ENTERPRISE RISK MANAGEMENT

WHAT'S YOUR RISK APPETITE?

With a clearly articulated risk appetite statement, management can form and control the enterprise risk portfolio and measure risk management performance.

By J. David Dean and Andrew F. Giffin

The financial crisis and the move to market-based accounting highlight the need for greater transparency about an organization's risks. Company boards and external stakeholders are demanding evidence of clear boundaries and guideposts that govern the nature and amount of risk an organization undertakes.

A clear risk appetite statement — one that details the total exposure that an organization is willing to undertake to achieve its strategic objectives and meet its obligations to stakeholders — can provide strong assurance to stakeholders that the company has a full understanding of the risks involved in the enterprise and that those risks are appropriately under control.

According to our 2008 ERM survey, less than half of respondents had a documented, risk appetite statement in place. Another 37% said they were planning one. Defining risk appetite and tolerances was the leading short-term ERM priority of 61% of respondents.

In an earlier article, we described how risk appetite is a critical element of any company's enterprise risk management (ERM) program ("Risk Appetite: A Boundary for Decisions," *Emphasis* 2008/1). Here we focus on the process of formulating an effective risk appetite statement and how it should be used.

Once both the risks and acceptable exposure are defined, the risk appetite can be translated into day-to-day business management through the articulation of risk limits by business unit, functional area and, sometimes, team (see *Exhibit 1* for further definition of risk appetite, risk tolerance and risk limits). This final step is an essential component of ensuring that the risk appetite is embedded in the firm's processes and way of doing business.

EXHIBIT 1
Key risk appetite definitions

RISK APPETITE IS...
- The amount of total risk exposure that an organization is willing to accept or retain on the basis of risk-return trade-offs
- Reflective of the company's business strategy, risk strategies and stakeholder expectations
- Set and endorsed by the board of directors through discussions with management.

CORPORATE RISK TOLERANCE IS...
- The amount of risk an organization is willing to accept in the aggregate (or occasionally within a certain business unit or for a specific risk category)
- Expressed in quantitative terms that can be monitored
- Often expressed in acceptable/unacceptable outcomes or levels of risk.

RISK LIMITS ARE...
- The more granular tolerance levels expressed for specific products, business lines or risk categories that can be used on a frequent basis to implement the overall risk appetite of the organization
- Used to monitor the organization's exposure both by risk and cumulatively.

PROCESS FOR DETERMINING RISK APPETITE/TOLERANCE

We have found that a four-step process is a useful way to develop a meaningful risk appetite statement:

Step 1: Gather perspectives on risk.

Step 2: Articulate a preliminary risk appetite and tolerance statement.

Step 3: Test the preliminary risk appetite/tolerance statement.

Step 4: Validate and refine risk appetite.

Step 1: Gather Perspectives on Risk

While organizations are guided by some assumptions, both explicit and implicit, regarding risk, we find that the board and management often may not have a common understanding of risk and reward preferences and trade-offs. The first step, then, in defining the risk appetite is to gather information from managers and directors on their understanding of the organization's risk-taking activities. This needs to take into account risk within an organization's traditional disciplines, such as underwriting, investment and actuarial, as well as risk that crosses various disciplinary silos and departments.

Step 2: Articulate a Preliminary Risk Appetite and Tolerance Statement

By synthesizing the input of the various perspectives gained in the previous step,

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an organization can develop a broad and preliminary statement of risk appetite that should be consistent with the overall risk strategy. To develop the preliminary risk appetite statement, we have found that a facilitated discussion among the key risk owners is critical to ensuring understanding and eventual buy-in.

We have also found that this discussion becomes very useful in testing hypotheses related to the risk tolerance statements. The preliminary risk tolerance should describe the potential metrics to be used and indicative calibrations for those metrics (e.g., economic capital to remain positive nine years out of 10). These metrics and their calibration are then tested and validated in the next steps.

Step 3: Test the Preliminary Risk Appetite/Tolerance Statements

To be effective, the overall risk appetite and risk tolerance statements need to match up with risk limits that are used to determine risk acceptance throughout the organization. Although 47% of respondents in our 2008 ERM survey indicated that they had formulated risk appetite statements, 60% indicated that they had not modeled/reconciled the consistency of their bottom-up risk limits and their top-down risk tolerance.

Testing the risk tolerance statement through fairly high-level modeling is critical to gaining confidence that the risk appetite will have practical application, rather than being a toothless declaration. In some cases, such as target financial rating, existing metrics may already be available. For others (e.g., earnings volatility), new metrics may be required, or existing models may need to be refined, to capture the required data in appropriate measures.

The point is not to develop the ultimate economic capital (EC) model at this stage, but to have high-level, directional information against which risk appetite/tolerance hypotheses can be tested. However, when the finalized risk appetite statement is completed, it will provide a basis for designing, or redesigning, an appropriate EC model for risk measurement, monitoring and control.

Step 4: Validate/Refine Risk Appetite

The conclusion of the process is to evaluate the quantitative framework developed in the previous step and calibrate the strawman risk appetite statement. Typically, this involves another small-group working session to refine risk appetite and tolerance statements consistent with risk levels that are acceptable to the company and support corporate strategic objectives.

LINKING RISK APPETITE AND PERFORMANCE EXPECTATIONS

Risk appetite becomes tangible and actionable when it is directly calibrated to the company's targeted financial performance indicators (e.g., required capital, earnings, economic value added). Corporate risk tolerances assign quantitative targets to performance indicators in the form of ultimate risk limits. Examples include:

- maximum EC budget
- maximum percentage of economic value at risk (e.g., one year VaR at 99.5%)
- maximum annual earnings volatility
- maximum reduction in surplus in one year with a 95% probability
- a 95% probability of maintaining a financial strength rating at or above a target level
- a 99% probability of maintaining surplus above minimum regulatory requirements
- less than a 5% probability of needing to cut shareholder dividends.

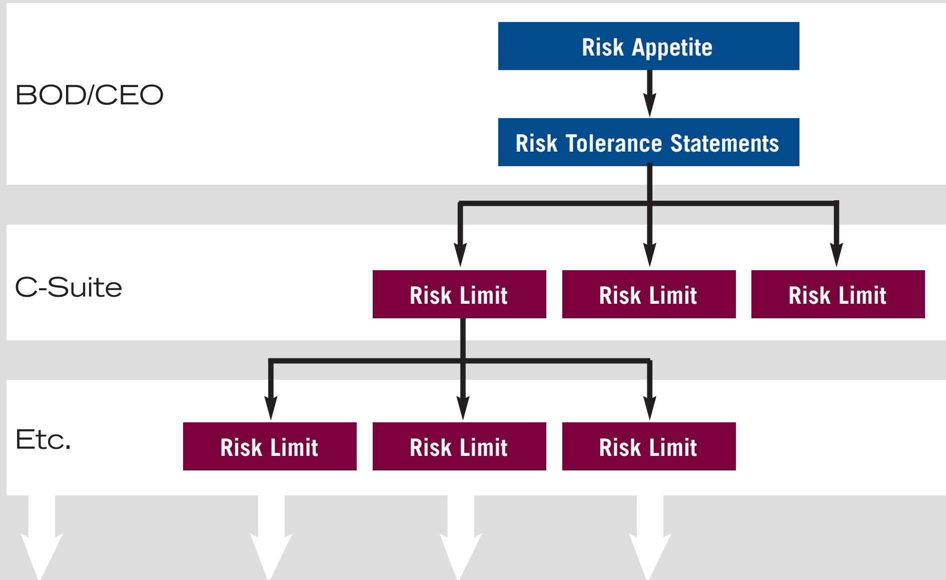
Typically, risk tolerances are expressed as maximum acceptable levels. In fact, risk appetite is an expression of the need both to limit exposure to unacceptable risks and to assume risks for which the company is well positioned to make targeted returns from managing. Thus, corporate risk tolerances identify the critical measures of company value and performance, and place limits on acceptable exposure to the level of these measures.

Management is then charged with parsing corporate strategies and meeting performance targets within these limits. This requires the establishment of layers of risk limits that guide organizational decision making — for risk acceptance and for risk mitigation and transfer — in order to make sure that risk assumption remains within the established bounds.

RISK LIMITS

Risk acceptance occurs throughout the organization subject to bottom-up risk limits. An enterprise risk portfolio includes the sum total of these actions (see *Exhibit 2*, next page). These include combined actions that can magnify risks (e.g., multiple risks

EXHIBIT 2
Risk appetite and tolerance statements provide the overarching guardrails that constrain and determine the risk limits set at the operating levels of the organization.



associated with a single event, multiple exposures to a single counterparty) and some that can reduce total risk (e.g., reinsurance, countercyclical risks). Thus, the ERM program must include risk limits for individual risk taking as well as a way to measure the overall risk profile of the enterprise risk portfolio.

The ERM risk identification process helps to determine the multitude of risk types that require individual risk limits (e.g., investment in particular asset types, acceptances of insured risks within lines of business, exposure to default of reinsurers). Based on prior experience with these risks and their volatility, probabilities can be assigned to these types of risks in terms of their likelihood to be outside levels expected by pricing systems or investment yield expectations.

These individual risk assessments can then be aggregated (e.g., auto insurance coverage risks within an auto line of business, auto insurance within a combined P&C line of business, investment classes within an investment portfolio). By extending this process, various market, credit, insurance, operational and strategic risks can be aggregated to an enterprise-level probability of performance outside of corporate risk tolerance levels.

This process allows management to align risk limits at a detailed level with broad business decisions needed to achieve financial and operational goals, and test for more optimal mixes of risk acceptance. It also allows for monitoring and reporting to assure that the cumulative risk portfolio is consistent with the risk appetite and corporate risk tolerance (e.g., the probability that a 1-in-250-year catastrophe event will reduce surplus by an unacceptable amount).

KEYS TO SUCCESS

While there are a variety of ways in which companies are approaching formulation of risk appetite and risk tolerance statements, certain practices are critical to fulfilling key objectives of ERM, namely, ensuring that transparency and awareness of risk are linked to well-defined measures of risk subject to quantification and rigorous analysis.

Characteristics of an Effective Risk Appetite Statement

Ultimately, the risk appetite and tolerance statements serve as the guardrails on the organization's journey of risk taking. And the suite of statements — risk appetite, tolerance and risk limits — need to conjoin what the board defines as the organization's overall risk/reward trade-off preference at a corporate level with the day-to-day effects of risk taking and decision making by managers within the organization.

It is important, therefore, that the risk appetite and tolerance statements be expressed in terms that are understandable, meaningful and helpful to internal and external stakeholders. This means that the risk tolerance, and ultimately risk limits, need to be sufficiently specific so that they can form the basis of a control framework that will enable risk managers to ensure that risks taken stay within the stated appetite.

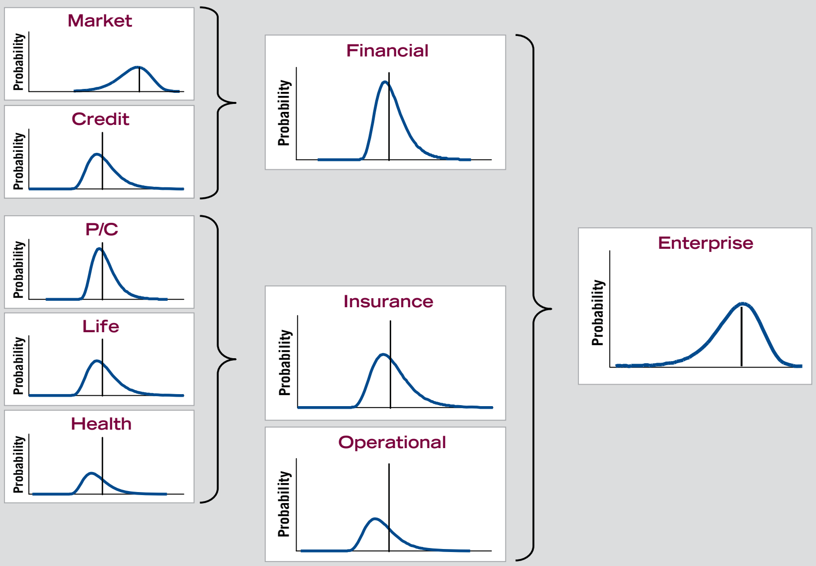
An effective risk appetite statement therefore includes the following:

- *Strategic considerations:* details regarding the company's strategic objectives and how key stakeholder expectations interact with these objectives. The statement sets the stage for reporting risk-based results to all stakeholders.

- *Risk strategies:* articulation of the current risks the organization is undertaking, and linking these risks to the company's corporate strategies, strategic objectives and stakeholder expectations. This requires the existence of a clear corporate strategy. Key risks are those that are assumed or avoided to further or protect strategic objectives.

- *Risk tolerances:* the key metrics to measure risk as it relates to risk strategies, corporate objectives and stakeholder objectives. These metrics will likely be both internal and external.

EXHIBIT 3
In economic capital, distributions of individual risk types are combined to determine capital required to meet an EC need at the enterprise level.



Governance

Risk appetite is a corporate statement of attitude about risk taking. As such, it is something that is decided by the board of directors. As particularly evident in today's markets, effective management of risk is critical to company survival. Thus, the board needs to fully understand and provide direction for risk appetite. Management should engage the board in active discussion to define the qualitative risk appetite and quantitative corporate risk tolerances that the firm will use to guide decision making. The board should review and approve the risk appetite and risk tolerance statements so that there is greater understanding among board members of the nature and amount of risks the organization is planning to undertake in aggregate.

The process of defining, validating and refining the risk appetite will, by necessity, be iterative, and requires that the risk appetite be reviewed on a regular basis (e.g., annually).

Just as the risk appetite statement and its risk tolerances cascade down through the organization within consistent risk limits, the governance structure must support adherence to the letter and spirit of the limits. Typically overseen by a chief risk officer who is part of senior management and reports directly to the board, the whole management structure must reinforce communication of the limits and take responsibility for effective monitoring, reporting and enforcement.

Risk Culture

Risk patterns are constantly changing. For risk appetite to have meaning, it must be widely understood throughout the organization, with all eyes and ears open to changes in underlying assumptions, particularly to new events that can have extremely negative consequences. The monitoring and reporting process needs to alert risk managers to their performance against limits and permit needed adjustments to risk limits and reassessment of risk tolerances as well as the risk appetite overall.

Risk Quantification

The process of developing a risk appetite statement does not demand the most rigorous risk quantification to validate the general direction. However, the company needs to use the risk appetite statement and the quantitative indicators in the risk tolerance and risk limit statements to design a robust risk quantification process.

Economic capital is a modeling methodology that is designed to capture the total combined effects of risk-taking activity within an organization and measure the impact on economic value. It uses consistent risk volatility measures appropriate for each type of risk, including all types of risks (i.e., investments, underwriting, operational). It then aggregates the risk impacts, accounting for compounding and countercyclical effects (see *Exhibit 3* for an illustration).

There are other less complex approaches that may be appropriate for risks that can be managed without complex models. However, there is a strong trend toward the use of some form of EC modeling approach, particularly as we face the kind of extraordinary combinations of risk events in the current financial crisis (see "Preparing Economic Capital for Decision Making" on page 18 of this issue for more on EC designs).

RISK APPETITE IS THE FOUNDATION

ERM is a complex process that requires clear direction. Risk appetite is a critical link between corporate strategy and day-to-day risk assumption.

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