

VALUE-BASED ENTERPRISE RISK MANAGEMENT

BY SIM SEGAL

Looking for a means of quantifying value in ERM? The process suggested here may be exactly what you're looking for.

Most insurance companies have been effectively managing risk since their inception. In the past, these companies have resisted adopting sweeping programs that, on the surface, resemble the current enterprise risk management (ERM) approach. However, the ERM concept has recently evolved to a point that has many companies starting down the path of ERM implementation.

- Is a process involving a cultural shift and a change in the day-to-day business decision-making and processes, rather than a once-and-done event; this process may be represented as in Chart 1 on page 34.

This evolved ERM approach implies several new potential advantages, including:

How has ERM evolved? ERM is now generally defined as follows:

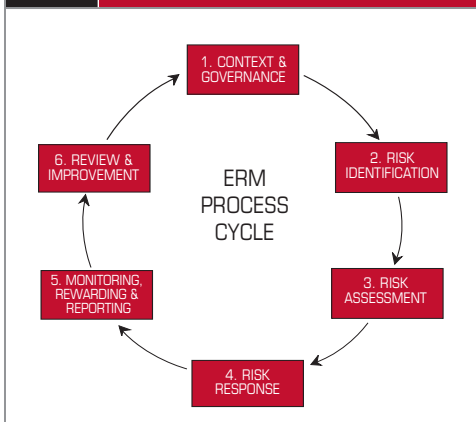
ERM is the process by which organizations assess, control, exploit, finance and monitor risks from all sources for the purpose of increasing short- and long-term value for stakeholders.

There are several key nuances in this definition that represent important scope expansions from prior incarnations of ERM:

- Includes upside risk exploitation, rather than just downside risk mitigation; as a result, anything impacting the strategic business plan is in scope.
- Addresses all sources of risk, including operational risk, rather than just financial risk (e.g., credit risk).
- Reflects the correlation-adjusted enterprise-wide impact of risks, rather than just the impact of risks on a stand-alone basis; this implies the need for much more than traditional risk management within functional silos.
- Encourages measurement of risk using long-term value-based metrics, rather than just current period metrics (e.g., earnings).



CHART 1 THE ENTERPRISE RISK MANAGEMENT PROCESS



- Value: A framework to better manage the value of the business by injecting a risk-reward discipline into the business processes enterprise-wide.
- Risk: An ability to better understand, manage and communicate the company’s risk appetite and risk exposure to all risks, on a correlation-adjusted enterprise-wide basis.
- Capital: The potential to reduce required capital, using an economic capital approach.

may even be aware of the enterprise impact of a given risk. However, they may not be able to readily quantify any of the following:

- The impact of risk on shareholder value, rather than on current period metrics.
- The integrated net/combined impact of two or more simultaneous risks.
- The enterprise-wide, correlation-adjusted impact.

Intuitively recognizing the benefits of this ERM evolution, many insurance companies have started implementing ERM in some form. However, many others remain hesitant at the starting gate. A common reason given for this hesitation is a lack of clarity in making the business case, which should include a quantification of the potential impact of ERM on shareholder value.¹ Unfortunately, most ERM approaches do not easily lend themselves to such quantification.

As a result, they lack valuable information. Quantifying the impact on value is the key to making the business case for ERM. The ability to quantify multiple simultaneous risks is also important, because more than 80 percent of “value-killers”—risk events triggering the largest 100 losses to shareholder value—involved two or more simultaneous risks.² Finally, without adjusting for correlations of the risks, it is impossible to know the true size of the impact, and sometimes, even the direction.

However, there is one approach particularly well-suited for making the business case for ERM: Value-Based ERM. What is Value-Based ERM? It is an approach that makes the quantification of value central to all aspects of the ERM process. This value-centric focus has two key advantages:

However, this is precisely the kind of information that Value-Based ERM offers. The centerpiece of Value-Based ERM is a model designed to quantify the enterprise-wide integrated impacts of risk on shareholder value. A simplified example of such a model is shown in Chart 2A (page 35). The model presents a partial list of internal and external risk drivers (on left of chart) and the items that they impact downstream (moving to the right), ultimately impacting the valuation elements and shareholder value.

- Quantifies the impact of ERM on shareholder value.
- Creates a common “language” that unifies otherwise disparate ERM processes.

Two versions of this type of model would typically be developed. One is a high-level, proof-of-concept tool. The other is a robust, end-stage model.

Quantifying the Impact of ERM on Value

Executives are often already aware of the potential impact of a single key risk on current period metrics for a given business segment. For example, they may know how much a given shift in the yield curve would impact quarterly earnings for their life insurance business. They

Top-Down Model

The first version is a top-down model, and involves deterministic risk scenarios and simplified risk correlations. This is a proof-of-concept model, which is used to make the business case for ERM.

¹ Value may be defined as the sum of distributable surplus at the time zero and the present value of future distributable earnings, discounted at the weighted average cost of capital, where a) distributable surplus is the excess of total surplus over required capital, and b) distributable earnings is the excess of post-tax statutory earnings plus post-tax interest on required capital over the increase in required capital.

² “Disarming the Value Killers: A Risk Management Study,” a Deloitte Research Study.

An illustrative deterministic scenario is shown in Chart 2B: Customer service quality decreases noticeably in the new annuity product line. Customer retention drops 10 percent. The Wall Street Journal reports the company's problems with its customers. Customer retention drops another 5 percent and sales growth decreases 3 percent from expected. Stock analysts implicitly increase their discount rate for the stock, reflecting an expected increase in volatility. In Chart 2B, the boxes highlighted in red indicate the risk drivers involved in this scenario, and all downstream items impacted, including the ultimate impact of an 8 percent reduction in shareholder value.

Bottom-up Model

Once a decision is made to implement Value-Based ERM, a second, more robust version of the model is constructed. This second version is a bottom-up model, constructed at the business unit level and rolled up to the enterprise level. This version accommodates both deterministic and stochastic risk scenarios and complex risk correlations. In its most complex form, this model is essentially a coupling of a stochastic (economic) capital model and a stochastic (embedded) value model.

The end-stage Value-Based ERM model would be used for several ERM activities, including, but not limited to, risk prioritization, evaluating alternative risk responses, performance measurement, incentive compensation and external reporting and communications. The following examples are a blend of actual case studies and hypothetical exercises. All the examples are scaled to represent the same mid-size, multi-line, stock life insurance company.

Dynamic Strategic Planning: A company uses the Value-Based ERM model as a dynamic strategic planning tool, running deterministic scenarios through the

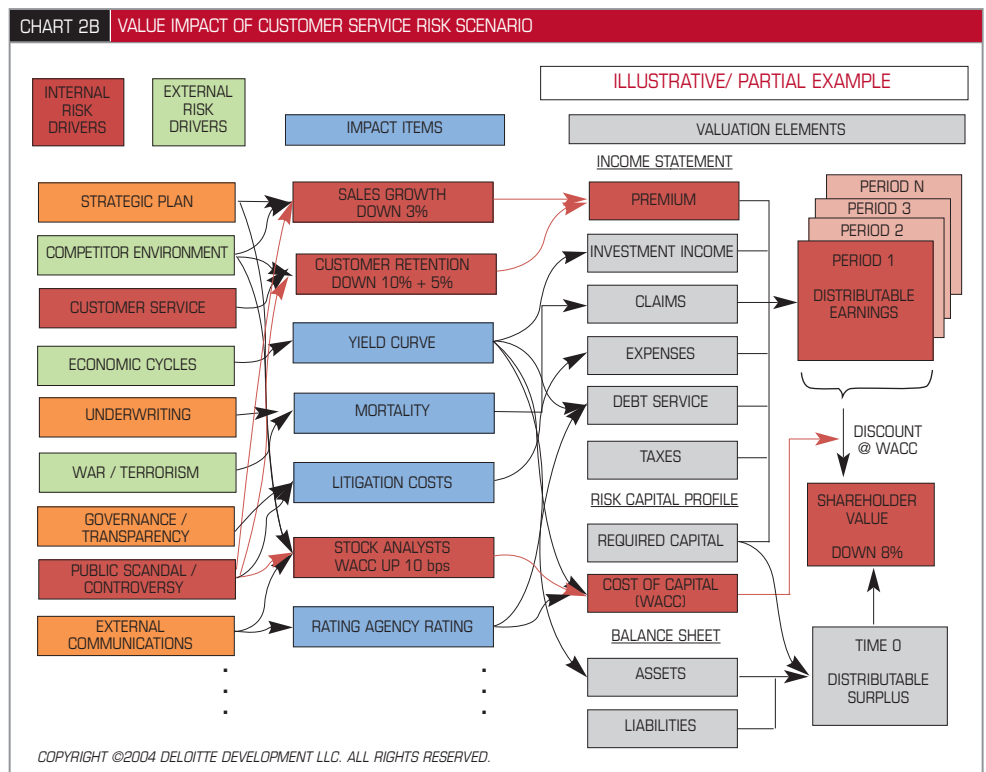
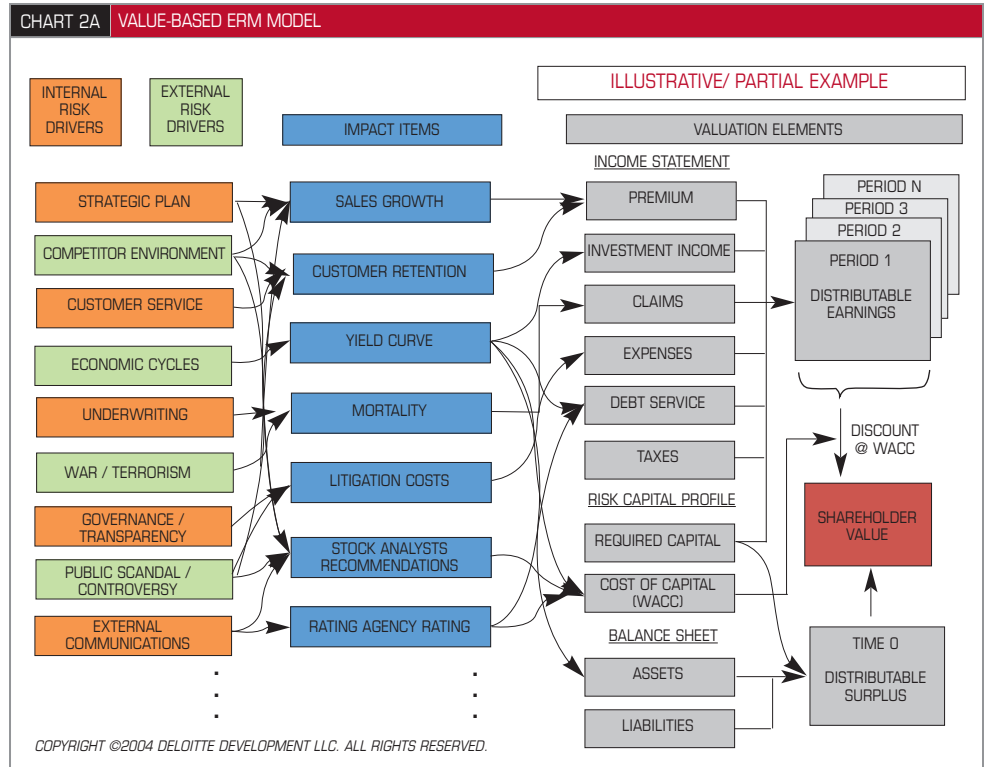
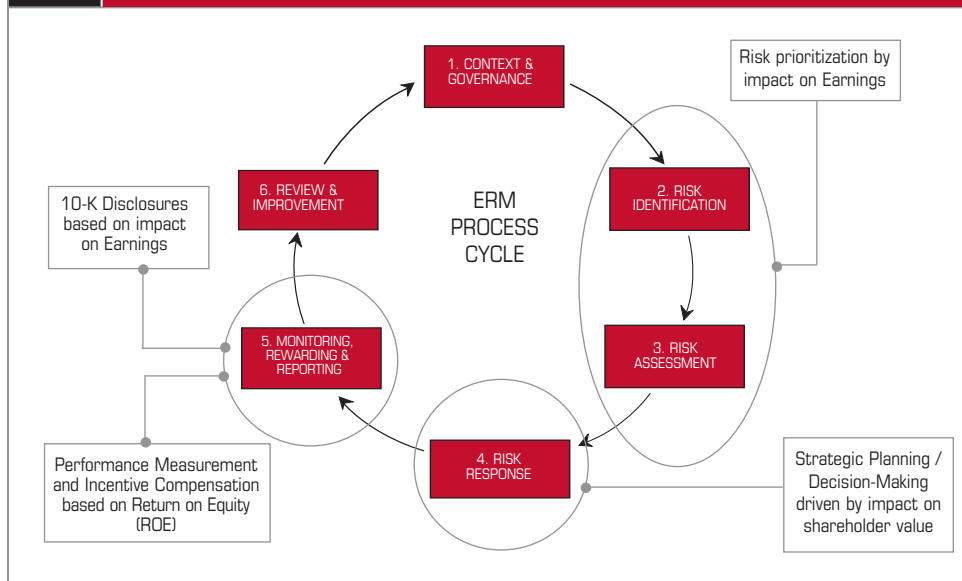


CHART 3 THE ENTERPRISE RISK MANAGEMENT PROCESS



model. It identifies a strategy that is expected to increase shareholder value by 2 percent (\$150 million) more than the baseline strategic plan.

Pricing Arbitrage: The economic capital model reveals that the Term life insurance product is substantially over-capitalized. The company reduces its capital allocation to the Term product by 25 percent, and lowers Term prices by 10 percent. As a result, Term sales increase 20 percent, increasing shareholder value by 6 percent (\$450 million).

External Communications: A Value-Based ERM approach is adopted and successfully implemented. The company communicates its robust and disciplined ERM approach to ratings agencies, which had the company on ratings watch for potential ratings action. As a result of the company demonstrating an improvement in management’s ability to manage risk, the company is removed from ratings watch. Stock analysts take this as a signal, and implicitly lower the weighted average cost of capital used for the company’s valuation by 25 basis points. As a result, shareholder value increases 6.9 percent (\$515 million).

Creating a Common Language

Many companies have already implemented ERM with steps similar to those in Chart 1. However, disparate measures are often used for

the various ERM processes, as shown in Chart 3. As a result, activities are not always aligned towards value.

In one such case study, incentive compensation was based on a combination of ROE and earnings, while the decision-making process was based on shareholder value. This misalignment resulted in two instances of counter-incentives:

- A manager was penalized for creating shareholder value. The cost of capital was 15 percent. The manager of a business unit with an ROE of 20 percent took on a project with an ROE of 16 percent, which exceeded the cost of capital and increased value, but also lowered the weighted average ROE of the business unit.
- Another manager was rewarded for destroying shareholder value. The cost of capital was 15 percent. The manager of a business unit with an ROE of 12 percent grew the business in scale, destroying value on a larger scale, since 12 percent was below the hurdle rate, but also increased earnings.

In contrast, Value-Based ERM creates a consistent approach by unifying multiple processes through a focus on value. This minimizes friction, aligns incentives and encourages value-enhancing decisions and behaviors. Every member of the enterprise is “rowing in the same direction” of value creation.

Most insurance companies have instinctively moved forward with some form of ERM, in recognition of the new benefits afforded by adopting an evolved risk-reward framework. Others are waiting to see a clear business case for ERM. Many of these hesitant companies will find that a Value-Based ERM approach can shine a bright light on the value of ERM. The rest—those doubters unaware of Value-Based ERM and still searching for a business case—will likely remain in the dark. ■

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