGEMENT

THE CONSEQUENCE DOMAIN

RISK-BASED BUSINESS PROCESSES AND ORGANIZATIONAL CONSIDERATIONS

CONCEPTS, METHODS, AND MODELS ENABLING RISK IDENTIFICATION, EVALUATION, MITIGATION, PRIORITIZATION, AND MANAGEMENT

INFORMATION REQUIREMENTS AND CHALLENGES

MEASURES OF EFFECTIVENESS FOR CONTINUOUS IMPROVEMENT

CONCLUSION

ABOUT THE AUTHOR

NOTES

CHAPTER 22: Quantitative Risk Assessment in ERM

INTRODUCTION

RISK ASSESSMENT: FOUR ALTERNATIVE APPROACHES

AGGREGATING PROBABILITIES AND IMPACTS

TOTAL CORPORATE RISK: AN ILLUSTRATION

INCORPORATING RISK QUANTIFICATION IN  
THE BUSINESS PLANNING PROCESS

SENSITIVITIES AND SCENARIOS

CONCLUSION

REFERENCES

ABOUT THE AUTHOR

NOTES

CHAPTER 23: Risk Appetite

INTRODUCTION

CONTEXT AND PRINCIPLES

METHODOLOGY

DISCUSSION

CONCLUSION

REFERENCES

ABOUT THE AUTHOR

CHAPTER 24: Organizational Decision Making

INTRODUCTION

WHAT'S AT RISK?

EVOLVING RISK DEFINITIONS

THE BALANCING ACT

DEFINING THE RISK APPETITE

TARGET RISK APPETITE

INTERPRETING THE RISK APPETITE

OBJECTIVE DECISION-MAKING MODEL

EMBEDDING THE RISK APPETITE INTO THE  
BENEFIT SCORE

CONCLUSION

REFERENCES

ACKNOWLEDGMENTS

ABOUT THE AUTHOR

NOTES

CHAPTER 25: The Challenges of and Solutions for  
Implementing Enterprise Risk Management\*

1. THE IMPORTANCE OF ENTERPRISE RISK  
MANAGEMENT

2. THE CHALLENGES

3. THE SOLUTIONS

4. CONCLUSION

REFERENCES

ABOUT THE AUTHORS

NOTE

PART IV: Types of Risk

CHAPTER 26: Market Risk Management and  
Common Elements with Credit Risk Management

INTRODUCTION TO CREDIT RISK AND  
MARKET RISK

RESPONDING TO CREDIT AND MARKET RISK

MEASURING MARKET RISK

MARKET RISK MANAGEMENT WITH  
FORWARD-TYPE PRODUCTS

CONCLUSION

REFERENCES

ABOUT THE AUTHOR

NOTES

CHAPTER 27: Credit Risk Management

CREDIT RISK ANALYSIS

AN ANALYSIS OF THE 2007-2009 CREDIT  
CRISIS

CONCLUSION

REFERENCES

ABOUT THE AUTHOR

NOTES

CHAPTER 28: Operational Risk Management

INTRODUCTION

WHAT IS OPERATIONAL RISK AND WHY SHOULD YOU CARE ABOUT IT?

IS RISK ALL BAD?

HOW DO YOU ASSESS OPERATIONAL RISKS, PARTICULARLY IN A DYNAMIC BUSINESS ENVIRONMENT?

WHY YOU NEED TO DEFINE RISK TOLERANCE FOR ALIGNED DECISION MAKING

WHAT CAN YOU DO TO EFFECTIVELY MANAGE OPERATIONAL RISK?

HOW DO YOU ENCOURAGE A CULTURE OF RISK MANAGEMENT AT THE OPERATIONAL LEVEL?

HOW DO YOU ALIGN OPERATIONAL RISK MANAGEMENT WITH ENTERPRISE RISK MANAGEMENT?

CONCLUSION

ABOUT THE AUTHOR

NOTES

CHAPTER 29: Managing Financial Risk and Its Interaction with Enterprise Risk Management

INTRODUCTION

WHAT IS FINANCIAL RISK AND HOW IS IT MANAGED?

THEORETICAL UNDERPINNINGS OF  
FINANCIAL HEDGING AND EMPIRICAL  
FINDINGS

INTERACTION OF FINANCIAL HEDGING  
WITH OTHER TYPES OF RISK MANAGEMENT

WHAT CAN WE LEARN ABOUT ERM GIVEN  
OUR KNOWLEDGE OF FINANCIAL HEDGING?

CONCLUSION

REFERENCES

ABOUT THE AUTHOR

NOTES

CHAPTER 30: Climate Change Risk

INTRODUCTION

THE CAUSES OF CLIMATE CHANGE

THE EFFECTS OF CLIMATE CHANGE

POSSIBLE GLOBAL SOLUTIONS

IMPLICATIONS FOR ENTERPRISE RISK  
MANAGEMENT

CONCLUSION

APPENDIX

REFERENCES

ABOUT THE AUTHORS

NOTES

CHAPTER 31: Cybersecurity

INTRODUCTION

CYBERSECURITY IN THE ENTERPRISE: WHAT  
CAN GO WRONG?

HOW TO PROTECT YOURSELF: A BEST  
EFFORTS APPROACH TO SECURING YOUR  
CRITICAL CYBER ASSETS



[CONCLUSION](#)

[REFERENCES](#)

[ABOUT THE AUTHORS](#)

[NOTES](#)

[CHAPTER 32: Foreign Exchange Risk Management](#)

[INTRODUCTION](#)

[CONCLUSION](#)

[REFERENCES](#)

[ABOUT THE AUTHORS](#)

[NOTES](#)

[CHAPTER 33: Risk Management and Outsourcing](#)

[INTRODUCTION](#)

[OBJECTIVES OF OUTSOURCING](#)

[OUTSOURCING-RELATED RISKS](#)

[MITIGATION APPROACHES](#)

[CONCLUSION](#)

[REFERENCES](#)

[ABOUT THE AUTHOR](#)

[NOTES](#)

[CHAPTER 34: Leveraging ERM for Growth](#)

[INTRODUCTION](#)

[RETHINKING RISK THROUGH A GROWTH  
LENS](#)

[THE UNREALIZED POTENTIAL OF ERM](#)

[COMPONENTS OF INTEGRATING ERM INTO  
STRATEGIC DECISIONS](#)

[CONCLUSION](#)

[ACKNOWLEDGMENTS](#)

[ABOUT THE AUTHOR](#)

## NOTES

### CHAPTER 35: Commercial and D&O Insurance for Large Corporations

#### INTRODUCTION

#### THE KEY ORGANIZATIONAL RISKS (INSURED AND NOT INSURED)

#### DIRECTORS AND OFFICERS INSURANCE

#### SUMMARIZING INSURANCE DETAILS AND CLAIMS FOR BOARD OVERSIGHT PURPOSES

#### ROLES AND RESPONSIBILITIES

#### THE INSURANCE MARKETING PROCESS

#### CONCLUSION

#### APPENDIX 35.A: CHECKLIST OF KEY D&O INSURANCE POLICY EXTENSIONS

#### APPENDIX 35.B: BROKER RESPONSIBILITIES, SAMPLE BROKER SERVICE AGREEMENT

#### SUMMARY OF SERVICE

#### APPENDIX 35.C: CHECKLIST—THE PROCESS FOR MARKETING LARGE INSURANCE PROGRAMS

#### APPENDIX 35.D: DIRECTOR'S QUESTIONS

#### ABOUT THE AUTHOR

## NOTES

### CHAPTER 36: Managing Risk Associated with Project Delivery

#### INTRODUCTION

#### THE MANY FACES OF RISK—BEFORE, DURING, AND AFTER

#### MANAGING PROJECT RISK—IT'S A TEAM SPORT

SOAR WITH THE EAGLES AND PECK WITH THE CHICKENS

SCOPE, QUALITY, EFFORT, RISK, AND TIME (SQERT)

DON'T FORGET ABOUT THE HUMANS

FOLLOW THE LEADER

DO A RISK WORKSHOP EARLY AND REVISIT

APPROACHING THE FINISH LINE

RISK DOES NOT DISAPPEAR AT GO-LIVE

CONCLUSION

REFERENCES

ABOUT THE AUTHOR

PART V: Special Topics and Case Studies

CHAPTER 37: The Rise and Evolution of the Chief Risk Officer

INTRODUCTION

HYDRO ONE

GETTING STARTED WITH ERM

PROCESSES AND TOOLS

CORPORATE RISK PROFILE

QUANTIFYING THE UNQUANTIFIABLE

BENEFITS OF ERM AND OUTCOMES AT HYDRO ONE

CONCLUSION

ABOUT THE AUTHORS

NOTES

CHAPTER 38: Enterprise Risk Management in the Public Sector

INTRODUCTION

FUNCTION OF THE DEPARTMENT'S RISK  
MANAGEMENT ORGANIZATION1

ENTERPRISE RISK MANAGEMENT AT THE  
DEPARTMENT OF COMMERCE

ATTRIBUTES OF AN ERM PROGRAM: USING  
THE SMART GOAL SYSTEM

THE DEPARTMENT OF COMMERCE ERM AS A  
BEST PRACTICE

CONCLUSION

ABOUT THE AUTHOR

NOTES

CHAPTER 39: A Review of Academic Research on  
Enterprise Risk Management

INTRODUCTION

IDENTIFICATION OF FIRMS IMPLEMENTING  
ERM

FIRM CHARACTERISTICS ASSOCIATED WITH  
ERM IMPLEMENTATION

ERM AND FIRM PERFORMANCE

CASE STUDIES ON ERM

CONCLUSION

REFERENCES

ABOUT THE AUTHORS

NOTES

CHAPTER 40: Lessons from the Academy

THE HIGHER EDUCATION ENVIRONMENT

EMERGENCE OF ERM IN HIGHER  
EDUCATION

ADOPTING AND IMPLEMENTING ERM IN  
COLLEGES AND UNIVERSITIES

[THE UNIVERSITY OF WASHINGTON: A JOURNEY OF DISCOVERY](#)  
[EVOLUTION OF ERM AT UW](#)  
[ERM STRUCTURE AT UW](#)  
[PRESIDENT'S ADVISORY COMMITTEE ON ERM \(PACERM\)](#)  
[UW'S ERM MODEL](#)  
[OUTCOMES AND LESSONS LEARNED](#)  
[WHAT NEXT? CURRENT PRIORITIES AND FUTURE DIRECTION](#)  
[CONCLUSION](#)  
[REFERENCES](#)  
[ABOUT THE AUTHOR](#)  
[NOTES](#)

#### [CHAPTER 41: Enterprise Risk Management](#)

[INTRODUCTION](#)  
[LESSONS FROM THE ERM PROCESS](#)  
[LESSONS FROM INTEGRATING ERM WITH ONGOING MANAGEMENT INITIATIVES](#)  
[SOME KEY VALUE LESSONS FROM ERM](#)  
[CONCLUSION](#)  
[REFERENCES](#)  
[FURTHER READING](#)  
[ABOUT THE AUTHORS](#)  
[NOTES](#)

#### [CHAPTER 42: Financial Reporting and Disclosure Risk Management](#)

[THE IMPORTANCE OF DISCLOSURE MANAGEMENT AND ERM](#)  
[FOUNDATIONS IN THE UNITED STATES](#)

[DISCLOSURE AND SARBANES-OXLEY](#)  
[IMPORTANT SOX SECTIONS](#)  
[OTHER FINANCIAL REPORTING](#)  
[RE-EXAMINING FAIR VALUE ACCOUNTING](#)  
[\(ASC 820\): THE DEBATE RETURNS](#)  
[RISK IDENTIFICATION, MONITORING, AND](#)  
[REPORTING](#)  
[FINANCIAL REPORTING CHALLENGES](#)  
[TODAY](#)  
[CONCLUSION](#)  
[REFERENCES](#)  
[ABOUT THE AUTHOR](#)  
[NOTES](#)

[CHAPTER 43: Directors and Risk](#)

[INTRODUCTION](#)  
[ROLE OF THE BOARD OF DIRECTORS AND](#)  
[DIRECTORS IN GENERAL](#)  
[RISK MANAGEMENT](#)  
[METHODOLOGY](#)  
[RESULTS](#)  
[DISCUSSION](#)  
[CONCLUSION](#)  
[APPENDIX 43.A](#)  
[REFERENCES](#)  
[ABOUT THE AUTHORS](#)

[Index](#)

[End User License Agreement](#)

## **List of Tables**

## Chapter 1

[Exhibit 1.1 Chapters in \*Enterprise Risk Management: Today's Leading Research a...\*](#)

## Chapter 5

[Exhibit 5.1 TL, LCA, and Flipped-Classroom Course Content Introduction within...](#)

[Exhibit 5.2 LCA Index and Chapters Used from This Book](#)

[Exhibit 5.5 Fire Loss Ranges \(given fire loss has occurred\)](#)

[Exhibit 5.6 Fire Loss Reports](#)

## Chapter 6

[Exhibit 6.1 Glossary of Terms](#)

[Exhibit 6.2 A Simple Risk Profile Based on the "Top 10" Format](#)

[Exhibit 6.4 A Risk-Based Approach to Allocating Resources](#)

[Exhibit 6.5 The Incidence of Board Risk Committees](#)

[Exhibit 6.6 Questions That Directors Should Ask About Risk](#)

## Chapter 7

[Exhibit 7.4 Comparison between COSO ERM and ISO 31000](#)

## Chapter 8

[Exhibit 8.1 Summary of the Business-Partner Roles of the CRO](#)

## Chapter 10

[Exhibit 10.5 Key Differences between KPIs and KRIs](#)

## Chapter 12

[Exhibit 12.3 Differences in Resources, Flexibility, Environment, and Life Cyc...](#)

## Chapter 13

[Exhibit 13.1 The Formalization of Risk Appetite at Hydro One and TTC](#)

## Chapter 15

[Exhibit 15.2 Classification of Phenomena 1](#)

## Chapter 17

[Exhibit 17.1 Sample Impact Criteria](#)

## Chapter 18

[Exhibit 18.2 Risk Appetite—Rating Scale](#)

[Exhibit 18.3 Risk Appetite and Tolerance Sample Statement](#)

## Chapter 19

[Exhibit 19.1 How to Conduct a Risk Workshop](#)

[Exhibit 19.3 Sample Impact Scale](#)

[Exhibit 19.4 Sample “Strength of Mitigants” Scale](#)

[Exhibit 19.5 Sample Likelihood Scale.](#)

[Exhibit 19.6 Sample Record-Keeping Template](#)

[Exhibit 19.7 Velocity Criteria](#)

[Exhibit 19.8 Resilience Criteria](#)

## Chapter 20

[Exhibit 20.2 Risk Calendar](#)



[Exhibit 20.4 Risk Universe Schematic Sample \(Alternative\)](#)

[Exhibit 20.5 Prior Risks Ratings Table](#)

[Exhibit 20.6 Risk Profile Matrix](#)

[Exhibit 20.8 Risk Information Gathering Alternatives](#)

## Chapter 21

[Exhibit 21.3 Strategic Business Objectives and Key Performance Indicator Rela...](#)

[Exhibit 21.4 Key Performance Indicators and Risk Tolerance Relationships](#)

[Exhibit 21.5 Key Performance Indicator/Planning Indicator/Risk Tolerance Rela...](#)

[Exhibit 21.6 Representative Categories and Probability Levels for Assigning P...](#)

## Chapter 22

[Exhibit 22.1 Impact Range Probability Distribution](#)

[Exhibit 22.4 An Example of a Probability Scale](#)

[Exhibit 22.5 An Example of an Impact Scale](#)

[Exhibit 22.6.A Adding Expected Losses](#)

[Exhibit 22.6.B Calculating the Distribution of Combined Impacts](#)

## Chapter 23

[Exhibit 23.1 Risk Appetite Scale](#)

## Chapter 24

[Exhibit 24.1 Ratings for Two Risk Sources in a Traditional Matrix](#)

[Exhibit 24.3 Risk Appetite \(Overall\) Rating Scale](#)

[Exhibit 24.4 Assigned Risk Appetite \(Overall\) Values for Individual Decision ...](#)

[Exhibit 24.6 Risk Appetite \(Trade-Off\) Rating Scale](#)

[Exhibit 24.7 Assigned Risk Appetite \(Trade-Off\) Values for Individual Decisio...](#)

[Exhibit 24.10 ERM Risk Ranking Table](#)

[Exhibit 24.11 Non-Weighted Multi-Objective Evaluation—Initiative 1](#)

[Exhibit 24.12 Non-Weighted Multi-Objective Evaluation—Initiative 2](#)

[Exhibit 24.14 Extracting Weighting Factor from the Risk Appetite](#)

[Exhibit 24.15 Weighted Multi-Objective Evaluation —Initiative 1](#)

[Exhibit 24.16 Weighted Multi-Objective Evaluation —Initiative 2](#)

[Exhibit 24.17 Capital Prioritization List](#)

## Chapter 25

[Exhibit 25.2 Velocity criteria scale—Velocity is the interval between the ini...](#)

[Exhibit 25.3 Resilience criteria scale—The ability to detect and deploy \(plan...](#)

[Exhibit 25.4 Risk Calendar—This calendar keeps track of important future risk...](#)

## Chapter 26

[Exhibit 26.2 Comparison of Spot, Forward, and Option Hedging Strategies](#)

## Chapter 27

[Exhibit 27.1 Recovery Rates on U.S. Corporate Bonds as a Percentage of Face V...](#)

[Exhibit 27.2 One-Year Transition Matrix—1981-2018 Standard & Poor's 2018](#)

## Chapter 28

[Exhibit 28.3 Examples of the Relationship Between a Risk Factor, Risk Event, ...](#)

## Chapter 29

[Exhibit 29.1 Examples of Contracts Traded at Major U.S. Futures Exchanges](#)

## Chapter 32

[Exhibit 32.2 Translation of Debt in Euro \(U.S. company\\_perspective\)](#)

[Exhibit 32.7 Centralized versus Decentralized FXRM](#)

## Chapter 35

[Exhibit 35.1 Glossary of Commonly Used Commercial Insurance Terms](#)

[Exhibit 35.3 Management Responsibilities in Managing the Insurance Portfolio](#)

## Chapter 36

[Exhibit 36.1 Example of a Risk Slide to Include in Project Briefings](#)

## Chapter 37

[Exhibit 37.7 Benefits of ERM and Outcomes at Hydro One](#)

## Chapter 38

[Exhibit 38.1 Summary of Department Goals and Strategic Objectives](#)

[Exhibit 38.2 SMART Goals Chart](#)

[Exhibit 38.4 Risk Tolerance Level Comparisons](#)

[Exhibit 38.5 Department of Commerce ERM Roles and Responsibilities](#)

## Chapter 39

[Exhibit 39.2 The 20 Most Cited ERM Academic Journal Articles\\*](#)

## Chapter 40

[Exhibit 40.1 Distinctions between Structural and Collegial Elements of Manage...](#)

[Exhibit 40.2 Risks for Private-Sector versus Public-Sector Organizations](#)

[Exhibit 40.3 Sample of Colleges and Universities with ERM Programs](#)

[Exhibit 40.7 University of Washington ERM Implementation Time Line](#)

## Chapter 41

[Exhibit 41.1 Business Risk Model—A Common Language](#)

## Chapter 42

[Exhibit 42.1 History of Firm Failures and Disclosure Management](#)

## Chapter 43

[Exhibit 43.1 Question 1: How do we integrate risk management with the organiz...](#)

[Exhibit 43.2 Questions 2 and 16: What are our principal business risks?](#)

[Exhibit 43.3 Question 3: Are we taking the right amount of risk?](#)

[Exhibit 43.4 Question 4: How effective is the process for identifying, assess...](#)

[Exhibit 43.5 Question 5: Do people in the organization have a common understa...](#)

[Exhibit 43.6 Question 6: How do we ensure that risk management is an integral...](#)

[Exhibit 43.7 Question 7: How do we ensure that the board's expectations for r...](#)

[Exhibit 43.8 Question 8: How do we ensure that our executives and employees a...](#)

[Exhibit 43.9 Question 9: How is risk management coordinated across the organi...](#)

[Exhibit 43.10 Question 10: How do we ensure that the organization is performi...](#)

[Exhibit 43.11 Question 12: What information about the risks facing the organi...](#)

[Exhibit 43.12 Question 13: How do we know that the information that the board...](#)

[Exhibit 43.13 Question 14: How do we decide which information on risks we sho...](#)

[Exhibit 43.14 Question 15: How do we take advantage of the organizational lea...](#)

[Exhibit 43.15 Question 17: How does the Board handle its responsibility of op...](#)

[Exhibit 43.16 Question 19: How do we, as a board, establish the "tone at the ...](#)

[Exhibit 43.17 Question 20: How satisfied is the Board in doing what it should...](#)

## List of Illustrations

### Chapter 3

[Exhibit 3.1 How ERM and SRM Create Value](#)

[Exhibit 3.2 The Strategic Uncertainty Frontier](#)

### Chapter 5

[Exhibit 5.3 Holistic Vision](#)

[Exhibit 5.4 The Bowtie Model](#)

### Chapter 6

[Exhibit 6.3 A Risk Profile Using the Risk Map Format](#)

### Chapter 7

[Exhibit 7.1 COSO Enterprise Risk Management](#)

[Exhibit 7.2 COSO ERM Risk Management Principles](#)

[Exhibit 7.3 ISO 31000 Principles, Framework, and Process for Managing Risks...](#)

[Exhibit 7.5 Graph Developed from Data in RIMS Enterprise Risk Management Ben...](#)

[Exhibit 7.6 The Influence of Frameworks on ERM](#)

### Chapter 9

[Exhibit 9.1 ABC Model of Culture Development](#)

[Exhibit 9.2 Risk Matrix 1](#)

[Exhibit 9.3 Risk Matrix 2](#)

[Exhibit 9.4 The Essence of Risk Tolerance](#)