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Enterprise Risk Management: Laying a Broader Framework for Health Care Risk Management

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Enterprise Risk Management (ERM) represents a fundamentally new way for health care organizations to conceptualize and manage risks. ERM has emerged over the past five years as a powerful financial, operational, and strategic management framework that focuses on identifying, managing, and exploiting the various risks of the corporation. At the heart of the ERM framework is the recognition that "risk is capital," and that the more traditional definitions of risk are inefficient, conceptually constricting, and are where mitigation techniques can lead to suboptimal resource allocation or the misapplication of financial or operational solutions. Equally fundamental to the ERM framework is the notion that a corporation's risks do not exist in isolation, but can be better understood in terms of their relative importance or contribution to a risk portfolio.

These important distinctions require further examination. It is important to understand that ERM is a framework or a way of thinking about risk. The assertion that risk is capital strongly suggests that risks not only have classic downside potential, but also may exhibit upside or "profitable" characteristics. Therefore, if an organization can identify and manage its risks more effectively than its competition, then the organization may be able to "exploit" its risk management approach and realize a sustainable competitive advantage.

Increasingly, financial and operational managers have discovered that health care corporations, at least in North America, organize themselves functionally into silos that, to a significant degree, operate independently. Within the silos, management may have different perceptions of risk and treat risk differently. For example, hazard risks are usually handled by the corporate risk manager; technology risks, such as Internet security, are handled by the IT department; capital acquisition and market risks (those that have a potential negative impact on earnings arising from changes in market conditions or competition) are handled by the chief financial officer; and human resources-related risks, ranging from

absenteeism to corporate benefits, health care, and retirement program management, are typically handled by the human resources department. Also, reputational, brand value-related risks, and corporate governance risks are being managed by finance and audit committees at the board of directors level. In most, if not all, of these cases, the definitions of risk, how risk is measured, and the inventory of possible mitigation solutions is varied and potentially counterproductive. For health care organizations, the ability to understand and deal with risk is extremely important. The health care market environment now requires significant financial dexterity and heightened executional nimbleness when executing strategy. Those organizations that are unable to understand and manage risks within this more chaotic and fluid environment will suffer the ultimate penalty of lost market share, increased operating costs, and eventually, loss of the franchise. A number of recent events have encouraged health care risk managers to broaden their risk management perspectives and seek organizational alliances outside their core competency or specialty. These include the Y2K event, the Health Insurance Portability and Accountability Act, and the new Patient Safety Initiatives report delivered in 1999.[1] All of these events require that risk be reassessed and redefined on a broader basis, and there is a need to capture the strengths of various disciplines to create a more comprehensive view of the organization.

Set against this backdrop, the focus of this chapter is to set the stage for the rest of the handbook by exploring the historical antecedents of ERM, illustrating how ERM is currently being deployed, and suggesting ways in which a health care organization can use ERM to better understand, manage, and exploit risk.

THE ORIGINS OF ERM

The place to begin looking for the conceptual origins of ERM lies first in understanding the conventional definitions of risk. Risk has been traditionally defined as either "speculative or pure" or "fortuitous" risks. A speculative or pure risk consists of an event(s) or action(s) for which an observable probability of financial gain or loss can be established. Investment in the stock market, particularly in 2002, represents a good example this type of risk because capital invested in the market carries a calculable probability of financial reward or loss. These rewards or losses can be observed continuously, and the probability of gain or loss can be calculated with a degree of specificity. A fortuitous risk is also an event(s) or action(s), but substantively different from speculative or pure risks, because it only generates economic loss. Fortuitous risks are generally defined as insurance risks (property, casualty, workers' compensation, hospital general liability, and medical professional). The financial performance of these risks can be quantified. More important, from a risk management perspective, a market exists that utilizes loss probabilities to calculate a risk premium, with which the risk is transferred to a third party, usually in the form of an insurance contract.

Within the context of ERM, risks can behave either speculatively or fortuitously. The notion that risk is capital underscores this point. The segregation of risks into speculative and fortuitous categories serves to make it easier for "markets" to organize around them. Corporations or governmental bodies approach the stock and bond markets around the expected behavior of investors as they evaluate the new issuance of equity stocks and bonds. The market was set up to understand and manage risk from a price perspective. So too, we observe the historical development of the insurance market as an efficient way to organize capital for the expressed purpose of understanding and transferring risk in the form of insurance policies. The economic assumption at the base of the formation of the

insurance market is that large numbers of insureds will pay defined premiums in exchange for a binding legal contract that will pay the insured in the event of a specified loss. The mathematical law of large numbers allows for the aggregation of risk and spreads the risk among a number of insurers who bear the liability in exchange for the premiums.

A fundamental economic problem presents itself when elements of a speculative risk and a fortuitous risk collide in the form of new risk categories. Operational risks, generally defined as those risks that directly affect cash flow or operational efficiency, can take on characteristics of both speculative and fortuitous risk. In these cases, managers have been traditionally forced to chose between treating the risk as one or the other.

Within the ERM framework, the definition of a risk tends to ignore the mutually exclusive speculative or pure versus fortuitous classification scheme. In an ERM context, a risk exists if it can be defined as an observable event(s) or action(s) that can have a material effect on the financial or operational performance of the organization. To be considered, a risk must first be:

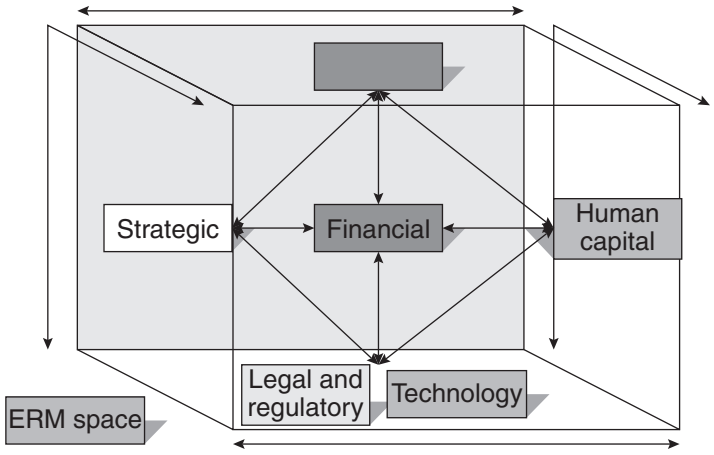
- Specifically definable
- Measurable, utilizing a standard unit of account (revenues, percentage of return on investment [ROI] or earnings before interest and taxes [EBIT], number of beds, patient visits, and so on)
- Observable over a period of time

A second major ERM tenant is that risks do not exist or behave in "isolation" but can be identified, grouped, and catalogued in risk domains. A risk domain represents a naming convention or taxonomy that allows the analyst to group risks together in much the same way biologists group species or animals or plants. The assumption within ERM is that risk domains are flexible and convenient ways to observe seemingly independent risks, yet their actual behavior may evidence material movement or organize into families or clusters that can travel across or between domains. Another way to understand domains is to view them as semipermeable membranes within and across which ERM risks or groups of risks can travel. The notion that they only exhibit downside potential (fortuitous) or can display upside and downside behavior (speculative or pure) is rendered immaterial.

The risk domains that are treated throughout the text of this book include:

- *Operational Risk*: Risks derived from an organization's core business practices, which rely on systems, practices, and people. Within this risk domain are risks associated with a diverse number of clinical areas as well as alternative delivery sites.
- *Financial Risks*: Risks associated with an organization's ability to raise capital, maintain access to capital, contracting issues, cost of risk, and evaluating vendor support. This domain includes risks eligible for risk financing treatments such as insurance and self-insurance.
- *Human Capital*: Risks associated with the acquisition, management, and maintenance of a human workforce. These risks would include workers' compensation, unionization, turnover, absenteeism, strikes, workplace violence, harassment, and discrimination. Environmental issues related to safety and security, occupational, and environmental hazards are also included within this domain.
- *Strategic*: Risks that impact the growth of an organization and include mergers, acquisitions and divestitures, advertising liability, joint ventures, and other collaborations. This domain also includes a broad spectrum of reputational risks that center on performance expectations related to customer and community relations.

EXHIBIT 1.1. One of the Central Differences Between ERM and Other Robust Risk Analysis is the Types of Risks That are Analyzed.



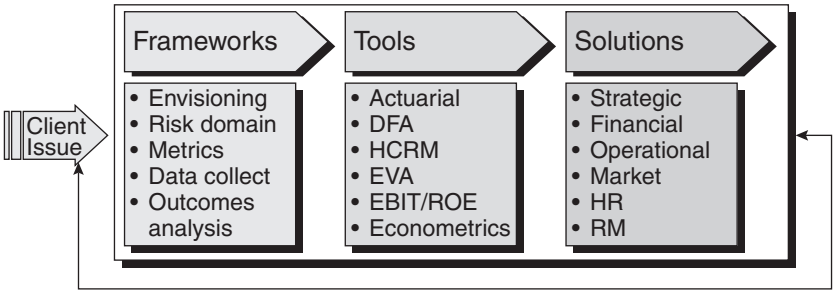
- *Legal and Regulatory*: Risks associated with the varied and complicated area of mandated health care-related rules, regulations, statues, standards, and regulations. This domain also includes risks associated with licensure, accreditation, and HIPPA.
- *Technology*: Risks associated with new technologies, inventory control, biomedical, telemedicine, e-health, e-commerce, risk management information systems, and equipment obsolescence.

Exhibit 1.1 illustrates the relationship between the various domains.

As shown in this exhibit, the ERM framework deliberately changes the way in which risks and risk domains are characterized and viewed. Within the ERM framework, risks and risk domains are viewed as a larger space, eliminating the artificial barriers that have traditionally been used to identify and contain risks.

Exhibit 1.2 provides a specific definition of ERM.

EXHIBIT 1.2. ERM Defined. ERM is a structured analytical process that focuses on identifying and estimating the financial impact and volatility of a defined portfolio of risks.



Simply stated, ERM is a structured analytical process that focuses on identifying and estimating the financial impact and volatility of a defined portfolio of risks. As such, it represents a way of recognizing and discussing risks in a very specific and robustly analytical way. ERM seeks to provide a common metric and discussion platform for senior management decision making. For the health care industry, it represents an operational and cultural framework upon which to recalibrate corporate strategy and deliver improved financial and operational results.

As Exhibit 1.2 shows, ERM focuses on health care issues utilizing three key lenses. The first is referred to as "frameworks," the way an organization defines risk, selects a meaningful core metric, and utilizes the information it gathers about risks to evaluate strategic issues. The second lens is called "tools," which are used to explore the risk framework through financial planning analysis, actuarial forecasting, dynamic financial analysis, economic value-added analysis, critical pathing, and market assessment. The third ERM lens focuses on identifying and implementing solutions to ERM-related problems.

Exhibit 1.3 illustrates the evolution between the more traditional definitions of risk management and ERM. The term evolution is used instead of replacement because with any paradigm shift,[2] the strengths of the older perspective must be accommodated and improved in the new framework. The older risk paradigm conveyed a static definition of risk, where the probability of loss was the only expected financial outcome. The key to risk management was to mitigate the probability of losses through aggressive loss control, safety, clinical risk management, training, and, where losses could not be controlled, transferred through the use of insurance. A core assumption was that an organization's future performance was a function of its historical performance, and this relationship was assumed to be linear. If one understood the loss exposures and the growth of the organization, one could use linear methods to calculate future expected losses by specific risk.

EXHIBIT 1.3. The ERM Framework Fundamentally Redefines the Concept of "Risk."

Old Risk Paradigm:	New Risk Paradigm:
• Risk is defined at the probability of an identified adverse financial or operation event.	• Risk is capital.
• Risks within a corporation can be identified and managed within corporate functional silos: – Insurance – Human resources – Finance – Safety or loss control	• Risk has both an upside and downside potential. The question is: which is most valuable to the corporation? • Risks do not exist in isolation. They cross artificial corporate structures. They should be managed that way. Hence the development of the CRO.
• Partial or full risk transfer maximizes shareholder value.	• Risks are better managed in portfolios. • There exists an "efficient frontier" upon which risk and reward is reflected in risk assumption and transfer decisions.

Consistent with this traditional definition, the older risk management paradigm assumed that risks were best handled within their functional silos. The approach further contends that successful risk mitigation within the silos were additive and provided the organization with a positive cost of risk. The problem was that the definitions of risk and the metrics used were generally different. There was no common metric tied to financial or operational performance to determine if the risk management approach was producing intended results. Under the older risk paradigm, a leap of faith was required to believe that risks were being identified and measured correctly, and that sufficient risk treatment was being applied to prevent serious or catastrophic cash flow impairment.

Another element of the traditional risk paradigm asserts that partial or full risk transfer into an organized market maximizes shareholder value. The core assumption is that properly mitigated or transferred risks remove volatility off the corporate financials and by doing so protect shareholder value. Recent capital market representations seem to suggest that the markets, particularly the rating agencies (Fitch, Moody's, and Standard & Poors), view cash flow derived from the firm's core businesses as the key economic indicator of financial health. The market (meaning the equity or stock market combined with the rating agencies) is increasingly viewing significant investments in risk transference instruments that are intended to replace existing property, equipment, and processes as potentially redundant and unnecessary risk mitigation investments. The market recognizes and understands that corporations take risks and are in potentially risky businesses. Their success, as measured in terms of long-term, positive, and growing cash flow, is what grows shareholder value. From the market's perspective, managing volatility across all risk domains is considered a superior vantage point.

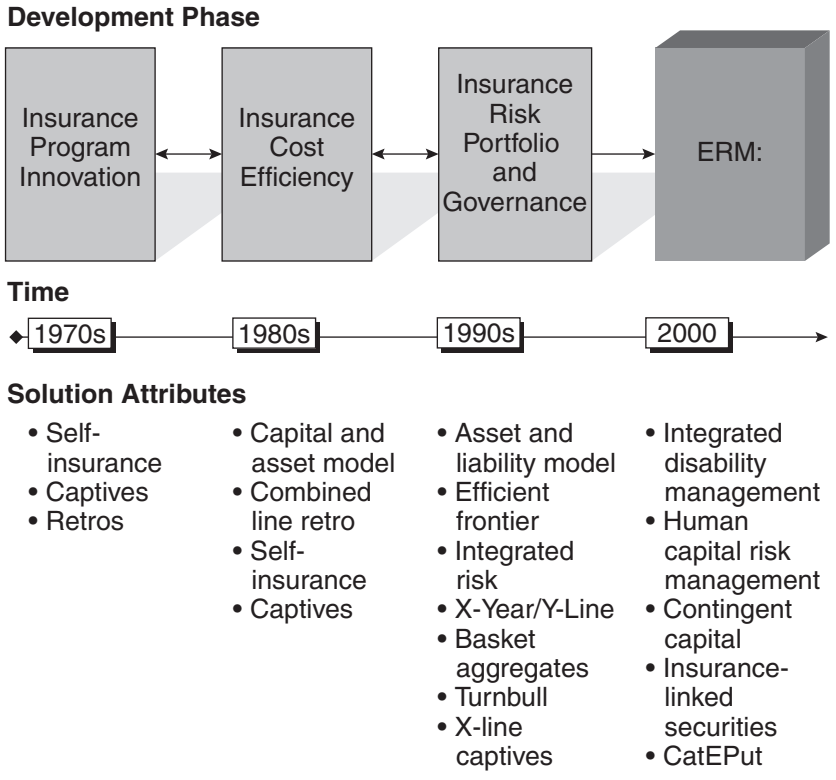
The new risk paradigm builds upon the traditional model by declaring that risk is capital. The ERM framework asserts that like other elements of the classical economic production function (capital, technology, raw inputs), risk represents a source of capital, particularly if the corporation is capable of identifying and managing its risks better than its industry grouping or immediate competitors. This perspective also assumes, as has been discussed earlier, that risks do not exist in silos, but can be observed across various domains. As a result, a new type of organizational structure, commonly called the Enterprise Risk Management, Chief Risk Office, or Enterprise Risk Committee, is gaining importance.

The notion that volatility can be better understood in terms of a portfolio reflects treasurers' and CFOs' recent adoption of sophisticated portfolio management techniques into ERM. If volatility is the key issue, then the organization can establish an "efficient frontier" upon which risks and countermeasures can be mapped and managed. Admittedly, with the exception of some of the larger financial institutions and capital markets, efficient frontier analysis has not been directly applied to more than one risk domain. However, the technology exists to collect information that will allow financial and strategic managers to better model volatility within their organization.

To a large degree, changing risk issues and market conditions have shaped the current ERM approach. Exhibit 1.4 provides a timeline of these changes, as they relate to insurable risks.

The exhibit shows the development phase and the solution attributes that have led up to the current ERM approaches since the early 1970s. In the 1970s, the insurance markets experienced some degree of program innovation. Market conditions were variable, where some lines of coverage were more difficult to purchase than others. Common risk management solutions included the use of self-insurance, captive insurance companies, and retrospectively rated programs. As the markets moved into the 1980s, a shift towards cost efficiency occurred as a reaction to an oil embargo and subsequent economic recession in

EXHIBIT 1.4. The Historical Development of ERM Has Been Shaped by the Changing Risk Issues and Market Conditions.



the United States and Asia. It was during this time that more aggressive uses of capital and asset modeling were introduced along with multiline and multiyear insurance programs. Health care programs began to transition from first-dollar programs to moderately self-insured programs. Many offshore captive insurance companies were developed specifically for medical professional liability. In the 1990s, U.S. economic improvement ignited the longest economic expansion in the nation's history. Growth models that utilized portfolio techniques were introduced along with integrated risk insurance programs. It was also during this period that new risk management standards were beginning to appear in Europe,[3] requiring all publicly traded corporations to include forward-looking risk assessments and statements in their public filings and annual reports. While these standards preceded the Enron and Global Crossing financial debacles, the seeds of a more robust ERM process were planted.

ERM methods, while clearly emerging in the mid-1990s, took on significant importance as corporations prepared for the Y2K transition. For the first time, organizations were forced to review their corporate structures and methods in anticipation of a significant operational disruption. Within this context, complex financial risk solutions involving the capital markets were introduced. Moreover, a new focus of using risk management as a competitive advantage tool surfaced. Corporations who were in highly competitive markets, such as technology, finance, and communications, were looking for sources of

differentiation. ERM became the focal point for identifying sustainable differentiation. Similarly, the same competitive conditions reside within health care, perhaps to a larger degree, with the current fragile nature of the health care delivery, cost management systems, and the changing demographic environment.

THE ERM FRAMEWORK AND APPLICATIONS

Much like other robust analytical frameworks, the ERM approach contains an extremely deep set of tools and solution opportunities. Exhibit 1.5 illustrates the many different, yet related, risk management methodologies that support the ERM process.

While the schematic may appear convoluted, there is a logical flow to the process. The ERM framework starts with an assessment phase, during which the questions about risk definition, measurement and core metrics, and ways to recover information are answered. An important ERM element is that it encourages multidisciplinary interaction within the organization. ERM practitioners often promote this process by conducting "envisioning meetings" in which a number of corporate constituencies are brought together, sometimes for the first time, to discuss risk and agree on a key risk metric. The envisioning meeting usually generates a risk task force or committee that is charged with the responsibility of implementing the ERM process.

The second major ERM component is the data collection and quantitative root cause determination phase. As the schematic demonstrates, depending upon the risk domains being evaluated or the risk management questions being answered, there are a number of methods available to the organization to identify and measure the relative performance of its risk portfolio.

The early risk identification and root cause analysis lead to the mapping of risks to corporate financial and operational materiality thresholds. At this point, the organization is learning how the risk domains interact, where risk dependencies exist and how risks are mitigated. The schematic also includes business continuity planning and human capital risk management review opportunities.

The final section of the schematic takes the work product from the previous phases and focuses on developing and evaluating appropriate financial and operational risk treatments. During this phase, risks that are better managed than the competition can be integrated into the corporation's strategic thinking process. In effect, as the ERM process identifies competitive advantages, it is up to the corporation to incorporate these advantages into workable and measurable business opportunities.

For many organizations, particularly those in the health care industry, a common problem for management is understanding where to begin employing the ERM approach. The perceived complexity is understandable given the unfamiliarity of the ERM process and the types of analytical tools shown in Exhibit 1.5. To make things easier, Exhibit 1.6 illustrates a scope of work used for one of the early and foundational ERM tools, the risk map, which is provided in Exhibit 1.7.

Risk maps are one of many methods management can use to identify and evaluate risks. Maps provide a prioritization scheme that can be used for further data collection, to establish risk mitigation strategies, define capital allocations, and exploit competitive advantages. Probably the most beneficial use for a risk map is that it serves as the basis upon which management can achieve consensus regarding risk metrics, expected risk mitigation and exploitation outcomes, and integration of ERM into the culture of the corporation.

EXHIBIT 1.5. The ERM Analytical Schematic.

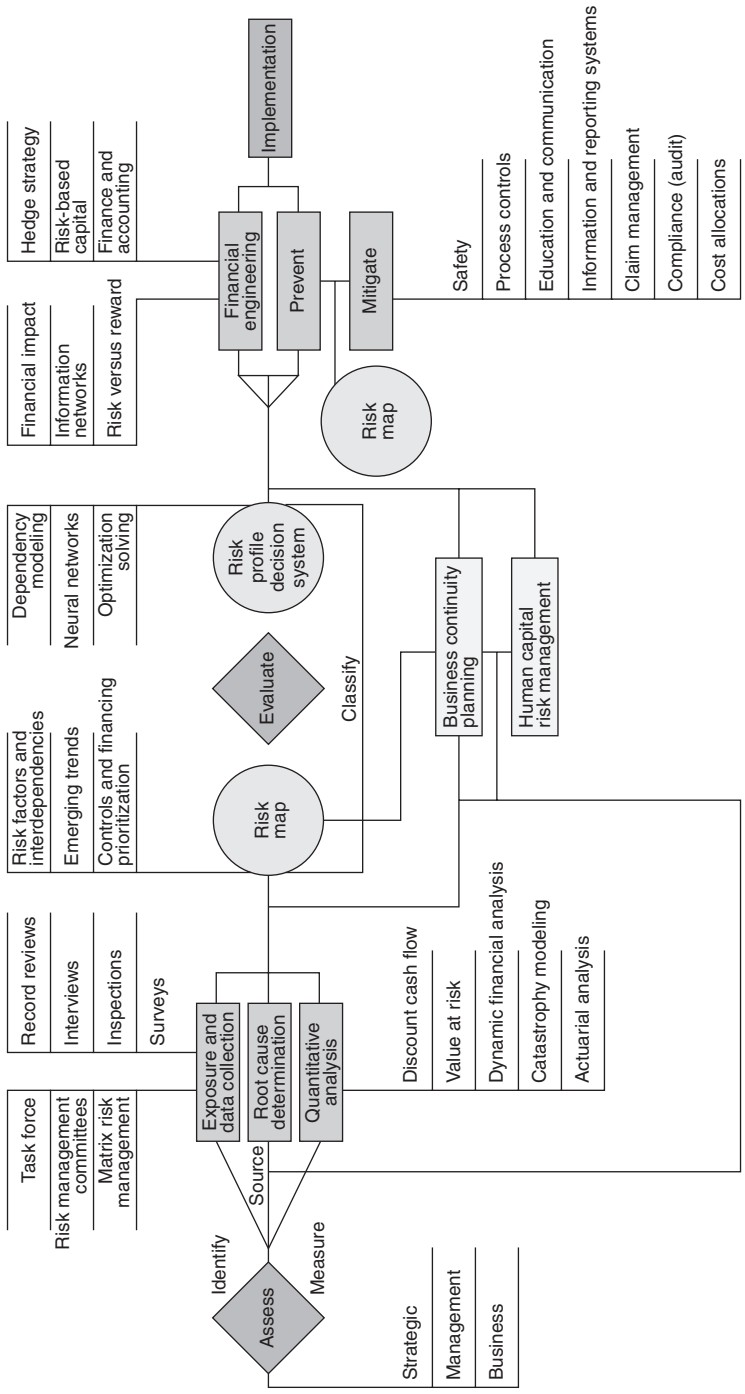
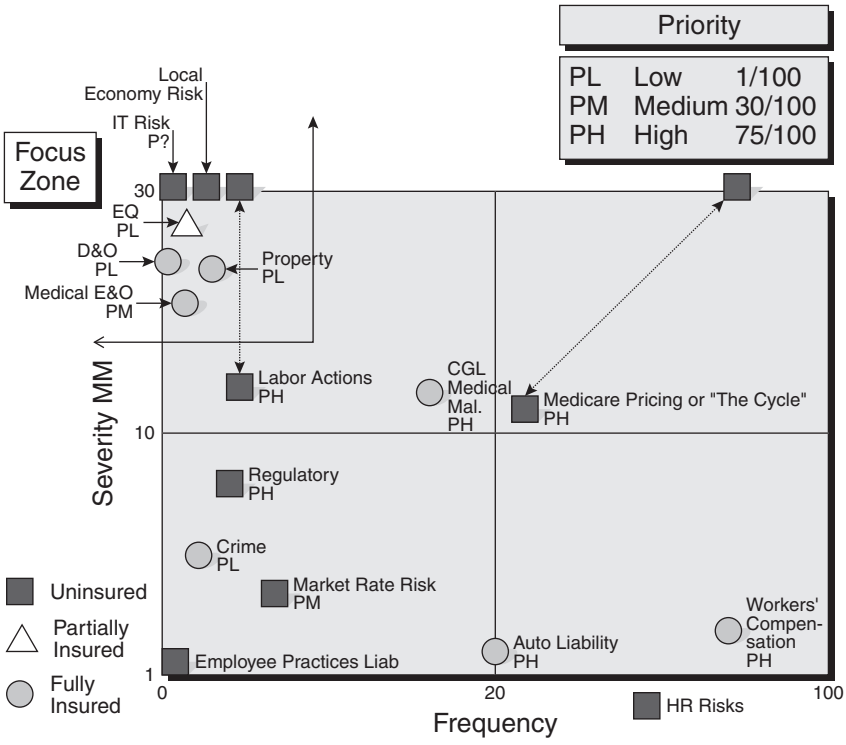


EXHIBIT 1.6. Example Scope of Work for a Risk Mapping Assignment.

Process Phase	Phase I: Model the Various Sources of Risk	Phase II: Link Risk Sources to Financial Measures	Phase III: Identify Portfolio of Risk Remediation Strategies	Phase IV: Optimize Risk Financing/ Mitigation Strategies
Key Worksteps	• Envisioning meeting • Set project mechanics • Establish project office • Scope of work validation • Initiate data retrieval • Interview document development and scheduling	• Quantitative assessment (simulation and financial modeling) • Conduct interviews • Link qualitative and quantitative assessments • Develop map metrics • Map identified risks	• Map risks against remediation methods • Determine value of remediation • Hazard risk	• Develop map-enhanced risk remediation strategy • Develop implementation method
Deliverables	• Clear scope of work • Identify key participants • Develop interview guide • Project office initiated • Data book developed • Peer review standards established • Materiality thresholds determined	• Risk map and score and strategic risk management report	• Risk map and score portfolio	• Strategic risk management report

EXHIBIT 1.7. Preliminary Risk Map.



CONCLUSION

ERM is an analytically robust and strategically focused framework that concentrates on identifying, managing, and exploiting risks to achieve competitive advantage. This new approach is receiving a strong reception because it redefines and broadens the classical definitions of risk, eliminates many of the analytical deficiencies, and allows management to achieve a clear and auditable understanding of risk. Within the health care industry, ERM is in the beginning stages of acceptance and use.

Endnotes

1. Carroll, R. "Guidance to Contributing Authors—Enterprise Risk Management and Risk Domains," August 2002, San Francisco, California, pp. 1–2.
2. Kuhn, T. S. *The Structure of Scientific Revolutions* (2nd ed.), enlarged. Chicago: The University of Chicago Press, 1970 (1962).
3. *Internal Control Guidance for Directors on the Combined Code*. The Institute of Chartered Accountants in England and Wales, Turnbull. Accountancy Books, September 1999.