

FINANCIAL SERVICES

RISK MANAGEMENT IN STRATEGIC DECISION MAKING

While companies have invested in tools to measure economic capital and organizational structures to manage enterprise risks, the full benefits won't come until the new approaches to risk management are embedded in the business.

By Ferdia Byrne and Ian B. Farr

Risk management is not new. Insurance companies have been doing it for centuries. Unfortunately, they do not have an exemplary track record, as losses over the past decade have shown. Some risks have been badly managed and others completely overlooked.

However, the industry's position has been changing rapidly over the last few years as information technology developments have brought more sophisticated approaches to risk analysis, including practical and usable stochastic models. These models, combined with analysis of rare events and management actions to respond to them, have allowed economic assessments of the capital requirements of the business based on much more explicit quantification of risk than had been possible previously.

For many companies, these developments have required a significant investment in modeling capabilities. This investment reflects some one-off costs but also includes resources to support ongoing improvements in processes as well as the regular monitoring and reporting of economic capital requirements. Many companies believe the investment is paying off, and they are now using economic capital to add value to the business through their ability to make better risk-based decisions.

However, the full business benefits of the enhanced understanding of risk can only be realized when the modeling results, including the economic capital requirements, are embedded in the business and used to support wider strategic decision making. Furthermore, external evaluators

such as rating agencies and regulators will not recognize economic capital assessments if they remain as stand-alone theoretical calculations disconnected from the business.

BEYOND THE TOOLS

While actuaries and risk managers can be proud of the technical achievements in quantifying risks, embedding effective risk management across an organization is, in reality, a much more challenging undertaking than the construction of sophisticated tools. A company starting out on the journey of implementing risk management faces a number of tasks. It must:

- clearly define the organization's risk strategy and risk appetite
- develop appropriate risk organization and governance structures
- implement new risk processes
- modify existing business and reporting processes to make appropriate allowance for risk.

Exhibit 1 gives an overview of how the various aspects fit together.

RISK STRATEGY AND APPETITE

A clear articulation of risk strategy and risk appetite is an essential starting point in embedding risk management across an organization. These statements of corporate objectives act as a reference point to benchmark all risk taking and risk mitigation activity within the organization. They provide guidance and define boundaries within which risk-based decision making can occur and provide a clear framework for the selection of one course of action over another.

While "risk appetite" and "risk strategy" are sometimes used as separate terms, in practice they are inextricably linked. In aggregate, they cover three broad areas:

- the quantum of risk that the organization is comfortable assuming or retaining
- the nature of the risks that the organization is prepared to assume or retain
- the target level of return that the organization seeks on the risks it assumes or retains.

WHAT IS YOUR RISK APPETITE?

An organization's risk appetite needs to be considered from the perspective of a number of stakeholders in the business — policyholders, debt holders and shareholders — along with regulators, rating agencies and analysts.

Regulators and rating agencies primarily view matters from the standpoint of the policyholders. They are interested in the organization's ability to pay claims as they fall due even in adverse circumstances. From this perspective, it is the structure and calibration of the organization's economic capital metric that represents its risk appetite. Consequently, it is this metric that regulators and rating agencies are most keen to see reflected appropriately in the company's overall management processes or embedded in the business.

Most economic capital models are calibrated on the basis of a target security level relating directly to the insurer's ability to meet its commitments to policyholders in full. Examples include a 0.05% risk of ruin over a one-year time horizon, or a probability of 98% of meeting all claims and expenses over the runoff of the port-

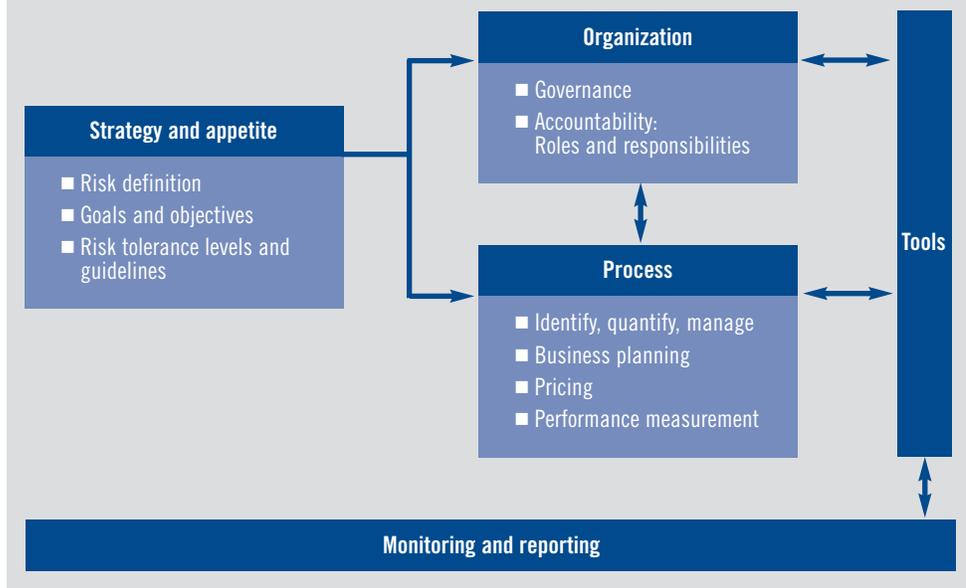


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EXHIBIT 1
ERM framework



folio. It follows that capital is quantified based on events that we would expect to encounter only very rarely, if at all, during our lifetimes.

But what about shareholders and their appetite for risk? In the general sense, risk appetite is about the extent of variability of results that shareholders are willing to accept when management adopts a given strategy. The focus here is on risk to shareholder value, which includes not only the realistic net assets of the company but also the value of the expected future earnings stream (often called the goodwill value of the company).

In determining which measures properly reflect the shareholder viewpoint, it is important to identify events that could

have significant adverse effects on value. For example, a modest change in rating or the cancellation of a distribution agreement can have a significant adverse effect on new business volumes and hence on the stock price. As shown in *Exhibit 2* on page 8, these are not the types of risk typically considered material when analyzing economic capital requirements.

To ensure that a company's overall risk appetite — expressed both in terms of economic capital and other shareholder focused risk metrics — is not breached, specific limits need to be set to define the boundaries and maximum tolerances for risk taking. To be effective and to drive behavior, these limits need to be communicated effectively to individual business units.

However, the aim should not simply be to curtail business activities but to set clear ranges within which business units are expected to operate and to encourage them to steer clear of activities that could breach these limits. Business units that operate in an environment where risk appetite is well understood will use defined limits to help manage the balance between taking on risk and creating value for the company, rather than merely avoid taking on any risk at all.

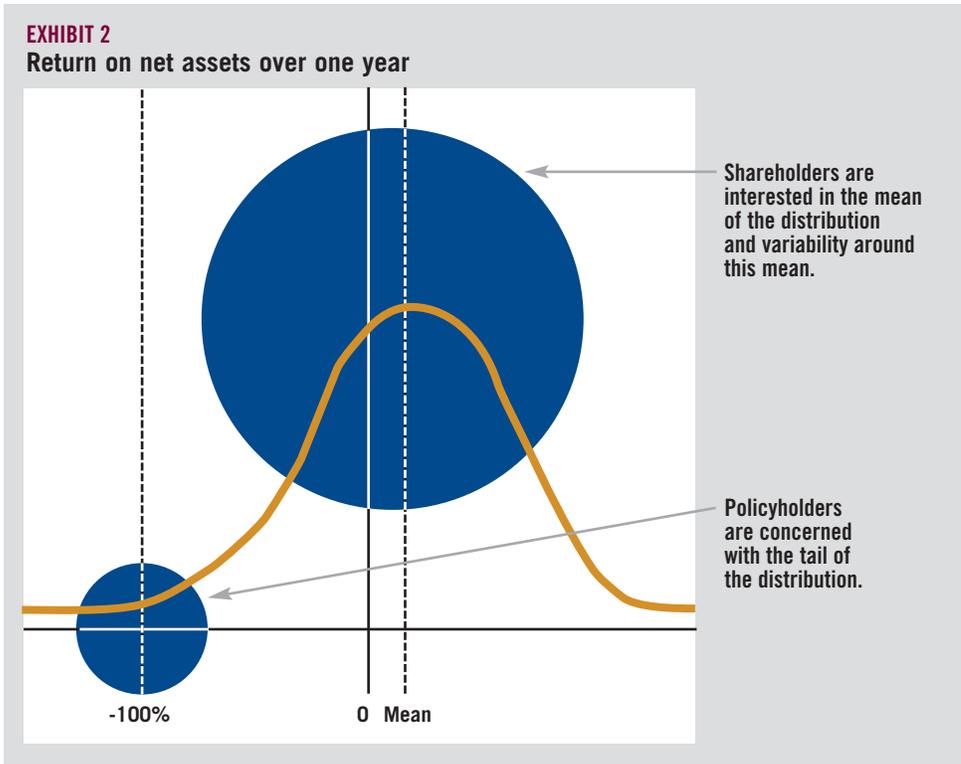
ORGANIZATION AND GOVERNANCE

New organizational structures have emerged as companies have focused on improving the governance surrounding their risk taking. There is no “right” governance structure; roles and responsibilities must evolve in a manner tailored to the needs of a particular company. However, there are a few key requirements that any structure needs to satisfy:

- There should be demonstrable independence between risk taking and risk-monitoring activities.
- Accountability for all risk activities must be well defined.
- The structure should facilitate a consolidated view of risks to be taken — for example, through a multidisciplinary risk committee.
- The risk management organization needs a clear connection to the board.

The role of chief risk officer (CRO) is now common, albeit under two alternative models — either leading the risk monitoring function or taking a more active role in the business using risk management to support business decisions.

Full business benefits of enhanced understanding of risk can only be realized when economic capital modeling requirements and results are embedded in strategic decision making.



DRIVING BEHAVIOR

The most sophisticated risk assessment models will have no impact on the business — and will not be accepted by regulators and rating agencies — unless they are actively used to measure and manage both risk exposure and performance. In practice, this means that economic capital models cannot be limited to assessing risks at a company or group level. They need to drive down to a more granular level through a process of allocating capital to products and business units based on the level and nature of risk in each and how they interact.

Alternatively, the company-level capital requirement can be allocated by risk if certain risks (e.g., market risk) are managed in aggregate across the organization. The basis for allocation of company-level diversification benefits across products, business units or risks is complex and can be contentious. Nevertheless, an approach must be agreed upon if risk measures are to be utilized effectively, and in reality there are few theoretically and practically sound bases for performing such an allocation. Through the allocation process, business managers can measure the impact of their decisions on the capital requirements and risk profile of the company.

Product pricing and capital deployment are primary areas where decisions need to take into account the level of risk, expected returns and a group's risk appetite. In fact, given their growing use across the industry, risk-based approaches have effectively become a necessity if companies are to maintain competitive positioning and avoid losing business.

Finally, allocation of economic capital is necessary to ensure that risks are measured at the level at which individuals have responsibility for managing these risks. To drive behavior, performance and profitability need to be assessed using consistent metrics based on allocated economic capital.

Changing behavior takes time, especially when complicated actuarial and risk models lie behind the measures and tools. There will inevitably be business units or products that look better or worse under a new measurement framework. Risk managers need to work hard to gain acceptance of the new approach and convince business managers of its relevance before they can be expected to take action on it.

Risk management will only be fully effective if people throughout the organization have clear direction from senior management, understand what they need to do and receive consistent reinforcing messages. As part of the embedding process, actuaries, risk managers and other finance professionals have an important role to play. In particular, they need to embark on a program of engagement with senior management to explain results and convincingly demonstrate the business benefits of risk measurement tools.

Risk reporting can help manage risk exposure and maintain the desired level of solvency capital when supported by capital budgeting, strategic planning and performance target setting.

Getting credit for internal capital from regulators and rating agencies

The Solvency II proposals to change the regulatory regime in Europe beginning in 2012 will allow companies to determine minimum capital requirements using economic capital models (referred to as internal models) — as an alternative to the prescribed “standard approach.” In a process similar to the one banks are going through at present, insurers will need to apply to the supervisory authorities for approval before these internal models can be used to measure regulatory solvency.

According to a survey conducted by Towers Perrin in 2006, 98% of European respondents plan to use internal capital models for one or more risks under Solvency II.

There are compelling reasons for using internal capital models to determine capital requirements:

- The capital requirements using the prescribed standard approach are expected to be calibrated conservatively and may therefore overstate the economic capital requirements.
- Internal models can be tailored to reflect the actual risk profile of the business and can be aligned with economic approaches to measuring performance and managing the business.
- Appropriate recognition of diversification between risks and geographies can enable well-diversified insurers to reduce their regulatory capital requirements.

While internal models will need to be robust and reliable, sophisticated measurement and modeling will not be enough to obtain approval. European regulators have stated that internal models will need to pass both a “statistical quality” test and a “use” test. In practice, this is likely to mean that the internal capital models will need to be embedded throughout the organization.

At some time in the future, rating agencies can be expected to take account of the results of internal capital models when undertaking their analysis of capital adequacy. For example, Fitch Ratings has stated its intention to incorporate an assessment of companies’ own models in forming a view of capital adequacy. Fitch Ratings has also said that, in addition to gaining an understanding of in-house models, it will want to assess how they are used in the context of wider ERM.

S&P has already undertaken initial ERM evaluations for 241 insurers. Only 13% were rated “excellent” or “strong,” and most (82%) were rated “adequate.” S&P has indicated that it will be looking for evidence of use of economic capital tools, strong risk management culture and risk controls when it undertakes its next round of ERM evaluations. Embedded ERM will be a precondition for considering internal economic capital models in the capital adequacy assessment.

Companies that successfully embed their internal capital models in the business will be strongly positioned to obtain regulatory approval under Solvency II and similar emerging regimes around the world, as well as positive feedback from rating agencies. With appropriate risk management functions in place, these companies should be able to align their capital requirements with the economic requirements for the risks that have been written. For some, the real benefits will be improved capital efficiency and, potentially, more competitive prices for customers.

INTEGRATING THE PROCESSES

ERM and reporting on risk create new processes for a company, but risk also needs to fit into the regular business processes and activities. In addition to managing risk exposure and the desired level of solvency capital, risk reporting needs to dovetail with the wider finance process in the company, including capital budgeting, strategic planning and setting targets for performance.

Most importantly, ERM affects everyone in the organization from finance professionals to business managers. Only when risk management has become part of business as usual, used to support business decisions and understood by senior management, can a company claim that ERM is truly embedded in the business.

While some companies have begun to address the need for new tools and governance structures, successful embedding of ERM also requires engagement with, and commitment from, senior management. This is important to encourage a process of cultural change and the integration of risk into daily business behaviors.

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