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Increasing the Usefulness of ERM to Insurance Companies

Jean-Pierre Berliet

Jean-Pierre Berliet, is the founder of Berliet Associates, LLC, a New York area-based advisory firm on strategy and risk management. He can be contacted at *jpberliet@att.net.*

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Background and Overview

Although many independent studies suggest that Enterprise Risk Management (ERM) may be coming of age in the insurance industry—efforts to integrate risk considerations into daily decisions appear to progress slowly and meet resistance. As a result, it is far from clear whether ERM is a factor in actual decisions and is having a beneficial impact on the financial performance of companies. In many companies, executives have also been wondering whether costs incurred to establish ERM have produced commensurate benefits.

This article is based on discussions I had with many executives of insurance companies regarding the challenges they are encountering to establish ERM and in preparing for discussions with rating agencies or regulators. Observations they shared suggest that, in many companies, the effectiveness of ERM and related risk adjusted performance measurement frameworks is impeded by design weaknesses, especially the absence of a mechanism to reconcile the solvency concerns of policyholders and the value concerns of shareholders.

Design weaknesses are an important source of resistance to ERM implementation. Some are subtle and thus often remain unrecognized. However, seasoned business executives recognize readily that decision signals from ERM can be misleading in particular situations in which these design weaknesses can have a significant impact. This generates much organizational heat and can create a dysfunctional decision environment.

Discussions with senior executives suggested that decision signals from ERM would be more credible and that ERM would be a more effective management process if ERM framework were shown to:

- Reconcile the risk concerns of policyholders and shareholders.
- Support management of operational risk.
- Produce credible and useful risk adjusted performance measures.
- Align performance metrics with management's performance measurement philosophy.
- Integrate ERM into daily management activities.

The following five sections discuss these issues and suggest action steps that insurance companies should take to establish ERM as a more robust and valuable management process.

Reconciling Risk Concerns of Creditors and Shareholders

Creditors—including policyholders and rating agencies or regulators whose mission it is to protect creditors—and shareholders are all interested in the financial health of an insurer, but in different ways. Creditors want to be assured that an insurance company will be able to honor its obligations fully and in a timely manner. For creditors, the main risk question is: what is the risk of the business? This is another way to ask whether the company will remain solvent.

Shareholders, however, are interested in the value of the business as a going concern—in how much this value might increase and by how much it might decline. For shareholders, the main risk question is: what is the risk to the business? Shareholders are interested in what ERM can do to increase and protect the value of their investment in a company. While both creditors and shareholders are interested in the tail of the distribution of financial results—as an indicator of solvency risk—shareholders are also very interested in the mean of these financial results and their volatility, which could have an adverse impact on the value of their investment.

Policyholders' and shareholders' views are different but not incompatible: a company could not stay in business if it were not able to persuade regulators that it will remain solvent and should be allowed to keep its license, or obtain from rating agencies a rating suitable for the business it writes. Its value to investors would be significantly impaired.

Insurers recognize that the main drivers of their risk profile are financial risks, including insurance risk accumulations and concentrations, and the related market risk associated with their investment activities. They understand that resulting risks are best controlled at the point of origination through appropriate controls on underwriting and pricing and through reinsurance and asset allocation strategies that limit the volatility of financial outcomes. Stochastic modeling is being used more broadly by companies to understand how such risks accumulate, interact and develop over time and to evaluate strategies that enhance the stability of outcomes. Capital adequacy is the ultimate defense against severe risk "surprises" from insurance and investment activities. It is of interest to policyholders who want to be certain to collect on their claims, but also to shareholders who want assurance that a company can be viewed as a going concern that will write profitable business in the future.

Methodologies used by rating agencies on behalf of creditors describe in detail how the rating process deals with the three main drivers (insurance risk, inverstment risk and operational risk) of a company's financial position and of the volatility (risk) of this position. In response to rating agency concerns, insurance companies focus on determining how much "economic capital" they need to remain solvent, as a first step toward demonstrating the adequacy of their capital. Analyses they perform involve calculation of the losses they can suffer under scenarios that combine the impact of all the risks to which they are exposed. This "total risk" approach and the related focus on extreme loss scenarios ("high severity/low frequency" scenarios) are central to addressing creditors' concerns.

To address the solvency concerns of creditors, rating agencies and regulators and the value risk of shareholders, insurance companies need to know their complete risk profile and to develop separate risk metrics for each group of constituents. Knowledge of this risk profile enables them to identify the

continued on page 20

Comparing Perspectives on Risk:
Policyholders vs. Shareholders

	Policyholders	Shareholders
Risk	Insolvency	Value Loss
Risk Management Objective	Protection of Capital and Ratings	Protection of Company Value
ERM Focus	Financial Risks <u>of</u> the Business	Operational and Strategic Risks <u>to</u> the Business

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Increasing the Usefulness of ERM ...
◗ continued from page 19

distinct risk management strategies that they need to maintain high ratings while also protecting the value of their shareholders' investment. Leading ERM companies have become well aware of this requirement and no longer focus solely on tail scenarios to develop their risk management strategies.

ERM frameworks must also recognize that tools and processes required to address value risk concerns of shareholders are different from those required to address solvency risk concerns of policyholders. Measuring and managing shareholders' value risks requires tools and processes capable of addressing risk issues on a "going concern" basis, including explicit consideration of operational risk, with special focus on its strategic component.

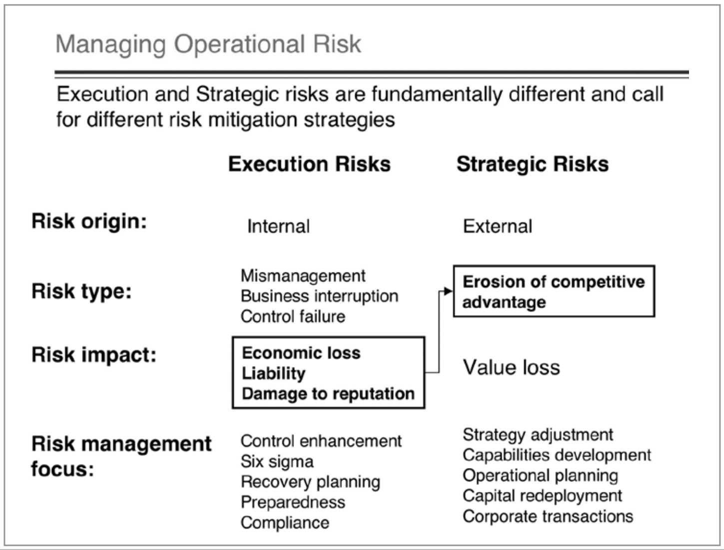
To reflect these critical considerations, companies need to:

- Create a risk measurement capability (e.g., a stochastic risk analysis model) for their business, at an appropriate level of granularity, to analyze the combined effects of underwriting and investment strategies on the company's ability to withstand plausible stress scenarios and the volatility of its earnings.
- Seek agreement on the level of earnings volatility acceptable to investors, relative to the volatility of results evinced by companies of similar capitalization.
- Assess the impact of alternative underwriting, investment, reinsurance strategies on the volatility of their financial results and capital positions and their ability to carry out their strategy on a going concern basis (e.g., over the next three or five years).
- Integrate insights from risk modeling and analysis into strategic and tactical decisions, including capacity and capital deployment across business lines or segments, underwriting/pricing, risk retention and risk transfer, asset allocation.
- Seek formal approval from the Board of Directors on proposed strategies, expected returns and the related confidence level.
- Establish processes to identify and manage exposures to material operational risks—including recovery programs and appropriate oversight and compliance mechanisms—and strategic risks that can inflict severe value losses to shareholders.

Managing Operational Risk

Operational risk comprises two different types of risks: execution risk and strategic risk.

These two categories of operational risk are important to policyholders and shareholders because they can reduce both the insurance strength and the value of insurance companies. Strategic risk stems from external changes that can undermine the profitability and growth expectations of a company's business model and strategy, and therefore have a significant impact on its value. Execution risk originates



in internal failures to manage the operations of a company competently, with the needed level of foresight, prudence, risk awareness, and preparedness. Execution and strategic risks impact insurance companies differently and, as a result, call for distinct mitigation strategies.

Execution Risks

Although financial risks are the primary determinant of the volatility of financial results of insurance companies, execution risks can also cause material adverse deviations from expected financial results.

Execution risks include, for example, economic losses resulting from

- Delays in alleviating adverse consequences of changes in the volume of activity (mismanagement).
- Events that can interrupt business operations whether man made or natural (lack of preparedness).
- Failures in controls that cause economic losses, create liabilities or damage the company's reputation (market conduct, regulatory compliance, bad faith in claim management, fraud, IT security, etc.).

Execution risks reduce current financial performance and company valuation. Company valuation is reduced investors because

- Often view negative earnings deviations as predictors of future decline in profitability and
- also performance volatilitycan derail the execution of a company's growth strategy.

Execution risks are relatively easy to identify, if not to mitigate for company management. Although stochastic modeling tools and event databases could be used to simulate the impact of execution risks on financial performance and fine tune mitigation strategies, undertaking such modeling is very costly and may be of limited value. Company management has fiduciary obligations to set in place processes designed to avoid executions risks, establish post event recovery procedures and to ensure compliance.

Both policyholders and shareholders need to note that

- Execution risks can impact financial performance significantly in the year or period of occurrence but may have a more or less pronounced impact on performance in subsequent periods and company valuation, depending on the availability of recovery strategies and the preparedness of a company.
- The impact of execution risks on a company's market value can be derived from estimated adjustments to free cash-flow projections. This is particularly significant in connection with risk events that erode a company's competitive advantage or damage its reputation. Such events can reduce the market value of a company significantly by reducing its volume of business or its pricing flexibility.

Management processes and management action —not capital—are the natural remedy for execution risks. Board of Directors or Audit Committees of such boards have become increasingly involved in exercising oversight of execution risks and their management by operating executives.

Strategic Risks

Strategic risks can undermine the economic viability of the business model and future financial performance of insurance companies. They can have a significant adverse effect on a company's insurance ratings and the credit worthiness of its debt and also its market capitalization. Strategic risks can cause otherwise solvent companies to lose a substantial share of their market value in a short time,

continued on page 22

Increasing the Usefulness of ERM ...
◗ continued from page 21

provoke legal action by disgruntled shareholders, inflict serious economic losses to Directors, senior executives and other employees, and induce potential raiders to attempt a take over.

Strategic risks are also very important to policyholders, (especially those who have bought protection against slowly emerging liabilities or policies that provide indemnification benefits in the form of annuity payments), because strategic risks that undermine the ability of companies to earn formerly expected returns also reduce the credit worthiness of these companies. Strategic risks stem from external changes in the regulations, institutional arrangements, competition, technology or demand that can erode the competitive advantage of an insurance company and its ability to operate credibly and profitably as a going concern in the future.

Strategic risks do not receive as much attention as they should because they are difficult to identify and assess, and are often viewed as "uncontrollable." At any point in time, it can be very difficult to assess whether a quantum change in any element of strategic risks is close to happening. When such a change occurs, however, its impact on future performance can cause a swift decline in the market values of a company.

To identify and manage strategic risks, companies need to:

- Conduct and challenge a periodic defensibility analysis of their business model and competitive advantage.
- Monitor market developments for emerging trends with potential adverse effects (loss of business to competitors, emergence of new risk transfer technologies or product innovations, regulatory developments, etc.).
- Develop appropriate responses to adverse developments through adjustment in capabilities, redeployment of capacity, change in composition and level of service provided, industry level lobbying of lawmakers and regulators, sponsorship of and participation in industry associations, etc.
- Communicate reasons for and objectives of needed changes to both customers and shareholders.
- Integrate the planned strategic response into action plans, budgets and objectives of business units.

Insurance companies need to include in ERM a process that provides consistent and updatable insights into strategic risks to which they are exposed. Because the insurance industry has been highly regulated, many insurance companies have not developed deep strategy development and assessment skills. It will be a challenge at first for such companies to establish strategic risk assessment frameworks powerful enough to yield robust insights but simple enough to be user friendly.

Conducting systematic reviews of strategic risks is important to all constituents. A number of companies that have already implemented comprehensive risk management frameworks have begun addressing strategic risks more formally. In one company, the CEO stated to me that he bore ultimate responsibility to shareholders for being both his company's Chief Risk Officer and Chief Return Officer.

Producing Credible and Useful Risk Adjusted Performance Measures

Risk adjusted performance measures (RAPM) such as Risk Adjusted Return On Capital (RAROC), first developed in banking institutions, or Risk Adjusted Economic Value Added (RAEVA) have been heralded as significant breakthroughs in performance measurement for insurance companies. They were seen as offering a way for risk bearing enterprises to relate financial performance to capital consumption in relation to risks assumed and thus to value creation.

Many insurance companies have attempted to establish RAROC/RAEVA performance measurement frameworks to assess their economic performance and develop value enhancing business and risk management strategies. A number of leading companies, mostly in Europe where regulators are demanding it, have continued to invest in refining and using these frameworks. Even those that have persevered, however, understand that framework weaknesses create management challenges that cannot be ignored.

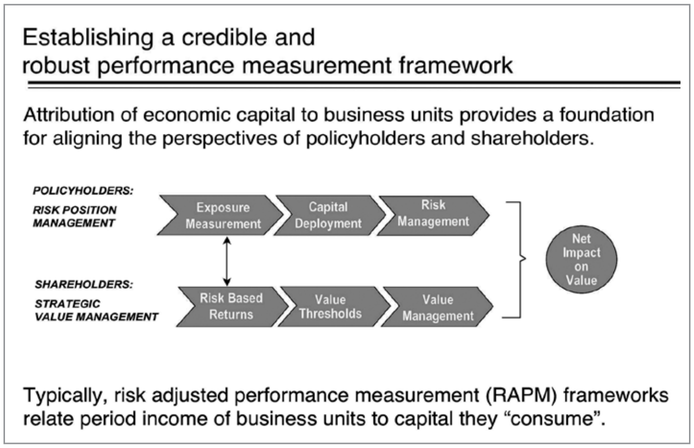
Experienced executives recognize that the attribution of capital to business units or lines provides a necessary foundation for aligning the perspectives of policyholders and shareholders.

Many company executives recognize, however, that risk adjusted performance measures can be highly sensitive to methodologies that determine the attribution of income and capital and that earnings reported for a period do not adequately represent changes in the value of insurance businesses. As a result, these senior executives believe that decision signals provided by risk adjusted performance measures need to be evaluated with great caution, lest they might mislead. Except for Return on Embedded Value measures that are comparatively more challenging to develop and validate than RAROC/RAEVA measures, risk adjusted performance measures are not typically capable of relating financial performance to return on value considerations that are of critical importance to shareholders.

To provide information that is credible and useful to management and shareholders, insurance companies need to establish risk adjusted performance measures based on:

- A (paid up or economic) capital attribution method, with explicit allowance for deviations in special situations, that is approved by directors;
- Period income measures aligned with pricing and expense decisions, with explicit separation of in-force/run-off, renewals, and new business;
- Supplemental statements relating period or projected economic performance/ changes in value to the value of the underlying business;
- Reconciliation of risk adjusted performance metrics to reported financial results under accounting principles used in their jurisdictions (GAAP, IFRS, etc.);
- Establishment and maintenance of appropriate controls, formally certified by management, reviewed and approved by the Audit Committee of the Board of Directors.

In many instances, limitations and weaknesses in performance measures create serious differences of view between a company's central ERM staff and business executives.



Capital Attribution

To be useful, a RAROC framework must be based on a credible and robust method of attributing a company's

continued on page 24

Increasing the Usefulness of ERM ...

◗ continued from page 23

capital to its individual lines of business or business segments.

Many calculation methods, often based on stochastic corporate models of insurance, have been developed for the purpose of attributing capital. Unfortunately, these methods have been shown to produce results that are sensitive to the methodology selected and to changes in risk measures and tolerance targets, correlations assumptions, the relative growth and performance of individual segments and the applicable risk assumption horizon. Instability of capital attribution results undermines the confidence that senior executives can place in RAROC as a guidepost for decisions.

Meanwhile, investors and directors insist on understanding how management "allocates" capital across activities. From their vantage point, capital "allocation" refers to how capital (as a proxy for "insurance capacity") has been or will be deployed across lines and business segments as a result of explicit decisions to seek particular exposures or types of business. They correctly see that management moves (i.e., "allocates") capital across lines and business segments whenever underwriting activities are redirected. As a result, they seek to hold management accountable and demand that executives be able to demonstrate that capital is or will be deployed toward uses in which realized returns are commensurate with risks assumed.

Performance Benchmarks

It is customary to compare RAROC performance to a company's cost of capital or to its return on equity target, depending on whether the capital attributed to business segments is the company's "economic capital" or the company's available capital measured under GAAP accounting rules. Both ways can be misleading, for different but important reasons.

Comparing RAROC to a company's cost of capital is problematic when attributed economic capital is used for calculating RAROC. Since economic capital is derived from consideration of the company's total risk and represents an amount of assets available to pay obligations to creditors, return on economic capital cannot be compared to the company's cost of capital. The company's cost of capital represents expectations of return by investors in compensation for systematic risk assumed for owning shares of the company, not for being exposed to total risk, a part of which can be diversified away. Further, this cost of capital performance benchmark should be used to assess returns on the value of investors' ownership positions rather than returns on the nominal amount of economic capital supporting a business segment or a company. Adjusting a RAROC measure to reflect the impact of these complexities and make the resulting adjusted RAROC comparable to a cost of capital estimate derived from observations in the capital market would not be straightforward, and appears to involve resolution of methodology issues for which no approach has yet been developed. Much caution is needed to use a calculated RAROC to assess financial performance and drive business and risk management decisions.

Comparing RAROC to a company's ROE target can also be misleading when the company's available capital measured under GAAP rules is used to calculate RAROC. The potential for misleading signals exists because there is no direct and simple relationship between measures of ROE under GAAP, measures of economic returns (such as GAAP income return on economic capital; economic income on the "fair value" of net assets; and return on embedded value), and a company's cost of capital. Accounting adjustments needed to reconcile risk adjusted return metrics with reported statements are neither simple nor easy to grasp intuitively. Although it would be possible to develop a mapping of GAAP ROE into corresponding measures of economic performance, I am not aware that any company has actually attempted to do this to calibrate its performance benchmarks. In any case, relating such benchmarks to a company's cost of capital with confidence would remain problematic for reasons explained in the preceding paragraph.

It is important to note that methodology issues discussed above in connection with the calculation and interpretation of RAROC would also apply to other measures of risk adjusted performance, such as RAEVA. They would not, however, apply to return on embedded value metrics (or the more recently developed return on European Embedded Value metric), based on a framework that aligns the calculation of returns with the change in value orientation of calculations made by investors in the capital market.

In a number of leading companies, difficulties involved in calculating and interpreting correctly RAROC or other measures of risk adjusted performance such as RAEVA are leading management to fall back on traditional performance measures, such as loss ratios and combined ratios or investment spreads, calibrated to reflect differences in risk levels, and to explore the feasibility of adopting additional performance metrics such as earnings at risk or embedded value at risk.

Aligning Performance Metrics with Management's Performance Measurement Philosophy

To provide useful guideposts for business decisions, the risk adjusted performance measurement framework supporting ERM needs to reflect senior management's views regarding alignment of responsibilities and performance metrics. Alignment is ensured by

- Matching of the structure of the financial management reports to the boundaries of business segment,
- Accurate attribution of capital, premium revenues, investment income and expenses to business segments, and
- Segregation in financial reports of the results associated with the current period from the impact of business written in prior years.

This alignment ensures appropriate distinctions between results of current and past decisions and a sharp focus on differences in drivers of performance.

In practice, leading companies are making explicit decisions about the design and features of the financial performance measures they develop by developing customized answers to questions such as the following:

- Are business segments to be evaluated on a stand alone basis or in a portfolio context (i.e., after attribution of a capital credit for diversification)?
- Are business segments to be evaluated as if assets they earned risk free, duration matched investment income? Or the average rate of return on the investment portfolio?
- Are business segments to be evaluated in relation to their "consumption" of economic capital? Regulatory capital? Rating agency capital?
- Should individual business segments bear the cost of "excess" or "stranded" capital?
- Should performance benchmarks vary across business segments, in line with differences in the volatility of their total risk? Or differences in exposure/premium leverage across lines? Or contribution to corporate debt capacity?
- How granular does such reporting need to be?
- Should performance metrics be developed in a policy/underwriting year framework?

continued on page 26

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Increasing the Usefulness of ERM ...
◗ continued from page 25

Would such metrics need to be reconciled with metrics based on fiscal year GAAP reported numbers?

- How should the period performance of the in-force (or liabilities run-off) be measured and separated from the performance of the "new business?" To what extent and how should the performance of "renewal" policies be separated from that of policies written for new customers in property, casualty companies?
- Should the performance reporting framework provide only period measures of performance or should it be extended to capture the longer term economic value of insurance contracts, such as the change in the embedded value of the business?
- Should the performance reporting framework be extended to incorporate stochastic performance metrics such as Earnings@Risk or Embedded Value@Risk?

Leading ERM practitioners, especially in Europe, have found that the usefulness, but also the complexity and cost of risk adjusted performance metrics are determined by the desired level of granularity in reporting, and design decisions in risk measurement, capital measurement and, financial reporting. The availability and quality of risk and financial data determine to a significant degree the level of granularity that can be built to support ERM.

ERM change management challenge:
Securing buy-in from operating units

ERM effectiveness can be hampered by differences of perspective between the corporate center and operating units.

	Corporate Center	Business Units
Primary audience	Shareholders	Policyholders
View of risk	Aggregate, across business portfolios	Customer and product related
Strategic risk decisions	Capital deployment Reinsurance Asset allocation	Product design and pricing Product mix
Operational risk decisions	Management of shared services	Management of operations and quality
Value protection focus	Strategic capital allocation	Competitive advantage

In my experience, success in establishing ERM is highly dependent on the level of effort that companies devote to designing a reporting framework that the organization can understand and embrace intuitively, without having to be trained in advanced financial or risk topics. In this area, setting out to develop the most rigorous and actuarially correct framework is likely to result in poor acceptance and much resistance on the part of decision makers who run the business day by day.

Integrating ERM into Daily Management Activities

Many senior executives recognize that establishing an ERM process is an obligation that cannot be avoided in today's environment. They also have a strong intuitive sense that the science of risk measurement and analysis offered by the actuarial profession and other specialists in risk does not yet provide robust answers to many important questions that are asked by people who manage the operations of insurance companies day by day. Differences in perspectives between executives in the corporate center and the managers of business units hamper the effectiveness of ERM. Bridging these differences is a major challenge to the establishment of ERM. This challenge is rooted in fundamental differences in the roles and responsibilities of these actors.

Corporate center executives who operate under oversight of the Board of Directors are highly sensitive to risk concerns of shareholders. It is natural for these executives to take an aggregate view of risk, across the business portfolio. They contribute to corporate performance by making strategic risk management decisions in connection with capacity deployment, reinsurance and asset allocation, and also operational risk management decisions principally in connection with the management of shared services. Their most important risk decisions, related to capital allocation, involve significant strategic risks.

By contrast, business unit managers have a different outlook. They are typically more focused on meeting the needs of policyholders. They are more likely to view risk as stemming from products and customers. From their point of view, risk management starts with product design, underwriting and pricing decisions, control of risk accumulations and concentrations, product mix and customer mix. With regards to operational risk, their activity places them on the front line to control the "execution risk" elements of operational risk. Business unit managers tend to view requests for support of ERM as distractions from serving policyholders and accomplishing their goals. They believe that they help protect shareholders from value loss by focusing on establishing and maintaining a competitive advantage.

The CFO of a very large insurance group confided to me recently that aligning the perspectives of executives at the corporate center with that of business managers was a challenge of great importance. He expressed the view that results from risk models cannot be used simplistically and that experience and business judgment are needed to guide decisions. Caution and prudence are especially important in interpreting decision signals when model results appear unstable or when complexity makes it difficult to recognize possible biases. He had become interested in using a combination of approaches to develop reliable insights into strategy and risk dynamics in his company. He was particularly focused on finding ways to bring these insights to bear on the daily activities of employees who manage risk accumulation, risk mitigation and risk transfer activities, on both sides of the balance sheet. In his judgment, borne out by other discussions and my experience with clients, ERM comes to life and creates value best when a top down framework initiated by senior management is embraced bottom up throughout the organization.

Consistent with these considerations, ERM appears to work best in companies in which operating managers have "bought in" ERM and embraced the perspective it provides. In many of these companies, one observes that:

- Risk management responsibility is owned by operating managers.
- Product definitions and investment boundaries are clear and matched to explicit risk limits.
- Policies and procedures have been co-developed with operating personnel.
- Product approval and risk accumulation are subject to oversight by the central ERM unit.
- Risk and value governance are integrated through a committee with authority to adjudicate decisions about trade-offs between risks and returns.
- Compliance and exceptions are subject to review by senior management.

Note that none of these requirements are about the technical components of risk management. Rather, they define a context for empowerment and appropriate limitations on the activities of people who run day to day operations.

Conclusion

In earlier times, when markets were both less competitive and less turbulent, experienced insurance executives could rely on insights from experience to manage their companies successfully. This is no longer the case. Some of the most successful companies in this country and in Europe have set out to move from a focus on managing individual risk silos to establishing frameworks and processes that can deal with the interaction of risks on an "integrated" basis. The companies that have made more progress have recognized that methodology weaknesses can be overcome by practical "work arounds" that keep ERM credible and relevant

continued on page 28

Increasing the Usefulness of ERM …

◗ continued from page 27

to people who run their businesses day by day. They establish structures and processes that combine actuarially based risk measurement with linkages to operations and strategy.

In practice, the integration of ERM into operations of an insurance company is easier to accomplish in areas that are managed centrally (e.g., investments, ceded reinsurance) and for which financial modeling can provide strong analytical insights. This integration is harder to accomplish with regards to capital redeployment issues and activities conducted to generate revenues and manage resulting risk accumulations and concentrations. These decisions can have a direct impact on the status and compensation of executives and can generate much resistance.

It is time for executives of insurance companies and ERM professionals to recognize that ERM frameworks are not developed enough, and may never be developed enough, to address and resolve conclusively all the risk issues that insurance companies need to address. In spite of the initial claims, this was never a realistic expectation. Many senior executives seem now ready to support less ambitious but practical approaches to ERM. ERM would be institutionalized in areas where well tested methodologies are clearly advantageous (e.g., financial risks), but would be introduced very gradually in other areas where available methodologies just do not fit well (e.g., strategic risks). In these areas, "work around" based on other disciplines would be created to provide the insights needed to support decision making.

ERM will be more effective in companies that identify and correct weaknesses in their approach. In final analysis, it is unproductive to insist upon the development of a complex and costly risk capture, measurement, and analytical infrastructure if the data collected is not used to produce insights that executives believe to be credible and relevant. Rather, it matters a great deal to design and establish an approach that can reconcile the perspectives of the most critical constituents, policyholders and shareholders, and produce results that managers can understand and find useful. With a proper focus on the data elements that illumine key material risks, simpler, better designed frameworks will help management identify and resolve important risk issues more effectively and more rapidly.

ERM professionals and executives of insurance companies need to engage in a constructive debate about the limits of risk management methodologies, to reach agreement on what we do not know and determine how best to reach the next level of effectiveness in ERM. ✦