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Book Review

The Solvency II Handbook, Developing ERM Frameworks in Insurance and Reinsurance Companies, edited by Marcelo Cruz, Risk Books, 2009, 614pp. (paperback), £145.00. ISBN: 978-1-906348-19-9

Solvency II is a European Union (EU) wide initiative for insurers which is currently due to be effective from 1st January 2014. There are two fundamental aims of Solvency II. The first is to provide a stronger level of consumer protection and the second is to aid the development of a single integrated insurance market across the EU.

This first aim will be achieved by embedding risk based supervision. This will require insurance companies to hold minimum levels of capital depending on their risk profile and in doing so it will force insurance companies to understand the risks they have taken on and will do so in the future. Insurers will have to increase their quantitative and qualitative awareness of risk. Therefore the Solvency II framework goes well beyond simply calculating the amount of capital which needs to be held and will require a change in culture around risk management. Solvency II will therefore form a new foundation of how an insurance entity is run and the new framework will need to be considered for pricing, reserving, risk management, capital allocation and asset allocation decisions.

The second aim to facilitate the development of a single integrated insurance market across the EU could prove difficult. The primary reason is that insurance groups which have international operations outside the EU, may be put at a disadvantage as a result of capital requirements under Solvency II being more onerous for insurers domiciled in the EU.

The Solvency II Handbook provides an excellent overview of topics which need to be considered and some of the obstacles to be overcome in order to meet the requirements under Solvency II. The book focuses on the topics targeted to meet the first aim mentioned above.

The book contains 22 chapters, each of which has been written by a single author or groups of authors. Overall the book contains contributions from over 30 authors, many of whom are well known in their fields. The background of the authors ranges from actuarial consultants to financial analysts and risk specialists to academics. The book therefore provides different points of view as well as solid technical arguments.

The book is split into five sections which are summarised below:

Section 1 provides an introduction to Solvency II and offers a useful comparison with International Financial Reporting Standards (IFRS) 4 Phase II and Market Consistent Embedded Value (MCEV). The remaining chapters look at preparing for Solvency II, building internal models and the key attributes of these models.

Section 2 explores how to measure and manage financial risks and covers market, credit and liquidity risks. The importance of Economic Scenario Generators (ESG), used for market and credit risk calculations, is discussed. The concept of Value at Risk (Var) and the fascinating topic of replicating portfolios in the use of liability measurement are also covered in this section.

Section 3 considers insurance risk for life and non-life insurance companies as well as discussing the benefits of using internal models compared to the standard formula approach for annuity risks. One chapter looks at the optimal level of capital for a life insurance contract under the Swiss Solvency Test (SST), which has many similarities with Solvency II. This section is probably the most technical section of the book.

Section 4 discusses the modelling and measurement of operational risk. Although most insurers admit that this is one of the key risks they face (possibly accounting for up to 25% of their total risk exposure), relatively little resources are put in place to measure and manage this risk. There is only one chapter in this section, which may be a possible indication of the general lack of interest in this area.

Finally, section 5 investigates the use of economic capital models and how these can be used in corporate decision making. There is also a chapter examining an insurance group level solvency model and the complications that can result from complex, intertwined entity and subsidiary structures. For those who are mathematically inclined, there is an interesting chapter looking at how to allow for dependencies in complex situations where simple linear correlation techniques are not suitable via the use of copulas.

Whilst the book covers a lot of material (in its 600 pages!) and in great depth, the authors have avoided where possible going into unnecessary complex technical detail. This high level approach ensures the book is accessible to a wide audience from different backgrounds and professions. This is particularly important as Solvency II is about bringing a cultural change and therefore needs to be embedded into the whole organisation.

In summary the book provides an excellent introduction to Solvency II. However, it does suffer from two weaknesses. The first is that it was published in October 2009, (with many of the articles written well before then). Therefore the articles within the book have inevitably been based on various assumptions made by the authors on how the guidance may evolve. The second stems from the fact that the book is essentially a collection of articles by different authors, which means that at times the book lacks flow from one chapter to the next and there is some duplication of information. Some might argue this is not a weakness because the book is a "Handbook" and therefore should not be read cover to cover, but rather used as a point of reference.

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