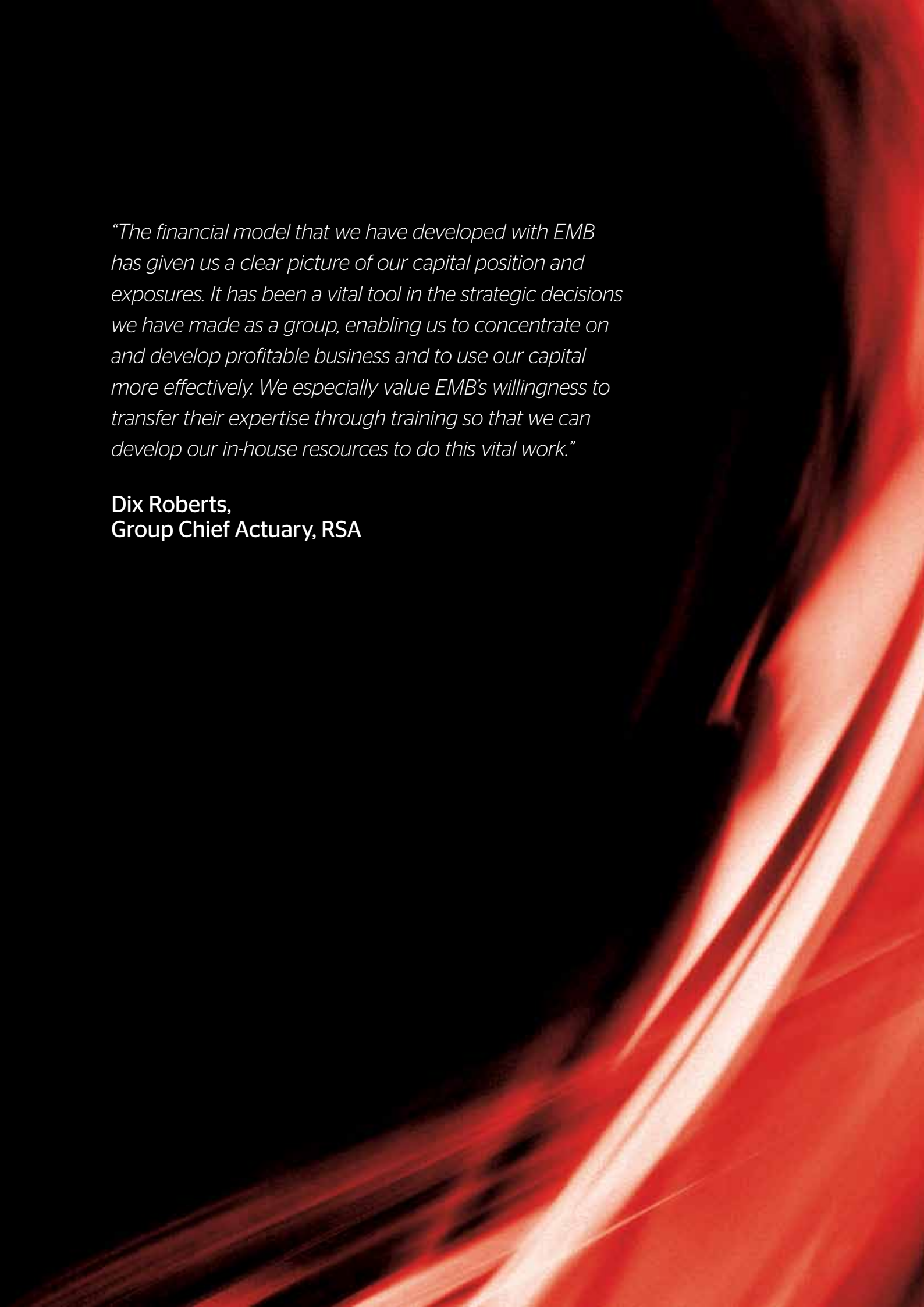




Case Study: RSA

Transforming group strategy using Enterprise Risk Management





“The financial model that we have developed with EMB has given us a clear picture of our capital position and exposures. It has been a vital tool in the strategic decisions we have made as a group, enabling us to concentrate on and develop profitable business and to use our capital more effectively. We especially value EMB’s willingness to transfer their expertise through training so that we can develop our in-house resources to do this vital work.”

**Dix Roberts,
Group Chief Actuary, RSA**

RSA (formerly Royal & SunAlliance) has enjoyed a remarkable turnaround in its fortunes in the past few years. After experiencing what the Financial Times described as a “near-death experience” in 2002, it has recorded several years of increased profitability, rising share prices and positive ratings developments. Although all shares have recently felt the effects of a falling market, most analysts expect RSA to continue to outperform its peers.

There are many reasons for this uplift in its fortunes, but one factor was undoubtedly a root and branch review of its capital structure, with Enterprise Risk Management (ERM) and financial modelling at its heart. The company has taken a lead in demonstrating that ERM is much more than just a theoretical exercise; that it really can be a highly effective tool for strategic decision making.

Working with EMB, RSA has used ERM, supported by financial models, to help transform the management of the group. This has improved performance in all areas and significantly strengthened its financial position.

Improving capital management

In 2002, despite the tremendous goodwill that it enjoyed in the market, RSA appeared to be in trouble. Its credit ratings had dropped to 'A-' and there was the very real possibility of a further fall, with serious ramifications for its ability to retain business.

Against this background, and with a new CEO in place, the management team decided to take a proactive approach: to find new ways to employ capital effectively and to back up its analysis with firm action. Financial modelling would be at the centre of the strategy, and they subsequently asked EMB to assist by providing the necessary consultancy and software.

Planning started in the last quarter of 2003, and the three-year project itself commenced the following January. The brief was to create a financial model and integrate it into RSA's main non-life operations globally, supporting the planning and capital management functions. The exercise would dovetail with the group's three-year planning cycles, operate at both regional and global level and take into account all types of risk, including currency fluctuations and large loss/catastrophe data.

The financial modelling had to be technically robust, of course, but there was much more to it than that. It needed the flexibility to reflect the realities of the company, as opposed to shoe-horning the data into a pre-determined template. Perhaps above all, the model had to be embedded in the organisation and not just a complex actuarial exercise. RSA required a practical tool capable of delivering results.



Financial modelling for a global business



EMB Igloo, the market-leading financial modelling software, was chosen as the platform for this work. With its power, flexibility and proven ability to deliver results, RSA saw it as a natural fit with their needs.

Igloo gives users the means to create a model of their own choosing that can do exactly what they want, a feature that made it ideally suited to reflect the unique characteristics of a company such as RSA.

RSA and EMB appointed a project manager each and agreed on the necessary management procedures. RSA opted for an incremental approach, starting with a relatively simple model, restricted to the UK, to test the software and corporate infrastructure. The initial focus was on compliance with the FSA's forthcoming ICAS regime. The aim was to embed the software first, and then roll it out across the group and to all major classes of business steadily expanding its range of applications.

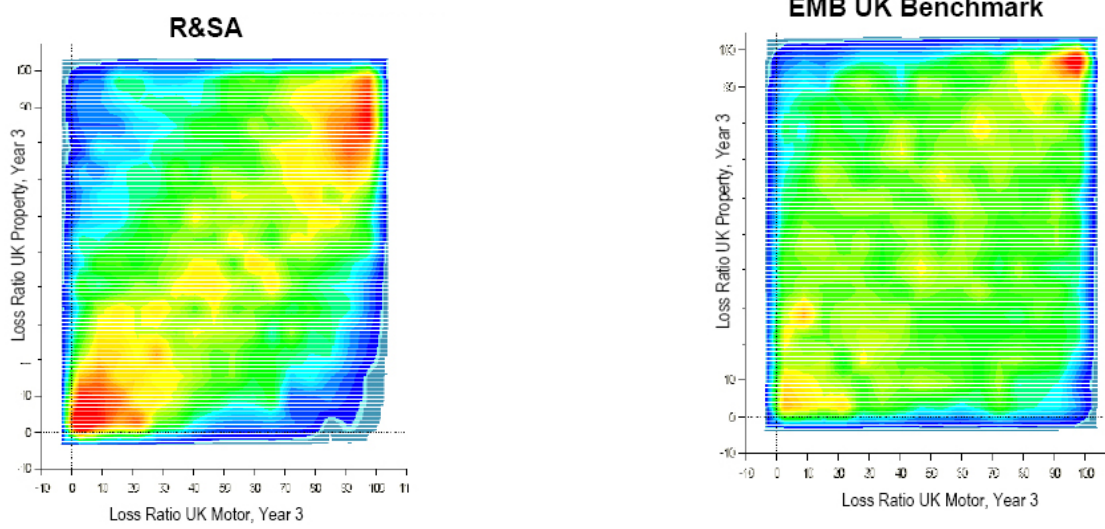
The changes had the full support of top management, an essential element in any ERM programme, and a first-class team to oversee decisions.

The immediate benefit of the financial model was that it gave them a greater understanding of their risk profile and enabled RSA to set capital more appropriately, by both geography and type of business.

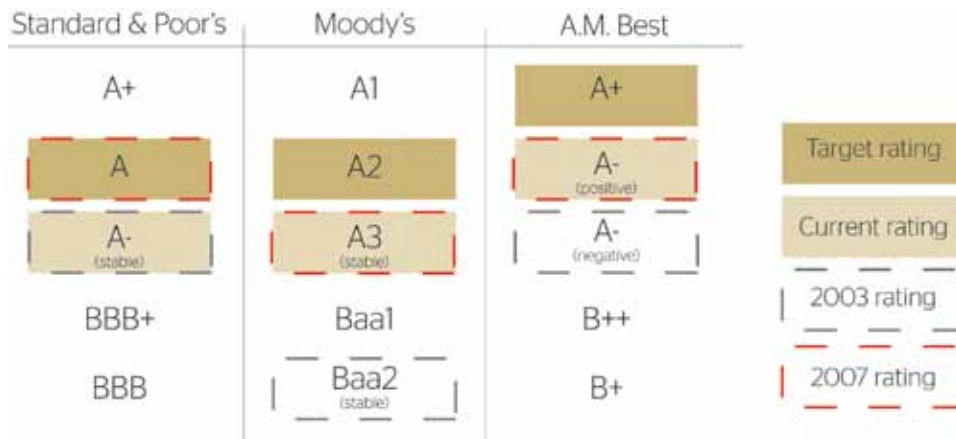
As a result, some lines and territories received additional investment, whilst others were scaled back.

The exercise also facilitated more accurate reinsurance purchase. And, as you would expect, the financial model and the data it produced were to be pivotal in satisfying the new risk-based capital requirements of the FSA when they were introduced in 2005.





EMB gave RSA an independent review of the correlations within the insurance part of the economic model.



RSA's Rating Agency comparison of its 2003 position to its target and current position

Improved capital position and upgraded credit rating

Quoting group chief actuary Dix Roberts, EMB provided a corporate “Igloo centre of excellence” and a group-wide training programme to empower RSA staff to take over much of the work. As understanding of ERM developed, and appreciation of how it could be used to enhance the business, there was a strong motivation throughout RSA to manage risk better and improve the capital position. ERM became part of the culture, and not just a bolt-on to existing practices.

The model driven by Igloo Professional was firmly established by 2006 as a strategic tool, one that continues to give the board a clear picture of its capital position and supports well informed decision-making on a global basis. By this time the ratings agencies had adapted their methodologies to give ERM a central role in their calculations, and RSA were in a strong position to use their work to demonstrate the group’s resilience.

In December 2007, for example, Standard & Poor’s raised its assessment of RSA’s ERM capability from “adequate” to “strong”.

In this business, though, nothing stands still. RSA and EMB work together on a continuous basis to create greater efficiencies and streamline the model to the group’s changing needs.

This is, of course, a never-ending process. RSA will continue to evolve, as will its customers, its core markets and the demands of the regulators. Thanks to EMB’s unique philosophy of knowledge

transfer, passing on skills to its clients, RSA’s in-house team is increasingly able to manage and adapt the model itself. EMB is retained for strategic advice and to peer review their work, providing a second pair of eyes.

One of the emerging challenges, where financial modelling is an essential part of the management mix, is the arrival of Solvency II in 2012. Work is well advanced in ensuring that RSA prospers under this new regime, seeing it as an opportunity to develop further its management transparency and accountability, rather than simply regarding it as a regulatory chore.



EMB Igloo

Designed to help actuaries and analysts create financial models that provide meaningful answers to complex problems, EMB Igloo is a financial simulation platform that helps take account of the uncertainties of the real world in business decisions and forecasting.

Application across the industry

Igloo allows a range of models to be developed, from simple applications to a corporate level top-down view of a financial enterprise. It can be used by a variety of organisations, including insurers, reinsurers, financial institutions, rating agencies and regulators.

Igloo is ideally suited for financial modelling because it has the power and flexibility to produce sophisticated financial models that are quick to create, easy to understand and efficient to run.

The Extremb module enhances the accuracy and efficiency of model parameterisation.

Reflecting your business structure


The building-block approach helps construct simple models with minimal effort, which can easily be expanded as needs change.

Because every problem is different, modern financial modelling demands the flexibility and extensibility of a modular approach.

Components are developed using spreadsheet-type formulae, and components can be linked together at the click of a mouse. Models can be updated in seconds by replacing one module with another.

EMB Igloo helps you to:

- Assess economic and regulatory capital requirements
- Assist in communication with regulators and rating agencies
- Improve the effectiveness of outwards reinsurance
- Gain insight into the risk and return for a variety of business strategies
- Produce a consistent internal view of pricing, reserving and capital



“RSA was ahead of its time in having a full understanding of the uses of ERM and financial modelling and the potential benefits to the business. It’s exciting to work with a company with this level of commitment and to help them reap the rewards,”

**Richard Rodriguez,
Partner at EMB**

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