

CHAPTER 1

Enterprise Risk Management Case Studies

An Introduction and Overview

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Businesses, business schools, regulators, and the public are now scrambling to catch up with the emerging field of enterprise risk management.

—Robert Kaplan (quote from Foreword in Fraser and Simkins, 2010)

Most executives with MBA degrees were not taught ERM. In fact, there are only a few universities that teach ERM. So some business school graduates are strong in finance, marketing, and management theory, but they are limited in terms of critical thinking, business acumen, and risk analysis skills.

—Paul Walker¹

THE EVOLUTION OF ENTERPRISE RISK MANAGEMENT

Over the past two decades enterprise risk management (ERM) has evolved from concepts and visions of how risks should be addressed to a methodology that is becoming entrenched in modern management and is now increasingly expected by those in oversight roles (e.g., governing bodies and regulators). As Felix Kloman describes in his chapter “A Brief History of Risk Management,” published in Fraser and Simkins (2010), many of the concepts go back a very long time and many of the so-called newly discovered techniques can be

referenced to the earlier writings and practices described by Kloman. However, it is only from around the mid-1990s that the concept of giving a name to managing risks in a holistic way across the many operating silos of an enterprise started to take hold. In the 1990s, terms such as *integrated risk management* and *enterprise-wide risk management* were also used. Many thought leaders, for example, those who created ISO 31000,² believe that the term *risk management* is all that is needed to describe good risk management; however, many others believe that the latter term is often used to describe risk management at the lower levels of the organization and does not necessarily capture the concepts of enterprise-level approaches to risk. As a result, the term ERM is used throughout this book.

As ERM continues to evolve there is still much discussion and confusion over exactly what it is and how it should be achieved. It is important to realize that it is still evolving and may take many more years before it is fully codified and practiced in a consistent way. In fact, there is a grave danger now of believing that there is only one way of doing ERM. This is probably a mistake by regulators who have too eagerly seized some of these concepts and are trying to impose them when the methods are not fully understood, and in some cases the requirements are unlikely to produce the desired results. As Fraser and Simkins (2010) noted in their first book on ERM: “While regulatory interest can force ERM into companies, if not done well, it can become another box-ticking exercise that adds little value.”³

The leading and most commonly agreed⁴ guideline to holistic risk management is ISO 31000. However, it should be mentioned that in the United States the COSO 2004 Enterprise Risk Management–Integrated Framework has been the dominant framework used to date. Many organizations are currently adopting one or the other of these frameworks and then customizing them to their own context.

WHY THE NEED FOR A BOOK WITH ERM CASE STUDIES?

Following the success of the earlier *Enterprise Risk Management: Today’s Leading Research and Best Practices for Tomorrow’s Executives* by Fraser and Simkins (2010), we found through our own teaching experiences, and by talking to others, that there was an urgent need for a university-level textbook of ERM case studies to help educate executives, risk practitioners, academics, and students alike about the evolving methodology. As a result, Fraser and Simkins, together with Kristina Narvaez, approached many of the leading ERM specialists to write case studies for this book.

Surveys have also shown that there is a dire need for more case studies on ERM (see Fraser, Schoening-Thiessen, and Simkins 2008). Additionally, surveys of risk executives report that business risk is increasing due to new technologies, faster rate of change, increases in regulatory risk, and more (PWC 2014). As Paul Walker of St. John’s University points out in the opening quote of the 2014 American Productivity & Quality Center (APQC) report on ERM, “Most executives with MBA degrees were not taught ERM. In fact, there are only a few universities that teach ERM. So some business school graduates are strong in finance, marketing, and

management theory, but they are limited in terms of critical thinking, business acumen, and risk analysis skills.” Learning Centered Teaching (LCT), as discussed in Chapter 2, is an ideal way to achieve this. Using LCT and the case study approach, students actively participate in the learning process through constructive reflective reasoning, critical thinking and analysis, and discussion of key issues. This is the first book to provide such a broad coverage of case studies on ERM.

The case studies that follow are from some of the leading academics and practitioners of enterprise risk management. While many of the cases are about real-life situations, there are also those that, while based on real-life experiences, have had names changed to maintain confidentiality or are composites of several situations. We are deeply indebted to the authors and to the organizations that agreed so kindly to share their stories to help benefit future generations of ERM practitioners. In addition, we have added several chapters where we feel the fundamentals of these specialized techniques (e.g., VaR) deserve to be understood by ERM students and practitioners. Each case study provides opportunities for executives, risk practitioners, and students to explore what went well, what could have been done differently, and what lessons are to be learned.

Teachers of ERM will find a wealth of material to use in demonstrating ERM principles to students. These can be used for term papers or class discussions, and the approaches can be contrasted to emphasize different contexts that may require customized approaches. This book introduces the reader to a wide range of concepts and techniques for managing risks in a holistic way, by correctly identifying risks and prioritizing the appropriate responses. It offers a broad overview of the various types of ERM techniques, the role of the board of directors, risk tolerances, profiles, workshops, and allocation of resources, while focusing on the principles that determine business success.

Practitioners interested in implementing ERM, enhancing their knowledge on the subject, or wishing to mature their ERM program, will find this book an absolute must resource to have. Case studies are one of the best ways to learn more on this topic.

This book is a companion to *Enterprise Risk Management: Today's Leading Research and Best Practices for Tomorrow's Executives* (Fraser and Simkins 2010). Together, these two books can create a curriculum of study for business students and risk practitioners who desire to have a better understanding of the world of enterprise risk management and where it is heading in the future. Boards and senior leadership teams in progressive organizations are now engaging in building ERM into their scenario-planning and decision-making processes. These forward-looking organizations are also integrating ERM into the business-planning process with resource allocation and investment decisions. At the business unit level, ERM is being used to measure the performance of risk-taking activities of employees.

As these case studies demonstrate, ERM is a continuous improvement process and takes time to evolve. As can be gleaned from these case studies, most firms that have taken the ERM journey started with a basic ERM language, risk identification, and risk-assessment process and then moved down the road to broaden their programs to include risk treatments, monitoring, and reporting processes. The ultimate goal of ERM is to have it embedded into the risk culture of the organization and drive the decision-making process to make more sound business decisions.

SUMMARY OF THE BOOK CHAPTERS

As mentioned earlier, the purpose of this book is to provide case studies on ERM in order to educate executives, risk practitioners, academics, and students alike about this evolving methodology. To achieve this goal, the book is organized into the following sections:

- Part I: Overview and Insights for Teaching ERM
- Part II: ERM Implementation at Leading Organizations
- Part III: Linking ERM to Strategy and Strategic Risk Management
- Part IV: Specialized Aspects of Risk Management
- Part V: Mini-Cases on ERM and Risk
- Part VI: Other Case Studies

Brief descriptions of the contributors and the chapters are provided next.

PART I: OVERVIEW AND INSIGHTS FOR TEACHING ERM

The first two chapters provide an overview of ERM and guidance on ERM education. As we have pointed out, education on ERM is crucial and more universities need to offer courses in this area. Our conversations with many ERM educators and consultants highlight how extremely challenging it is to achieve excellence in ERM education.

Chapter 2, “An Innovative Method to Teaching Enterprise Risk Management: A Learner-Centered Teaching Approach,” offers insights and suggestions on teaching ERM. This chapter covers the concept of flipping the classroom with learner-centered teaching (LCT), distinguishes it from traditional lectures, and describes how it can be used in teaching ERM. The LCT approach emphasizes active student participation and collaboration on in-class activities such as case studies versus the traditional lecture approach. This chapter provides several examples as to how LCT can be applied in teaching ERM, utilizing Fraser and Simkins’ (2010) book. David R. Lange and Betty J. Simkins, both experienced ERM educators, team together to write this chapter. David Lange, DBA, is an Auburn University Montgomery (AUM) Distinguished Research and Teaching Professor of Finance. He has received many prestigious awards for both research and teaching from the University and from several academic associations. He has taught many courses in the area of risk management and has consulted in a significant number of individual and class insurance-related cases in both state and federal court. Betty Simkins, PhD, the Williams Companies Chair of Business and Professor of Finance at Oklahoma State University, is coeditor of this book.

PART II: ERM IMPLEMENTATION AT LEADING ORGANIZATIONS

Part II is a collection of ERM case studies that give examples of how ERM was developed and applied in major organizations around the world. Note that there is no perfect ERM case study and the objective is for readers to assess what they believe was successful or not so successful about these ERM programs.

The first case study in this book describes ERM at Mars, Inc. Larry Warner, who is the former corporate risk manager at Mars, Inc. and now is president of Warner Risk Group, describes the ERM program at the company in Chapter 3. Mars is a global food company and one of the largest privately held corporations in the United States. It has more than 72,000 associates and annual net sales in excess of \$33 billion across six business segments—Petcare, Chocolate, Wrigley, Food, Drinks, and Symbioscience. Its brands include Pedigree, Royal Canin, M&M's, Snickers, Extra, Skittles, Uncle Ben's, and Flavia. With such complex business operations, Mars recognized the importance of providing its managers with a tool to knowledgeably and comfortably take risk in order to achieve its long-term goals. Mars business units use its award-winning process to test their annual operating plan and thereby increase the probability of achieving these objectives.

The case study in Chapter 4 entitled "Value and Risk: ERM in Statoil" was written by Alf Alviniussen, who is the former Group Treasurer and Senior Vice President of Norsk Hydro ASA, Oslo, Norway, and Håkan Jankensgård who holds a PhD in risk management from Lund University, Sweden. Håkan is also a former risk manager of Norsk Hydro. In this case study, the authors discuss ERM at Statoil, one of the top oil and gas companies in the world, located in Norway. In Statoil, understanding and managing risk is today considered a core value of the company, which is written into the corporate directives and widely communicated to employees. ERM is thoroughly embedded in the organization's work processes, and its risk committee has managed the transition from a "silo"-mentality to promoting Statoil's best interests in areas where risk needs to be considered.

Chapter 5, called "ERM in Practice at University of California Health Systems," is written by their former Chief Risk Officer (CRO), Grace Crickette, who is now the Senior Vice President and Chief Risk and Compliance Officer of AAA Northern California, Nevada, and Utah. The University of California's (UC) Health System is comprised of numerous clinical operations, including five medical centers that support the clinical teaching programs for the university's medical and health science school and handle more than three million patient visits each year. ERM plays an important role at the UC Health System and assists the organization in assessing and responding to all risks (operational, clinical, business, accreditation, and regulatory) that affect the achievement of the strategic and financial objectives of the UC Health System.

The descriptive case study in Chapter 6, written by Dr. Mark Frigo from DePaul University and Hans Læssøe, the Strategic Risk Manager of the LEGO Group, provides a great example of integrating risk management in strategy development and strategy execution at the LEGO Group, which is based on an initiative started in late 2006 and led by co-author Hans Læssøe. The LEGO methodology is also part of the continuing work of the Strategic Risk Management Lab at DePaul University, which is identifying and developing leading practices in integrating risk management with strategy development and execution.

United Grain Growers (UGG), a conservative 100-year-old Winnipeg, Canada-based grain handler and distributor of farm supplies, was an ERM pioneer. Chapter 7 called "Turning the Organizational Pyramid Upside Down: Ten Years of Evolution in Enterprise Risk Management at United Grain Growers" analyzes the ERM program at United Grain Growers 15 years later. When UGG announced that it had implemented a new integrated risk-financing program in 1999, it received a great deal of attention in the financial press. CFO magazine hailed the UGG

program as “the deal of the decade.” *The Economist* characterized it as a “revolutionary advance in corporate finance,” and Harvard University created a UGG case study. While most outside attention focused on the direct financial benefits of implementing the program (protection of cash flow, the reduced risk-capital required, and a 20 percent increase in stock price), scant attention was given to the less tangible and therefore less measurable issues of governance, leadership, and corporate culture—the conditions that enabled such innovation. It was a combination of a collaborative leadership open to new ideas, a culture of controlled risk taking, and active risk oversight by the board that produced a strategic approach to UGG’s risk management process. This chapter is written by John Bugalla, who is the principal of ermINSIGHTS.

John Hargreaves has written Chapter 8 titled “Housing Association Case Study of ERM in a Changing Marketplace.” He has a mathematics degree from Cambridge University and six years strategy consultancy experience at KPMG. This case study features four real-life charitable housing associations in England and Wales, each with a different strategy and risk environment. Simple yet practical tools to assist in risk identification and prioritization are also presented. This case study has two main aims. The first is to help develop an understanding of the importance of ERM in a charitable context, showing that modern charities are often very active organizations that face significant risks. Second, the case aims to illustrate the need for a close relationship between risk assessment and strategy development, particularly in sectors where objectives are defined in social as well as economic terms. Each of the four cases has a different perspective and challenges the student or practitioner to identify and assess the risk and develop possible risk treatments for each.

Chapter 9, “Lessons from the Academy: ERM Implementation in the University Setting,” was written by Anne E. Lundquist. She is pursuing a PhD in the Educational Leadership program at Western Michigan University with a concentration in Higher Education Administration. This chapter explores the unique aspects of the University of Washington’s (UW) risk environment, including how leadership, goal-setting, planning, and decision-making differ from the for-profit sector. The lack of risk management regulatory requirements, combined with cultural and environmental differences, helps explain why there are a limited number of fully evolved ERM programs at colleges and universities. The second half of the chapter explores the decision to adopt and implement ERM at UW, including a description of early decisions, a timeline of how the program evolved, a discussion of the ERM framework, and examples of some of the tools used in the risk management process. It traces the evolution of the UW program as well as demonstrates decisions that administrators made to tailor ERM to fit the decentralized culture of a university.

The case study in Chapter 10, “Developing Accountability in Risk Management: The British Columbia Lottery Corporation Case Study,” demonstrates how ERM was successfully implemented in a Canadian public sector organization over a 10-year period. Jacquetta Goy, author of this chapter, was the Senior Manager, Risk Advisory Services at British Columbia Lottery Corporation and was responsible for establishing and developing the ERM program. Currently, Jacquetta is the Director of Risk Management at Thompson Rivers University, Canada. This case study focuses on initiation, early development, and sustainment of the ERM

program, highlighting some of the barriers and enablers that affected implementation. This case study includes a focus on developing risk profiles; the role of risk managers, champions, and committees; and the development of effective risk evaluation tools. The approach to ERM has evolved from informal conversations supported by an external assessment, through a period of high-level corporate focus supported by a dedicated group of champions using voting technology to an embedded approach, where risk assessment is incorporated into both operational practice and planning.

Chapter 11, “Starting from Scratch: The Evolution of ERM at the Workers Compensation Fund,” describes the evolution of a formal ERM program at a midsize property casualty insurance carrier. This chapter is authored by Dan Hair, the CRO of the Workers Compensation Fund. In this chapter, the motivations of executive management and the board of directors in taking existing strategic risk management discussions to a higher level are reviewed. The step-by-step actions taken by the company to develop the ERM program are explained in chronological order. External resources used are also commented upon. The chapter concludes with a discussion of striking an ongoing balance between program rigor, documentation, and business needs.

Chapter 12, “Measuring Performance at Intuit: A Value-Added Component in ERM Programs,” shows how Intuit, maker of Quicken, QuickBooks, and TurboTax, is committed to creating new and easier ways for consumers and businesses to tackle life’s financial chores, giving them more time to live their lives and run their businesses. This case study shows how Intuit, a global company, is exposed to a wide range of customer-related and operational risks. Understanding the risk landscape enables Intuit to formulate and execute strategies to address potential pitfalls and opportunities. The author, Janet Nasburg, is Chief Risk Officer at Intuit. Janet is responsible for driving Intuit’s ERM capability, ensuring that the company appropriately balances opportunities and risks to achieve optimal business results. Before Intuit, Janet spent 16 years in various finance roles at Visa, and has more than 30 years of risk management and finance experience.

Chapter 13 describes TD Bank’s ERM program and how it has been developed to reinforce the risk culture and ensure that all stakeholders have a common understanding of how risks are addressed within the organization. This is achieved by identifying the risks to TD Bank’s business strategy and operations, determining the types of risk it is prepared to take, establishing policies and practices to govern risks, and following an ERM framework to manage those risks. This chapter is co-authored by Paul Cunha and Kristina Narvaez. Paul Cunha is Vice President, Enterprise Risk Management at TD Bank. During his career at TD Bank, he has spent time in risk management, internal audit, retail banking, commercial banking, and corporate and investment banking. Kristina Narvaez is the president and owner of ERM Strategies, LLC, and is co-editor of this book.

PART III: LINKING ERM TO STRATEGY AND STRATEGIC RISK MANAGEMENT

Part III of this book demonstrates the link between ERM and strategy in what is now being called strategic risk management (SRM). SRM represents an important evolution in enterprise risk management, shifting from a reactive approach to a

proactive approach in dealing with the large spectrum of risks across the organization. These case studies view their risk-taking activities in a strategic way, not only to protect the organization's value and assets, but also to be able to capture new value that is in alignment with the strategic goals of the organization.

Zurich Insurance Group, the case study in Chapter 14, demonstrates the link between ERM and strategy. Zurich is a global insurance carrier and is exposed to a wide range of risks. Zurich recognizes that taking the right risks is a necessary part of growing and protecting shareholder value. It is careful not to miss valuable market opportunities that could attract the best talent and investor capital, but must also balance the growth opportunities with the reality that it is operating in a complex world economy. This chapter is co-authored by Linda Conrad, Director of Strategic Business Risk Management at Zurich and Kristina Narvaez, president and owner of ERM Strategies, LLC and co-editor of this book. Linda leads a global team responsible for delivering tactical solutions to Zurich and to its customers on strategic issues such as business resilience, supply chain risk, ERM, risk culture, and total risk profiling.

Chapter 15, "Embedding ERM into Strategic Planning at the City of Edmonton," is written by Ken Baker, who is their ERM Program Manager. This study examines the process used by the City of Edmonton in Alberta, Canada, to establish its strategic ERM model. After examining several existing frameworks, the City decided on a framework based on the ISO 31000 risk management standard, but customized to suit the City's needs. During the process, administration had to weigh factors common to any large organization, as well as those specific to governments in general and municipalities in particular. The chronicling of this process may assist those in similar organizations to more successfully implement their own ERM and SRM programs.

Chapter 16 describes a brief history of the evolution of enterprise risk management and describes a new and innovative approach (value mapping) to measuring the potential value by taking risks. This chapter also provides a model for incorporating the ERM process into strategic planning. John Bugalla, Principal of ermINSIGHTS and author of Chapter 7, and James Kallman, a finance professor at St. Edward's University, co-author this chapter. John's experience includes 30 years in the risk management profession serving as Managing Director of Marsh & McLennan, Inc., Willis Group, Plc., and Aon Corp., before founding ermINSIGHTS. James teaches courses in finance, statistics, and risk management.

PART IV: SPECIALIZED ASPECTS OF RISK MANAGEMENT

Part IV of the book captures unique aspects of ERM so that the reader can learn about the many broad applications, including insights into managing specific types of risk. This part starts with a case study in Chapter 17 of the challenges of risk management within a typical police department. This case is followed by eight additional chapters addressing other intriguing aspects of risk management.

Andrew Graham reveals the complex and challenging aspects of risk management in Chapter 17, "Developing a Strategic Risk Plan for the Hope City Police Service." This fictional case study was developed based on many years of teaching risk management to police forces. The setting is a medium-sized but growing city that

is facing many issues, including changes in demographics, traffic issues, budgetary challenges, and so on. The student is required to act as a consultant who has been hired by the chief of police to assist him in briefing the Police Services Board and the mayor in understanding the most critical risks to their objective of having a best-in-class police service for their citizens. Andrew Graham researches, teaches, and writes on public-sector management, financial management, integrated risk management, and governance at Queen's University School of Policy Studies, Canada, as well as a variety of international and Canadian venues. Andrew had an extensive career in Canada's criminal justice system and has taught and worked with police services and police boards and commissioners in a variety of ways for the past 10 years.

Chapter 18, "Blue Wood Chocolates," is designed to facilitate discussion of the implementation of an ERM framework, corporate governance issues, and commodity risk management. The situation that this fictional company faces is typical of many midsize companies that have performed satisfactorily in the past but are exposed, often unknowingly, to major potential risks and do not have the internal governance and risk management structures to identify, quantify, and manage such risks adequately. In particular, this case illustrates commodity and foreign currency exposures, and challenges the student to investigate the specifics of hedging such positions. Rick Nason, PhD, CFA, and Stephen McPhie, CA, coauthored this chapter. Rick is an associate professor of finance at Dalhousie University, Canada, and is also a founding partner of RSD Solutions, a risk management consultancy firm. His coauthor, Stephen McPhie, CA, is a partner of RSD Solutions Inc. and has also held various positions in the United States, Canada, and the United Kingdom with a major Canadian bank.

Foreign exchange (FX) risk management is one of the greatest financial risks a company faces when expanding globally. Chapter 19, "Kilgore Custom Milling," illuminates the myriad of issues that arise when hedging FX risk, such as faced by a midsize original equipment manufacturer (OEM) operating in the automobile industry. Kilgore Custom Milling (a fictional company) needs to develop a hedging strategy to manage its foreign exchange risk for a new contract and decide what type of derivatives to use, what size of hedge to implement, and how the company's financial risk management fits in with its overall ERM process. Rick Nason and Stephen McPhie, coauthors of Chapter 18, team together again to explore the complex and challenging issues that many companies face with FX risk.

ERM is currently of very high interest to companies operating in the Middle East, an area that presents unique challenges for implementation. Alexander Larsen captures this scenario in Chapter 20, "Implementing Risk Management within Middle Eastern Oil and Gas Companies." This case study is based on real-life examples of Middle Eastern oil and gas companies and captures the challenges of implementing risk management in the Middle East. Alexander Larsen holds a degree in risk management from Glasgow Caledonian University and is a Fellow of the Institute of Risk Management. He has over 10 years of experience across a wide range of sectors, including oil and gas, construction, utilities, finance, and the public sector. Alexander has considerable expertise in training and working with organizations to develop, enhance, and embed their ERM.

Public safety organizations are increasingly adopting sophisticated enterprise governance and risk management techniques as a means of managing their

programs and expenditures. Root cause analysis can provide these agencies with detailed insights into the problems and issues they face, and provide them with the information they need to make informed decisions on risk management. Chapter 21, "The Role of Root Cause Analysis in Public Safety ERM Programs," explores these issues by presenting six common root cause analysis techniques that are applied in a public safety or law enforcement environment. The chapter author, Andrew Bent, is a practicing risk manager with a large Canadian integrated energy company and was previously in charge of ERM for one of Canada's largest municipal police services.

Chapter 22, "JAA Inc.—A Case Study in Creating Value from Uncertainty: Best Practices in Managing Risk," provides extensive details about ERM implementation in a fictional international organization and discusses topics including governance structure, the processes, and the various tools used. The case is built on the principles and guidance of ISO 31000 and the implementation guidance created by The Australian and New Zealand Hand Book HB 436. This case emphasizes the roles of the heads of the internal audit function and the risk management function. The three coauthors of this chapter have extensive experience in risk management. Julian du Plessis, Head of Internal Audit at AVBOB Mutual Assurance Society, South Africa, has over eight years of financial sector experience. Arnold Schanfield is a Principal with Schanfield Risk Management Advisors LLC, and is an internal audit and risk professional with diversified industry expertise. Alpaslan Menevse is currently the Risk Officer at Sekerbank T.A.S., which has in excess of 310 branches in Turkey. He has 28 years of experience in information systems, both as an academic and as a practitioner.

A book on ERM case studies is not complete without some coverage of risk management failures. One of the most famous failures involving operational risk is discussed in Chapter 23, "Control Complacency: Rogue Trading at Société Générale." In January 2008, Société Générale uncovered €49 billion of unauthorized equity positions at its Paris head office, which cost €4.9 billion to unwind. Using an interactive format, this case study analyzes the origins, actors, causes, and consequences of this notorious control breakdown and derives risk management lessons from it in the areas of corporate governance, controls, compliance, systems, technology, and reputation risk. The author, Steve Lindo, Principal, SRL Advisory Services, has many years of experience in ERM and provides a thorough and fascinating coverage of this disaster.

Value at risk (VaR) is one of the most widely used techniques to measure financial risks, particularly in the area of investment portfolios. However, it is a technique that has not been fully understood by many risk managers. In Chapter 24, "The Role of VaR in Enterprise Risk Management: Calculating Value at Risk for Portfolios Held by the Vane Mallory Investment Bank," VaR is described along with its underlying assumptions, advantages, and disadvantages. Several examples for single assets are detailed for both the dollar and percentage VaR estimation methods. The main focus of this case study is a tutorial on calculating VaR for portfolios of assets using the covariance approach utilized in portfolio theory. Allissa A. Lee coauthored this case study with Betty J. Simkins. Allissa is an assistant professor of finance in the College of Business Administration at Georgia Southern University. She has published several academic articles and also worked in the mortgage industry for MidFirst Bank. Betty, coeditor of this book, is the

Williams Companies Chair of Business and Professor of Finance at Oklahoma State University.

Chapter 25, “Uses of Efficient Frontier Analysis in Strategic Risk Management,” covers an advanced analytical technique, efficient frontier analysis (EFA), where complex property and casualty risk profiles are being considered. This chapter provides insights into risk portfolio volatility, pricing, and insurance layering efficiency using EFA and is applied to a risk portfolio that presents catastrophic loss potential within the context of strategic risk management. This chapter’s coauthors are Ward Ching, who is Vice President, Risk Management Operations, at Safeway Inc., and Loren Nickel, who is Regional Director and Actuary, Actuarial and Analytics Practice, at Aon Global Risk Consulting. Both authors have extensive experience in property and casualty risk management and share their expertise in this specialized topic of ERM.

PART V: MINI-CASES ON ERM AND RISK

Mini-cases are a very powerful and highly useful resource in teaching ERM and can be easily utilized in short time periods such as a one-hour class segment. This part fills this gap in the education literature on ERM and includes six fictional mini-cases that have been developed by leading risk practitioners who draw from the wealth of their experiences in various applications of risk management.

Chapter 26, “Bim Consultants Inc.,” is based on a real event in which a company was faced with an important strategic acquisition decision. All names and data have been changed for confidentially reasons. The purpose of the case is to illustrate the complexity of making strategic decisions and how greed and ego can cause a firm to change strategy that may put the business at risk. The author, John Fraser, Senior Vice President, Internal Audit, and former Chief Risk Officer of Hydro One Networks Inc., is also coeditor of this book. Fraser is currently an adjunct professor at York University, Canada, and a member of the faculty of the Directors College. He is a recognized authority on ERM and has written extensively on the topic.

Chapter 27, “Nerds Galore,” is based on a fictitious small services company that appears to be on the verge of a major downturn. The focus of the case study is human resources-related risks, and the exercise is to conduct a risk assessment to aid in making the decision on whether to proceed with a major human resources strategy. This case study could be used as the basis for an actual risk workshop simulation with students role-playing various positions on the management team. Rob Quail, the author of this case study, draws on his extensive experience as Director of ERM at Hydro One Networks Inc., and provides an excellent mini-case to illuminate ERM applications.

Can a company have a successful ERM program that does not involve a key function, such as the legal department? And if not willing to participate, how do you convince this department to commit to ERM? The reader is challenged with tackling this crucial issue in Chapter 28, “The Reluctant General Counsel.” This mini-case is about the implementation of ERM at a software company and illustrates the challenges faced when the general counsel of the company has reservations and is not willing to support the implementation. The author, Norman Marks, CPA, CRMA, has been chief audit executive of major global corporations

for over 20 years, and is highly regarded in the global profession of internal auditing. Furthermore, he is a prolific blogger about internal audit, risk management, governance, and compliance.

Chapter 29, “Transforming Risk Management at Akawini Copper,” describes how the approach to managing risk can be transformed and enhanced in a company. The case study is based on a hypothetical mining company, Akawini Copper, that has recently been acquired by an international concern. It draws on the practical concepts of ISO 31000 to show how a weak approach to risk management can be enhanced to be more robust and comprehensive by following a logical framework and transformation plan. The author, Grant Purdy, has worked in risk management for more than 35 years, across a wide range of industries and in more than 25 countries. Grant is coauthor of the 2004 version of AS/NZS 4360 and also of AS/NZS 5050, a standard for managing disruption-related risk, and has also written many risk management handbooks and guides.

Richard Leblanc, PhD, who is a governance lawyer, certified management consultant, and Associate Professor of Law, Governance, and Ethics at York University, draws on his extensive experience in board of director effectiveness when writing Chapter 30, “Alleged Corruption at Chessfield: Corporate Governance and the Risk Oversight Role of the Board of Directors.” Richard has advised regulators on corporate governance guidelines, and, as part of his external professional activities, has served as an external board evaluator and governance adviser for many companies, as well as in an expert witness capacity in litigation concerning corporate governance reforms. This case deals with the inner workings of a large organization’s board of directors, including allegations of alleged corruption and self-dealing, and provides the reader with a captivating application of risk management shortcomings in governance and internal controls.

Diana Del Bel Belluz, president and founder of Risk Wise, Inc., draws on her experience in operational risk when writing Chapter 31, “Operational Risk Management Case Study: Bon Boulangerie.” This mini-case provides the opportunity for students to discuss and present their knowledge of operational risk. It describes the challenges and opportunities faced by a fictional bakery business in a small city. The bakery’s owner has decided to expand the business for greater rewards, but in doing so is faced with a number of operational challenges. Additional information on the steps of operational risk management is available in Chapter 16 in Fraser and Simkins (2010). Diana has many years of consulting experience in ERM, and advances the practice of ERM through her thought leadership as an educator, conference organizer, speaker, and author of ERM resources.

PART VI: OTHER CASE STUDIES

Many risk management lessons can be learned from the financial crisis of 2008, and we begin this part with a chapter addressing this topic: Chapter 32, “Constructive Dialogue and ERM: Lessons from the Financial Crisis.” In this chapter, Tom Stanton eloquently examines the critical distinctive factors between successful and unsuccessful firms in the crisis and refers to the presence or absence of these factors as constructive dialogue. Successful firms managed to create productive and constructive tension between those in the firm who wanted to do deals or offer certain financial products and services and those who were responsible for

limiting risk exposures. Instead of simply deciding to do a deal or not, successful firms considered ways to hedge risks or otherwise reduce exposure from doing the deal. Thomas H. Stanton is a Fellow of the Center for Advanced Governmental Studies at Johns Hopkins University, a director of the Association of Federal Enterprise Risk Management, a former director of the National Academy of Public Administration, and a former member of the federal Senior Executive Service.

An important objective in this book is to provide global coverage about ERM by including insightful applications in various countries. Poland, after the transition into the free market economy in 1989, became open to knowledge and transfer of the best practices from around the world. Chapter 33, "Challenges and Obstacles of ERM Implementation in Poland," draws on years of research, both formal and informal, and documents the country's first approaches to ERM implementation. The successes, challenges, and weaknesses are described and provide a valuable lesson for other countries, regions, or even organizations in how they might go about implementing ERM. Two experts on ERM implementation in Poland teamed together to write this chapter. Zbigniew Krysiak, PhD, is an associate professor of finance at the Warsaw School of Economics in Poland. He is the author or coauthor of more than 100 publications, intended both for practitioners and for the academic community, concerning finance, risk management, financial engineering, and banking. His coauthor, Sławomir Pijanowski, PhD, is president of the POL-RISK Risk Management Association in Poland, where he is responsible for development of good risk management practices for the Polish market. He is coauthor of the Polish book titled *Risk Management for Sustainable Business* published by the Polish Ministry of the Economy and has many other accomplishments in the area of risk management.

Chapter 34 entitled "Turning Crisis into Opportunity: Building an ERM Program at General Motors" was written by leaders of ERM at GM—Marc Robinson, Lisa Smith, and Brian Thelen. This case study chronicles the ground-up implementation of ERM at General Motors Company (GM), starting in 2010 after it emerged from bankruptcy. While GM recognizes that its ERM is a work in progress, there have been important successes both in improving the management of risk and making better business decisions. Critical to these successes has been a clear strategic vision on adding value for the business leaders that are the true risk owners, unique decision tools such as game theory, and a continuous improvement mindset, including robust lessons learned. The study describes the lessons learned during implementation and some of the unique approaches, tools, and techniques that GM has employed. Examples of senior management reporting are also included.

The last case study in the book is also extremely insightful because it provides an excellent example of an ERM application at a company in Asia. The authors demonstrate in Chapter 35 how Astro, a Malaysia-based media company, uses ERM to grow through international acquisitions, and how it implements enterprise risk management not only to ensure sound risk management by its foreign subsidiaries and joint ventures, but also to make better risk/return decisions on its portfolio of direct investments. Both authors are authorities on ERM implementation globally. Ghislain Giroux Dufort is President of Baldwin Risk Strategies Inc., a consulting firm advising boards of directors and management teams on risk governance and ERM and has over 25 years of experience. Patrick Adam Kanagaratnam Abdullah is the Vice President of ERM for Astro Overseas Limited

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CONCLUSION

As outlined above, the case studies and specialized topic chapters in this book present an impressive coverage of new information on enterprise risk management, and all chapters are written by leading ERM experts globally. To our knowledge, this is the first book to be published that provides such comprehensive coverage of ERM case studies. We hope you find this book a valuable resource in your education and/or implementation of ERM. We welcome your comments and suggestions. Answers to the end-of-chapter questions and detailed teaching notes to most cases are available to instructors at www.wiley.com.

NOTES

1. See the 2014 American Productivity & Quality Center Report.
2. ISO 31000 was issued by the International Standards Organization in 2009. For a description refer to Chapter 7 of Fraser/Simkins by John Shortreed.
3. Fraser/Simkins, 15.
4. ISO 31000 has been agreed to by about 25 major countries of the international community as the guideline for risk management.

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