

The FERMA-rimap® Series

# RISK MEASUREMENT AND MONITORING



# **Risk Measurement and Monitoring**

## THE FERMA-RIMAP<sup>®</sup> SERIES

*The FERMA-rimap<sup>®</sup> Series* serves as a proactive, continuous and dynamic learning and research platform to respond to risk managers' present and future educational and professional needs. The volumes set a flexible and dynamic measurable standard taxonomy for European Risk Managers and essential reading for students gaining their qualification. The scope of *The FERMA-rimap<sup>®</sup> Series* is to reach out to experienced or junior risk professionals, whatever their background is, and wherever their career is heading. All risk professionals have a duty to stay in contact with the evolution of the risk landscape.

# Risk Measurement and Monitoring

EDITED BY

**SIMON GRIMA**

*University of Malta, Malta*

**MARÍA ISABEL MARTÍNEZ TORRE-ENCISO**

*Universidad Autónoma de Madrid, Spain*

AND

**MAURIZIO CASTELLI**

*Augustas Risk Services SpA, Italy*



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INVESTOR IN PEOPLE

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# Preface

Risk measurement and monitoring are fundamental to modern risk management practices, enabling organisations to assess, quantify, and respond to uncertainties effectively. In today's complex and rapidly evolving risk landscape, financial institutions, corporations, and policymakers require sophisticated measurement techniques to make informed decisions and ensure resilience against unforeseen disruptions.

This volume, *Risk Measurement and Monitoring*, is a vital resource designed to equip risk professionals with the necessary knowledge, tools, and methodologies to measure, monitor, and mitigate risk effectively. It serves as a bridge between academic research and practical application, ensuring that risk managers can make informed decisions based on data-driven analysis and strategic foresight.

The book delves into both quantitative and qualitative risk assessment techniques, offering a multidimensional perspective on risk measurement. Covering essential topics such as uncertainty modelling, portfolio risk management, operational risk, corporate governance, supply chain risk, and cybersecurity, this volume provides a holistic view of the risk landscape. It also addresses contemporary challenges such as emerging risks, geopolitical threats, environmental risks, and the impact of artificial intelligence on risk management.

By integrating theoretical models with practical examples, the book offers valuable insights into modern risk management frameworks, emphasising regulatory compliance, decision-making under uncertainty, and enterprise risk management (ERM). Furthermore, the book highlights best practices in risk communication, reporting, and stakeholder engagement, reinforcing the importance of transparency and accountability in risk management.

As a part of the *FERMA-rimap® Series*, this book aligns with the European certification standards for risk professionals, ensuring that both experienced practitioners and newcomers in the field can benefit from its structured and forward-looking approach. Whether used as an educational tool or a professional reference, this book is an indispensable guide for navigating the complexities of risk measurement and monitoring in today's dynamic environment.

The book *Risk Measurement and Monitoring* specialises in enterprise risk management (ERM) and risk measurement methodologies, with a strong emphasis on quantitative techniques, strategic risk integration, and regulatory frameworks. It serves as a key educational and professional development resource for risk managers, financial analysts, auditors, and executives responsible for risk oversight.

The book is structured around core risk measurement topics, including:

- Uncertainty Modelling – Exploring historical data methods, expert-based analysis, and hybrid approaches for predicting and mitigating risk.
- Portfolio Risk and Efficient Frontier – Applying financial principles to optimise risk-taking in investment and corporate decision-making.
- Corporate Social Responsibility (CSR) and ESG Risk – Integrating environmental, social, and governance risks into enterprise risk management.
- Risk Communication and Governance – Understanding the role of corporate governance and effective communication in risk mitigation.
- Operational and Supply Chain Risk Management – Addressing systemic risks, compliance challenges, and third-party risk mitigation.
- Cybersecurity and Emerging Threats – Managing risks associated with cyber threats, data privacy, and artificial intelligence-driven vulnerabilities.
- Mergers, Acquisitions, and Financial Risk – Evaluating the risks involved in corporate restructuring, financial modelling, and regulatory compliance.
- Terrorism and Geopolitical Risks – Assessing the impact of terrorism, political instability, and macroeconomic disruptions on risk exposure.
- Reputational Risk and Crisis Management – Strategies to manage and recover from reputational crises and stakeholder challenges.

This book serves as an essential guide for professionals in risk management, finance, insurance, and corporate governance, offering both foundational knowledge and advanced methodologies to enhance risk resilience and decision-making.

We extend our sincere gratitude to the contributing authors, industry experts, and academic professionals who have shared their insights and expertise in shaping this publication. Their dedication ensures that this book remains a valuable resource for risk managers, corporate leaders, policymakers, and students alike. This book series is a testament of FERMA's (Federation of European Risk Management Associations) unwavering commitment to promoting excellence in risk management through education, research, and professional development.<sup>1</sup>

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<sup>1</sup>To know more FERMA's commitment to risk management, please visit [www.ferma.eu](http://www.ferma.eu)

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## **Instructional design and copy editing (FERMA materials)**

Stephanie Heriot AE, ANZIIF (Allied), Grad Dip Editing & Publishing, Cert. IV TAE

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- **www.anziif.com and www.ferma.eu**
- **Industry experts (ANZIIF source modules)**

Simon R. Doherty  
*BAppSc (Tour Mgt), Grad Cert Bus (Dpl & Trade) and Grad Cert Emerg Hth*

Deanne Keetelaar  
*CPRM*

Kevin W Knight AM  
*CPRM, Hon FRMIA, FIRM (UK), LMRMIA, ANZIIF (Mem)*

Kimberley Turner  
*CPRM*

Mark Wheatley  
*CPRM*

Lynda Fay  
*ANZIFF Admin*

Mikaela Reynoldson  
*MBA, LLB, BComm, GAICM*

Bob Anderson  
*ANZIFF Admin*

Gordon Taylor  
*ANZIIF Fellow, CIP, Adv. Dip FS, Hon Life Member*

Peter Moloney  
*ANZIFF Admin*

Shaun Wilkinson  
*ANZIIF (Fellow), FCII, Dip Bus Studs (Ins Mgt), FIRM*

Stuart Bassett  
*LLB, BComm, FICSM, ASA, AAI, AIRM*

Gordon Young  
*BA, MSc, ARM, AFRMIA, CPRM*

Harry Rosenthal  
*BA, MBA, ARM, CPCU*

Ian Deayton  
*Dip RM, AII (Assoc), RMIA (Mem)*

Vanessa Dallan  
*ANZIIF (Fellow) CIP, MRM*

Tom Beer  
*DSc, PhD, FEIA*

Gordon Young  
*BA, MSc, ARM, CPRM, AFRMIA*

J. Peter Clarke  
*FCA, MBA*

Roger Clarke  
*BCom, MCom, PhD, FACS*