Emerging Risks and Enterprise Risk Management
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Risk Management is a practice as old as mankind itself in its most fundamental objective of optimizing the outcome of risk-taking. Venturing out of the cave took courage and presumably a reasonable assessment of the risks and risk management options (I’ll leave the cave, you watch my back and be ready to run!). As in primitive times, the concepts of danger, safety, adventure, reward, predictability and stability are common in daily life and in risk management theory. Like people, organizations vary in their ability and willingness to take risks – and in their expectations regarding appropriate rewards associated with risk-taking behavior. As the complexity and pace of modern civilization has increased, the perceived value and sophistication of risk management has also evolved - not just in its use of formal tools of risk analysis, but also in terms of its importance to effective management of today’s organizations.

Enterprise Risk Management (ERM) has become a standard practice in most advanced organizations. ERM distinguishes itself from traditional risk management in several aspects, the most significant of which is that it considers risks from the enterprise perspective as opposed to focusing on risks that originate and are managed within functional silos or specific business units of an organization. Conceptually, ERM requires a mind shift to incorporate an entity-level view of risk, an understanding of risk management options and the use of consistently developed risk information to support decision making and management practices. The implicit idea is that ERM will help organizations focus on the most relevant risks to achieving an organization’s goals, both from an operational as well as a strategic perspective.

While ERM has yet to be universally accepted as an essential business discipline, ERM knowledge and experience have evolved to the point where there is a growing consensus regarding “best practices” and standards for excellence in the discipline. Generally accepted tools and resources, as well as internationally established standards, are available that can assist an organization to design and implement an ERM framework that fits well within each organization’s culture and management practices.

Unfortunately, many organizations tend to focus mainly on near-term risks without paying adequate attention to “emerging risks,” i.e., those issues that have not manifested themselves sufficiently to be managed using the tools commonly applied to more developed exposures. Emerging risks are those risks an organization has not yet recognized or those which are known to exist, but are not well understood. To quote Donald Rumsfeld, former US Secretary of Defense, “There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don’t know. But there are also unknown unknowns. There are things we don’t know we don’t know.” An ERM program that does not address the potential challenges created by the existence and development of emerging risks will not meet its goal of protecting, and generating opportunity for, the organization.

It is in this context that a discussion on emerging risks is necessary to continue the evolution of this discipline, and to help practitioners and organizations achieve full value from their investment in ERM. The recent global financial crisis – which was identified early by some risk managers as an emerging risk – raised many serious questions, some of which focused on the effectiveness of risk management practices and, more specifically, ERM. Analysis of the root causes of the resulting recession is ongoing.
Do existing ERM frameworks and tools de-emphasize or overlook emerging risks?

- Might emerging risks be de-emphasized when organizations place their focus on internal and better-known issues?
- Might emerging risks be overlooked when organizations think of “external risk” primarily in the context of macro-level global issues?
- Might these emerging risks be overlooked because an organization’s existing ERM frameworks and tools do not identify the interconnectedness of various risk factors?

The answers to these questions can provide insight into common deficiencies in existing ERM frameworks and tools. There have been several papers written on emerging risks by thought-leaders such as the Society of Actuaries, PricewaterhouseCoopers, Ernst & Young and Lloyd’s that tend to focus on macro-level global issues such as global warming, energy supply disruption and nano-technology risks, etc. These issues are important and should be assessed for potential impact on an organization’s risk profile both today and in the future. However, other emerging risk issues that are closer to home (those resulting from industry/sector prospects and trends; customer and supplier issues; strategic plans; etc.) are also important to consider. And, from a practicing risk professional’s perspective, it is often challenging to establish credible links between the “big picture” global issues and the practical impact of these issues on the risk profile of any particular organization. Without credibility built on appropriate analysis of close-to-home risks, discussion of the macro issues and the “emerging risks” may have little actionable value.

This paper will outline how ERM can address emerging risks and will:
• describe the characteristics of emerging risks; and
• describe certain best practices for identifying and assessing emerging risks.

Characteristics of Emerging Risks

Most existing ERM frameworks prioritize risks in terms of their potential impact and the likelihood of occurrence. While this is an effective technique for assessing known risks, it is not always effective in addressing emerging risks. Emerging risks differ in several key characteristics which suggest the need for additional and complementary risk analysis tools and risk management techniques.

Characteristics of emerging risks commonly include:

- **High level of uncertainty** – Both frequency and potential impact of risks are difficult to assess. Typically, emerging risks are expected to be characterized by very low frequency (“not likely to happen soon”) and relatively high impact. However, emerging risks are sometimes present at low impact levels with the potential to grow – sometimes rapidly – to a more significant level of impact.
  
  **Example:** Rapidly shifting demographic patterns
  While it is known that worldwide demographic patterns (e.g. age, ethnicity, etc.) are evolving, the impact of these changes on any enterprise can be highly uncertain as very few statistical benchmarks may exist.

- **Lack of consensus** – There is a general lack of consensus both internally (within an organization) and externally (within the public at large) regarding the drivers, impacts and likelihood of an emerging risk event occurring. This seems logical, since by definition the risk is relatively new, unknown and/or changing in some new way. As quoted in the *Survey of Emerging Risks* published by the Society of Actuaries, “assessment of emerging risks ‘requires managers and modelers to think outside their comfort zone. Often there is
There is a real possibility of an emerging risk being perceived as so unlikely to occur that it does not warrant attention (“it can’t happen here” syndrome), or is relegated to a “watch list” as a type of phantom risk that has little bearing on existing circumstances.

Example: Global financial meltdown
Even after seeing signs of recession, there was a lack of consensus regarding the inter-relations of various causal factors, or the speed of the expected decline. This lack of consensus made understanding and managing the emerging risk very challenging. Confusion over root causes of an emerging risk can also make management of the risk more difficult and may facilitate further similar losses – once again proving the adage that ‘those who do not learn from the past are destined to repeat it’.

• Uncertain relevance – Uncertainty over evolution of the risk is a hallmark of emerging risks. Little guidance is available for determining how emerging risks can be obstacles to (or accelerate) the achievement of objectives. Without being able to analyze the relevance and importance of emerging risks to a particular set of objectives, emerging risks may be perceived as too futuristic to matter for strategic planning purposes.

Example: Social media growth
Adoption of digital technologies is a trend that has been gaining traction among broad demographic groups for dissemination of information, where the speed of dissemination is almost more important than the accuracy or meaning of that data. An emerging risk inherent in this trend is that companies may become unable to properly communicate with current and future customers. Without understanding or factoring in the degree of relevance and importance of this emerging risk on an organization’s decision making and the achievement of its objectives, ignoring the trend of adopting new communication modes could prove detrimental to the company. On the other hand, if this emerging uncertainty is included in the organization’s strategic planning, the emerging risk could become an opportunity for growth.

• Difficult to communicate – It can be difficult to develop understanding about an emerging risk. There is a real possibility of an emerging risk being perceived as so unlikely to occur that it does not warrant attention (“it can’t happen here” syndrome), or is relegated to a “watch list” as a type of phantom risk that has little bearing on existing circumstances. This makes communication to senior management difficult, particularly using traditional risk management tools with their focus on silos.

Example: 9/11
Prior to the attack on 9/11, few resources were allocated to terrorism preparedness. However, after 9/11, terrorism became a top boardroom agenda item, and massive funding has been assigned to identify and respond to terrorist threats within the U.S.A. and elsewhere. While the concept of terrorism was widely known prior to September 11, 2001, the perceived possibility of a significant terrorist event within the U.S.A. was not enough to allocate adequate time, attention and other resources to prepare for it. This was an emerging risk that was largely ignored until a significant event actually occurred. The prior attack on the World Trade Center in 1993, and the increasing negativity towards the policies of that time were, in hindsight, evidence of the emerging risk.

This example underscores the difficulties in communicating the importance of risks that have not been experienced yet. The majority of risk management resources tend to be focused on current operational, financial and compliance risks. Less tangible (or already accepted) strategic risks and Taleb’s “black swan” types of low-probability risks are often under-resourced.

• Difficult to assign ownership – Emerging risks often defy easy categorization with known and accepted risks, and as a result it can be difficult to assign and/or encourage ownership of an emerging risk. Understanding and managing emerging risks often requires an interdisciplinary approach.

Example: Global warming
No one person or workgroup can sufficiently “own” this risk, as the increasing volatility of climate conditions can significantly impact personnel, shareholders, business resources, insurance markets and legal and regulatory demands. In addition, the timeline for the progression of climate change is widely unpredictable.

• Systemic or “business practice” issues – Some emerging risks can be embedded in long accepted practices, but may not be fully understood or appreciated until triggered by some external or internal change.

Example: Bundling subprime mortgages into securities
The complexity of these instruments made accurate assessment of their inherent risk very difficult. The risks became widely understood only after many of the underlying mortgages began to fail.
Organizations do not intend to fail. As Alan Lakein put it, “failing to plan is planning to fail.” This rather obvious statement provides the motivation for addressing emerging risks: as organizations gain a greater understanding of risk management, and attain more advanced competencies to manage risk, they have also developed processes, models and controls to give assurances that dramatic volatility in expected results can be avoided. While these risk management practices have proven to be useful, it is often the unexpected risk or a little understood interaction of some key risk factors that cause even the most risk-intelligent organizations to fail.

For example, the increased complexity and pace within the macro business environment creates additional risks which may not always be well understood by an individual organization, sector or market. As finances, supply chains and business processes have become increasingly intertwined and time-sensitive, it has become more critical to understand these interdependencies and the risks associated with them. These relationships bring operational benefits, but may also expose the organization to risks which manifest themselves in ways that were not previously considered. This was evident in the recent financial crisis as many companies failed – even though they had devoted substantial resources to quantifying and modeling the risks that were judged to present the most imminent threat. In some cases, the over-reliance on these models or their embedded assumptions actually provided a false sense of security that made companies like Lehman Brothers more vulnerable to emerging risks. Most importantly, as noted in the RIMS Executive Report entitled The 2008 Financial Crisis: A Wake-up Call for Enterprise Risk Management, the failure to use ERM to keep senior management informed on both risk-taking and risk-avoiding decisions ultimately created an even more uncertain environment.

The challenge for risk managers lies in uncovering these emerging risks, bringing resources to bear to address these risks, and building resiliency and sustainability for events that cannot be predicted through the usual historical analysis and risk models. Given that competitive advantage lies in addressing issues in a nimble and efficient manner, enterprise risk managers can add value to organizations by helping them communicate risk issues and allocate resources appropriately, and by turning emerging risks into opportunities.

By having a constant and robust discipline of scanning the internal and external environment for emerging trends, companies can formulate more effective strategies and build plans to execute those strategies while managing the underlying risks. Organizations that effectively manage these emerging risks can successfully outlast and outgrow their competition.

Emerging Risk - Organized Crime and Data Incursions

Data incursions have always existed since the deployment of computer systems. Initially, much of these incursions were accidental, or by inquisitive but not always malevolent computer “geeks.” However, with the increasing recognition of the value of personal data and the potential to use this data to obtain money, goods or even for money-laundering, organized crime has rapidly evolved as a primary driver of data incursions. Stolen personal data can be bought through multiple sources including some on-line auction sites (although not the usual freely-accessible public auction sites), and nearly one-third of the data on these underground sites is personal credit card details.

The organized crime approach has led to an explosion in the theft of personal data records with over 280,000,000 records stolen in 2008 compared to 230,000,000 records stolen between 2004 and 2007. In other words 25% more records were stolen in 2008 than the total stolen for the prior 4 years! The causes of the attacks to gain access to this data have shifted dramatically, with 90% of breaches in 2008 involving organized crime. For a chronological view of reported data breaches visit http://www.privacyrights.org/ar/ChronDataBreaches.htm.
Enterprise Risk Management best practices, with regard to identifying and quantifying emerging risks, continue to evolve, and will do so for quite some time. While no clear best practice standard has been identified to recognize and mitigate emerging risks, various tools and processes provide greater insight for evaluating such risks.

- **Conduct emerging risk reviews** – Organizations should establish a formal, documented process for identifying, assessing and periodically reviewing emerging risks. This process should involve the members of the management team responsible for the achievement of strategic goals, and should occur with sufficient frequency to ensure that the review of the risk environment is reasonably current. In addition, the review process should incorporate features that allow for immediate communication of new information about risk as it is discovered.

- **Integrate emerging risk review into the strategic planning process** – Emerging risks may be more distant and more strategic in nature, and therefore aligned with the organization’s strategic planning process. Conducting risk reviews in concert with the strategic planning process will help enforce a disciplined approach regarding the relevance, importance and effect of uncertainties on organizational objectives and improve management’s decision-making process.

- **Identify all assumptions and carry out disciplined assumption testing** – Establishing a disciplined approach to testing assumptions and beliefs in existing business models will help organizations avoid natural tendencies to prioritize known risks (those for which there is historical precedent and information) over emerging risks which may not be perceived as serious in the short term. The disciplined approach should include establishment of early warning signals to track the development of the emerging risks over time. For example, banks may not have taken on so much risk if they had tested their assumptions about the continuous rise in housing prices, particularly when there were signs of rising unemployment and an extraordinarily high level of leverage in the financial industry.

- **Challenge conventional thought processes and expectations** – Testing the potential impact of an emerging risk against the organization’s business model requires an assumption as to how the risk will manifest itself in terms of visibility and impact. As emerging risks are often the result of the continual evolution of the business environment, an emerging risk may manifest itself in a manner that differs from the conventional expectation. The analysis of an emerging risk should extend beyond what seems to be the most logical development path for that exposure and also consider other development paths that are possible given the characteristics of the risk, even if they seem extremely remote.

- **Apply new and developing methodologies to better understand and predict risk** – One example is how the Bayesian Belief Networks are helping to drive the estimation of risk where previous tools failed to provide a defensible approach to developing realistic risk assessment values (e.g. probability and impact). The Bayesian Belief Networks can help capture and calculate the interconnectedness of different risk factors, along with the composite impact of these risk factors which may differ significantly from their individual impact. Also, use of simulations and scenario analysis to further develop emerging risk scenarios and “what if” analyses can help organizations understand the implications of potential emerging risk events.

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**Approaching Emerging Risks**

Practitioners should balance focus on relevant macro-level trends with important micro-level organizational or industry issues that may be developing. This requires additional tools and techniques that are part of their existing risk management toolkit, though possibly in new applications where traditional approaches to risk identification and assessment may not work. Organizations are complex adaptive systems and many risks that may be measured in a traditional sense are often symptoms of more deeply rooted and less understood emerging risks.

Misplaced confidence regarding the understanding of risks through historical/statistical analysis can lead to a false understanding of the complex interplay of risk factors within the system. The key is to understand, articulate and manage risk within the risk appetite of the organization over a longer time horizon. This longer horizon not only considers known risks but the impact of emerging risks on the strategic objectives of the organization.
About the Risk and Insurance Management Society, Inc.
The Risk and Insurance Management Society, Inc. (RIMS) is a not-for-profit organization dedicated to advancing the practice of risk management. Founded in 1950, RIMS represents some 4,000 industrial, service, nonprofit, charitable and government entities. The Society serves more than 10,000 risk management professionals around the world.

About the ERM Center of Excellence
RIMS ERM Center of Excellence is the risk professional’s source for news, tools and peer-to-peer networking on everything related to Enterprise Risk Management. Whether you are initiating an ERM program within your organization, in the implementation phase or streamlining processes, in RIMS ERM Center of Excellence you will gain access to the key information and connect with the risk practitioners that will put you on the road to ERM success.

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