

## Financial Enterprise Risk Management

*Financial Enterprise Risk Management* provides all the tools needed to build and maintain a comprehensive ERM framework. As well as outlining the construction of such frameworks, it discusses the internal and external contexts within which risk management must be carried out. It also covers a range of qualitative and quantitative techniques that can be used to identify, model and measure risks, and describes a range of risk mitigation strategies. Over 100 diagrams are used to help describe the range of approaches available, and risk management issues are further highlighted by various case studies. A number of proprietary, advisory and mandatory risk management frameworks are also discussed, including Solvency II, Basel III and ISO 31000:2009.

This book is an excellent resource for actuarial students studying for examinations, for risk management practitioners and for any academic looking for an up-to-date reference to current techniques.

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# FINANCIAL ENTERPRISE RISK MANAGEMENT

PAUL SWEETING

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## Preface

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This book began life as a sessional paper presented to the Institute of Actuaries in Manchester and, some months later, to the Faculty of Actuaries in Edinburgh. Its presentation occurred at around the same time that a new subject on enterprise risk management was being developed for the UK actuarial exams. This made it a good time to expand the paper into something more substantial, with detailed information on many of the techniques that were only mentioned in the initial work. It also means that the book has benefited greatly from the work done by the syllabus development working party, led by Andrew Cairns and managed by Lindsay Smitherman.

I found myself writing this book during a time of crisis for financial institutions around the world. Financial models have been blamed for a large part of this crisis, and this criticism is, to an extent, well-founded. It is certainly tempting to place far too much reliance on very complex models, ignoring the fact that they merely represent rather than replicate the real world. Some senior executives have also been guilty of seeing the output of these models but not understanding the underlying approaches and their limitations. Finally, many models have been designed seemingly ignorant of the fact that the data histories needed to provide parameters for these models are simply not available. However, at least as big an issue is that many non-financial risks were allowed to thrive in the years before the crisis.

Many of the techniques described in this book are quantitative, and such risk modelling and management techniques can be very helpful. However, there are a number of ways in which risk can be quantified. Furthermore, these risk measures do not paint a complete picture. It is important to appreciate the limitations of these types of models, the circumstances in which they might fail and the implications of such failure. It is also crucial to understand that just because a risk is unquantifiable, it does not mean that it should be ignored. Some of the most important – and dangerous – risks cannot be modelled; however, they can frequently be identified and often managed.

All risks should be considered together: this holistic approach is fundamental to enterprise risk management. Whilst identifying the extent – or even the existence – of individual risks is important, looking at the bigger picture is vital. Looking at the interaction between risks can highlight concentrations of risk, but also the potential

diversifying or even hedging effect of different risks. It is also important to recognise that risk is not necessarily synonymous with uncertainty. Risk is only bad if the outcome is adverse, and these types of risks can be described as downside risks. Upside risks also occur – these are opportunities – and without them, there would be no point in taking risks at all.