SOCIETY OF ACTUARIES

Article from:

Risk Management Newsletter

March 2006 – Issue No. 7

ERM ≠ EC²

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Most companies have begun to consider implementing enterprise risk management (ERM) in some form. ERM is a process that includes several steps, including:

1) Establishing an ERM framework and risk governance
2) Risk identification
3) Risk assessment
4) Risk response
5) Incorporation into performance measurement/management
6) External risk reporting

Some companies are more advanced along this process than others, though few have mastered all of the steps above. However, many insurance companies have become overly focused on one of these steps in particular, risk assessment. Many insurers hear ERM and immediately think Economic Capital (EC)— the process of building a model to quantify the amount of required capital based on an internal assessment of company-specific risks and correlations. This is partly because EC has the compelling potential to reduce required capital by recognizing risk diversification benefits, as well as many other applications. Also, the actuaries involved in ERM are attracted by the challenge of such a complex modeling exercise.

Such companies also tend to begin the EC effort very early in the ERM process, effectively jumping ahead to the risk assessment step (step 3). EC takes a long time, so there is a tendency to get started in a hurry. Insurance companies typically have a highly complex set of risks and some very long-term contracts. Quantifying these risks often involves advanced tools and techniques, which can push the envelope of modern data/projection systems.

EC can be a valuable component of the ERM process for insurance companies. However, an over-emphasis on EC, to the point of neglect of other steps in the ERM process, can reduce the effectiveness of an ERM program. This is analogous to building a critical machine part without first considering how it will mesh with its neighboring parts and gears. At best, this will cause friction; at worst, the process will grind to a halt. These ERM programs typically suffer from an incomplete integration of EC into decision-making processes and a lack of buy-in from internal and external stakeholders. As a result, these ERM programs are experiencing difficulties, regardless of how sophisticated, complete and accurate their EC models may be.

To successfully implement an ERM program supported by EC, insurance companies must build the EC model only after carefully considering its interaction with each step in the ERM process.

ERM Framework

This step involves defining the ERM process steps and how they will interact, developing an implementation plan, and defining the metrics and procedural structures for key strategic ERM decisions—those made by the ERM committee.

Building the EC model without an ERM framework in place requires assumptions as to the extent and timing of each ERM process step. This can easily result in the EC model being unable to support other ERM steps in a timely fashion. One mid-size insurer was in the midst of building a robust EC model when the ERM framework was revealed requiring that EC support product pricing within a very short time period. The EC model being developed was too robust to complete within the required time frame. However, had the overall framework and plan been known in advance, the EC model could have been built in advancing stages of robustness to provide at least adequate pricing support in the near term.

Another implication of putting EC modeling ahead of this step is that EC may be unable to support a key strategic ERM decision—managing enterprise risk exposure to within risk appetite. The capital-only basis of the EC measure may be inconsistent with the ERM framework definition of risk appetite. For example, risk appetite may be expressed as a measure of shareholder value volatility (based on a discounted projection of distributable earnings) rather than

a measure of capital alone as provided by the EC model. This would cause delays while the EC approach is adjusted to support this, though the length of the time needed will vary depending on the specific EC methodology employed.

Risk Governance

In this step, management establishes the organizational and functional risk governance structure, including identifying the executive risk owners and defining their roles. Not involving the executive risk owners early on in the EC process can foster opposition to EC. Without input from executive risk owners, the model results will be suspect. However, this can be quickly remedied once they are engaged, simply by revising model assumptions and other inputs. Of more concern though is the lack of political buy-in from internal stakeholders. Most executive risk owners are from the business segments. Excluding these stakeholders from early involvement may give the impression that EC is an effort that will be controlled and imposed by corporate, with few useful applications for management. This will cause resistance in every arena of ERM in which EC is intended to operate. The longer this notion is allowed to take hold, the more challenging it is to overcome. Because EC is primarily intended as a tool employed by the risk takers in the business segments, the earlier these stakeholders are involved and receive this message, the better.

Risk Identification

If the EC model precedes the risk identification step, the EC model may be incomplete, having ignored certain risks. For example, key risks (to include in EC quantification) may have been defined in this step using qualitative criteria, whereas the risks included in the EC model may have been based on quantitative thresholds. This can result in delays while the missing risks are introduced into the EC approach and EC results are revised based on new risk correlation factors. If this is not corrected, the EC model will be unable to support decisions involving the risks excluded and the EC amount for the remaining risks will be based on an incomplete correlation covariance matrix.

Risk Response

This step includes the full range of decisions that will be supported by risk information in the ERM process. Prior to building the EC model, it is important to understand the scope of decisions that the model must support. Without this, the integration of EC into key decision-making processes may be incomplete. There are a number of issues that must be addressed in advance, including the following:

At what level of the organization will EC be expected to support decisions—enterprise, business segment, product line, etc.? This impacts EC model structure and required data and assumptions. For example, assume that the EC model was constructed to support only business segment-level decisions—the level for which this company has existing financial data and supporting allocations (e.g., investment income, expenses, etc). However, once the risk response step is defined, there is a requirement that EC support product-level decisions. This will cause significant delays to produce the required data inputs and model enhancements and to satisfy other requirements, such as training an additional layer of management in the use of EC.

What types of decisions will be supported—strategic (e.g., strategic planning, capital management, etc.), tactical (e.g., retention efforts, hedging programs, etc.), pricing, etc.? This impacts the processes with which the EC effort must be coordinated. This involves coordination of people and processes, integration of systems and building applications that support the specific decisions. One large multi-line insurer developed its EC model in isolation, without the coordination needed to integrate the model into decision-making processes through the company. As a result, after a lengthy and costly EC model development exercise, the model was only used by the corporate area and remained disconnected from decision-making processes in the business segments.

What risks must be reflected in the decisions supported—just financial risks or also operational risks? This may impact the EC modeling approach. At many companies, the EC approach uses a shortcut method (e.g., a fixed percentage of capital) for assessing operational

$$ERM \neq EC^2$$

risks. Some of these companies later realize, in the risk response step, that there is a need for a more robust approach to operational risk consistent with that used for financial risk. This results in delays while the EC model is enhanced to address operational risks in the same way it addresses financial risks. At companies where this issue is not addressed, the EC model is unable to support decisions involving operational risks, e.g., evaluating alternate risk mitigation techniques.

Performance Measurement/Management

EC measures should not be integrated into performance measures and certainly not into incentive compensation until the EC model is fully developed and stabilized. However, to secure internal stakeholder buy-in and support for the EC effort, it is important to clearly communicate early in the process that EC measures will ultimately be incorporated into performance measurement/management. This demonstrates senior management commitment and will align internal stakeholder interests with the EC effort. In addition, credibility with external stakeholders such as rating agencies will, in part, depend on whether this is being done. A lack of internal stakeholder buy-in to the EC effort is an indication that the company will not have a strong ERM program.

Although EC measures will not be incorporated into incentive compensation for some time, the EC approach should consider its implications. One important consideration is that EC is highly sensitive to assumptions. To maintain a credible EC measure, a disciplined process should be established for the setting and changing of assumptions. This may include a combination of providing incentives (disincentives) for accuracy (inaccuracy) and establishing corporate guidance and review protocols for any material changes.

External Risk Reporting

Similar to the performance measurement/management step, EC measures should not be used in external reporting until the EC model is credible. However, internally communicating the in-

tent to eventually incorporate EC into external reporting conveys management commitment to the EC approach and can be an additional tactic for securing internal stakeholder support.

In successful EC programs, EC measures are likely, at some point, to be included in external reporting—whether implicitly as a part of business segment earnings (i.e., interest on allocated EC) or in a segment-level Return-on-EC (ROEC) measure or in some other manner. As a result, it is useful to think through how and when the EC measures should be so employed, and the likely implications of doing so, during the EC development process. This can assist in discussions with stakeholders and in various choices made in the EC development process. If this is not done, there is a chance that risk disclosures will not be in synch with EC, which may be interpreted by external stakeholders as a signal that the ERM program is not being implemented as well as it could be.

As insurance companies begin implementing ERM, there are many steps in the process that must be considered. The risk assessment step, often represented by EC, is a critical step in this process, and when done correctly can be the catalyst for a powerful ERM program. However, companies believing that EC can operate in a vacuum will likely find their ERM program soon running out of air. In contrast, companies realizing and proactively addressing the inter-dependencies between the risk assessment step and other ERM process steps will more quickly reap the benefits of a successful ERM program. ✦

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