



Research Conducted by the ERM Initiative at NC State

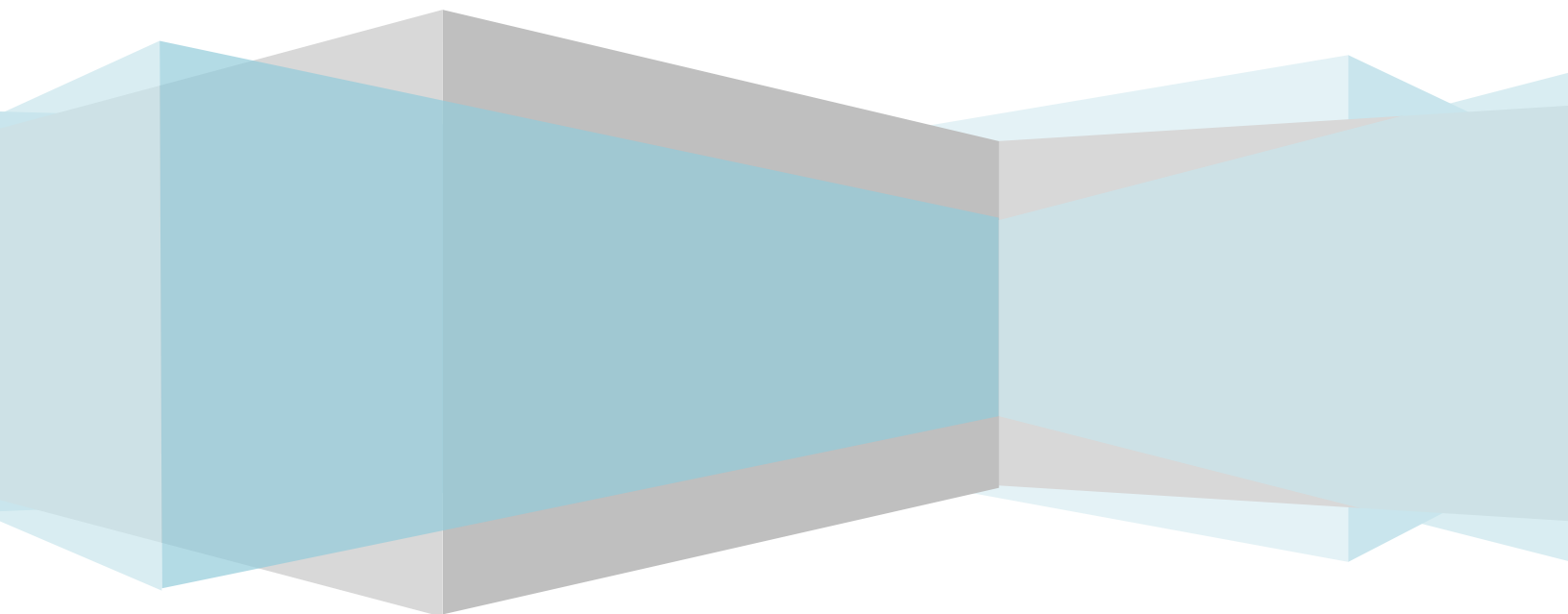
# Report on the Current State of Enterprise Risk Oversight: 3rd Edition

Conducted on Behalf of the American Institute of CPAs  
Business, Industry & Government Team

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Research Conducted in Conjunction with the

**American Institute of Certified Public Accountants (AICPA)  
Business, Industry & Government Team**

and the

**ERM Initiative at North Carolina State University**



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**August 2011**

## Report on the Current State of Enterprise Risk Oversight

Both domestic and global economic markets continue to become more complex creating challenges for senior executives and boards of directors who provide strategic leadership and governance oversight for the organizations they serve. Events, such as the Japanese earthquake, political unrest in the Middle East, and the continuing concerns about cyber threats and Wikileaks-style information disclosures, highlight the impact and speed in which emerging events can affect the strategic success of an enterprise. An increasing number of business leaders are realizing that traditional approaches to risk management require enhancement so that they are in a more-informed position to proactively manage emerging risks, especially those that are most likely to disrupt organizational objectives.

Greater focus on the need to oversee emerging risk exposures is also attracting the attention of boards of directors as expectations for more effective oversight of risk management processes have become an important component of overall governance. Boards of publicly traded companies must now provide disclosures in their annual proxy statements to shareholders about the board's involvement in risk oversight. Other governance proponents, including the National Association of Corporate Directors and COSO have issued thought-leadership guidance specifically focused on the importance of effective board of director risk oversight.

Many organizations are responding to these demands for greater risk management and oversight by implementing a holistic approach to risk management frequently referred to as "enterprise risk management" or "ERM." Despite the growing trends towards adopting a broader top-down approach to risk oversight, not all organizations have taken steps to modify their procedures for identifying, assessing, and managing risks, and in communicating risk information to key stakeholders, both internal and external to the organization.

In March 2009, we issued, in conjunction with the AICPA Business, Industry, & Government Team, our first *Report on the Current State of Enterprise Risk Management*, to provide insight on the current state of enterprise risk management based on fall 2008 survey results from over 700 senior executives representing organizations of various sizes and industries. That original report found that while organizations face a significant volume of complex risks, the state of enterprise-wide risk management was relatively immature.

In 2010, we partnered again with the AICPA Business, Industry, and Government Team to update our understanding about the current state of enterprise risk management by surveying 331 senior executives in December 2009 asking them a series of questions similar to those we asked in 2008 designed to illuminate their enterprise risk oversight process. That resulted in our issuance of the *2010 Report on the Current State of Enterprise Risk Management – 2<sup>nd</sup> Edition*.

We are pleased to have partnered again with the AICPA to complete our 3<sup>rd</sup> edition of this *Report on the Current State of Enterprise Risk Oversight*, which provides new insights about the state of enterprise risk management. This report examines responses received from 455 organizations and was conducted in spring 2011. While we observe a modest maturation of risk management processes in general, organizations continue to highlight areas where the integration of risk management and strategic planning continue to be less developed. We do observe an increased level of ERM maturity for the largest organizations (i.e., those with revenues at \$1 billion or greater), public companies, and financial services entities.

We explore numerous factors that help shed light upon the current sophistication of risk oversight, many of the current drivers within organizations that are leading to changes in their risk oversight processes, and some of the impediments to further ERM evolution. The next three pages summarize some of the key findings from this research. The remainder of the report provides additional information about other key findings and related implications for risk oversight.

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## Key Findings

- Without question, executives acknowledge that the overall risk environment is changing. Over 55% of respondents believe that the volume and complexity of risks have changed “extensively” or “mostly” in the last five years. While this is somewhat less than the 64% and 62.2% who responded in a similar manner in our 2010 and 2009 reports, the data suggests that executives are facing notable risk management challenges.
- Organizations continue to experience significant operational surprises. One-third of respondents admit they were caught off guard by an operational surprise “extensively” or “mostly” in the last five years. Another 32.8% noted that they had been “moderately” affected by an operational surprise. Together, these findings suggest that weaknesses in existing risk identification and monitoring processes may exist, given that unexpected risk events have significantly affected many organizations.
- Just over half (51%) of our respondents have no formal enterprise-wide approach to risk oversight, with only a small number (14.9%) who report they have a complete formal enterprise-wide risk management process in place. This represents a minor improvement over what we found in our 2010 report where almost 57% of our respondents had no formal enterprise-wide approach to risk oversight and in our 2009 report that reported 61.8% with no formal ERM processes in place. Thus, there has been some movement towards ERM since our 2009 report.
- There is significant variation in how organizations describe their current risk management practices and reporting procedures. Just over half (52%) either have no structured process for identifying and reporting risk exposures to the board or they track risks by silos with minimal reporting of aggregate risk exposures to the board. An additional 30.5% describe their risk management processes as informal and unstructured with *ad hoc* reporting of aggregate risk exposures to the board. Only 17.4% believe their enterprise risk oversight processes are systematic, robust, and repeatable with regular reporting of top risk exposures to the board.
- ERM maturity is linked to the size and type of organization. We found that over three-fourths (78.4%) of the publicly traded companies in our sample and 71% of the largest organizations in our sample (those with revenues greater than \$1 billion) believe they have partial or complete ERM processes in place.

- Close to a majority of respondents described their organization’s risk culture as “strongly risk averse” or “risk averse.” Given their admission of a complex risk environment and the risk averse nature of the organization’s culture, one might expect these organizations to be moving rapidly towards more robust risk oversight processes.
- Ironically, 48.2% of respondents in our full sample describe the sophistication of their risk oversight processes as “very immature” to “developing” (only 14.6% describe their risk oversight processes as “mature” or “robust”). Forty-seven percent report that they do not have their business functions establishing or updating assessments of risk exposures on any formal basis.
- Over 60% reported that management does not report the entity’s top risk exposures to the board of directors on at least an annual basis. While down from what we found in our 2010 report (almost 70% noted that management did not report the entity’s top risk exposures to the board), there is still an overwhelming majority of organizations that are not providing the board with information about the top risk exposures. However, that trend is quite different for the largest organizations and public companies, where 61.3% and 72.5% provide these reports to their boards.
- Communications from business unit leaders to senior executives are typically accomplished in *ad hoc* discussions at management meetings (69.8% of the time for the full sample). However, the largest organizations and public companies are more likely to discuss risks as a scheduled agenda discussion time at management meetings.
- Less than 20% of organizations provide explicit guidelines or measures to business unit leaders on how to assess the probability or impact of a risk event. Only the largest companies seemed to provide those guidelines more often (just under 50% of the time).
- Almost half (43.4%) admit that they are “not at all satisfied” or are “minimally” satisfied with the nature and extent of reporting to senior executives of key risk indicators. This is in line with what we found in 2009 and 2010.
- Surprisingly, in over half of the organizations (50.9%), respondents indicate that they believe risks are being effectively assessed and monitored in other ways besides ERM. The majority noted that competing priorities and insufficient resources create barriers for implementing a more enterprise-wide approach to risk management.

- Most organizations have not provided or only minimally provided training and guidance on risk management in the past two years. Thus, the overall relative immaturity of ERM processes in organizations may be due to a lack of understanding of the key components of effective enterprise-wide risk oversight.
- For the full sample, few organizations (24.3%) have created a chief risk officer (CRO) position (which is similar to the 23% reported in 2010 and 17.8% reported in 2009). The designation of a CRO is much more common for the largest organizations, public companies, and financial services entities (just under half of these organizations have CRO positions).
- About one-third (34.1%) of the boards of directors for the full sample have formally assigned risk oversight responsibility to a board committee. However, that is notably different from the largest organizations and the public companies where 74.2% and 62.7%, respectively, of the boards have made those formal assignments. The audit committee is the typical committee charged with risk oversight by the full board.
- Just under half (43.7%) of organizations surveyed do no formal assessments of strategic, market, or industry risks, and 44.2% noted that they do not maintain any risk inventories on a formal basis. Thus, almost half have no processes for assessing strategic risks. Despite that, about 51.3% of our respondents believe that existing risk exposures are considered “extensively” or “mostly” when evaluating possible new strategic initiatives. This raises the question of whether some organizations may be overconfident of their informal processes.
- Only one-third indicate that the board’s discussion of the entity’s top risk exposures is “mostly” or “extensively” done when the board discusses the organization’s strategic plan. So, most organizations indicate little if any explicit discussion of the top risk exposures as part of the development of the strategic plan. There appears to be a noticeable disconnect about the importance of integrating risk oversight with strategic planning. It may be true that risk management continues to be perceived as a compliance or bureaucratic exercise within many organizations.
- Two-thirds responded to the question “To what extent do you believe the organization’s risk management process is a proprietary strategic tool that provides unique competitive advantage?” by indicating “not at all” or “minimally.” Thus, many fail to appreciate the potential strategic value a risk management process could bring.

The remainder of this report provides more detailed analysis of these and other key findings.


## Overview of Research Approach

This study was conducted by research faculty who lead the Enterprise Risk Management Initiative (the ERM Initiative) in the Poole College of Management at North Carolina State University (for more information about the ERM Initiative please see <http://www.erm.ncsu.edu>). The research was conducted in conjunction with the American Institute of Certified Public Accountants' (AICPA) Business, Industry, and Government Team. Data was collected during April and May 2011 through an online survey instrument electronically sent to members of the AICPA's Business and Industry group who serve in chief financial officer or equivalent senior executive positions. In total, we received 455 partially or fully completed surveys.<sup>1</sup> This report summarizes our findings.

## Description of Respondents

Respondents completed an online survey consisting of over 40 questions that sought information about various aspects of risk oversight within their organizations. Most of those questions were included in our two previous editions of the surveys covered in our 2009 and 2010 reports. This approach provides us an opportunity to observe any shifts in trends in light of more recent developments surrounding the board and senior executive's roles in risk oversight.

Because the completion of the survey was voluntary, there is some potential for bias if those choosing to respond differ significantly from those who did not respond. Our study's results may be limited to the extent that such bias exists. Also, some respondents provided an answer to selected questions while they omitted others. Furthermore, there is a high concentration of respondents representing financial reporting roles. Possibly there are others leading the risk management effort within their organizations whose views are not captured in the responses we received. Despite these limitations, we believe the results reported herein provide useful insight about the current level of risk oversight maturity and sophistication and highlight many challenges associated with strengthening risk oversight in many different types of organizations.



*Results are based on responses from 455 executives, mostly CFOs, representing a variety of industries and firm sizes.*

A majority of those responding (60.8%) have the title of chief financial officer (CFO) and an additional 15.7% bear the title of controller. Others respondents included the head of internal audit (2.1%), treasurer (2.1%), and chief risk officer (1.4%), with the remainder representing

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<sup>1</sup> Not all questions were completed by all 455 respondents. In some cases, the questions were not applicable based on their responses to other questions. In other cases, the respondents chose to skip a particular question.



numerous other executive positions. The mix of respondents in this year’s update is similar to those analyzed in both our 2009 and 2010 reports.

A broad range of industries are represented by the respondents. The most common industry was finance, insurance, and real estate (33.2%), followed by manufacturing (15.8%), not-for-profit (15.1%), and services (15.1%). The mix of industries is generally consistent with the mix in both our 2009 and 2010 reports.

Industry (SIC Codes)	Percentage of Respondents
Finance, Insurance, Real Estate (SIC 60-67)	33.2%
Manufacturing (SIC 20-39)	15.8%
Not-for-Profit (SIC N/A)	15.1%
Services (SIC 70-89)	15.1%
Wholesale/Distribution (SIC 50-51)	6.2%
Construction (SIC 15-17)	4.5%
Retail (SIC 52-59)	3.8%
Transportation (SIC 40-49)	2.1%
Mining (SIC 10-14)	2.1%
All Other	2.1%

A variety of sizes of companies are represented by the respondents to the survey. As shown in the table below the majority (60.9%) of companies generated revenues equal to or below \$100 million. An additional 21.8% generated revenues between \$100 million and \$500 million while 10.3% earned revenues in excess of \$1 billion. Almost all (96%) of the organizations are based in the United States.

Range of Revenues in Most Recent Fiscal Year	Percentage of Respondents
\$0 < x ≤ \$10 million	19.4%
\$10 million < x ≤ \$100 million	41.5%
\$100 million < x ≤ \$500 million	21.8%
\$500 million < x ≤ \$1 billion	7.0%
\$1 billion < x ≤ \$10 billion	8.0%
x > \$10 billion	2.3%

Throughout this report, we highlight selected findings that are notably different for the 31 largest firms in our sample, which represent those with revenues greater than \$1 billion. Additionally, we also provide selected findings for the 52 publicly-traded companies and 97 financial services entities included in our sample.

## Summary Description of Responses

Many of our questions asked respondents to provide an assessment of various risk management factors and characteristics using a 5-point scale where a score of 1 represents a response reflecting “not at all” and a score of 5 represents a response reflecting “extensively” or a similar response depending on the nature of the question.<sup>2</sup>

Not at All			Extensively	
1	2	3	4	5

## Perceptions about the Nature and Extent of Risks Organizations Face

With the volatile state of the global economy, many argue that the volume and complexity of risks faced by organizations today are at all-time highs. To get a sense for the extent of risks faced by organizations represented by our respondents, we asked them to describe how the volume and complexity of risks have increased in the last five years. Almost 16% noted that the volume and complexity of risks had increased “extensively” over the past five years. An additional 38.5% responded that the volume and complexity of risks have increased “mostly.” Thus, on a combined basis, about 55% of respondents indicate that the volume and complexity of risks have changed “mostly” or “extensively” in the last five years, which is somewhat less than, but relatively similar to, the 64% who responded in that manner in the 2010 report (62.2% in the 2009 report). Only 1.1% responded that the volume and complexity of risks have not changed at all.

We separately analyzed responses to this question for various subgroups of respondents. While the percentage of respondents from the largest organizations (those with revenues in excess of \$1 billion) who believe the volume and complexity had increased “extensively” was the same as the full sample (16.1%), more large organization respondents (45.2%) noted the increase was “mostly.” Interestingly, the percentage of respondents from public companies indicating that the volume and complexity of risks had increased “extensively” was much higher (at 31.4%) as compared to the full sample. On a combined basis, 58.9% of public company respondents noted that volume and complexity increased “mostly” or “extensively.” Similar

*The majority of respondents believe the volume and complexity of risks have increased “mostly” or “extensively” in the past five years.*

<sup>2</sup> In some cases, the 5<sup>th</sup> point response was worded differently from “extensively” given the nature of the question. In those cases, the responses were “very mature/robust,” “very satisfied,” or “very closely.” We note when those differences occurred as we report the responses in this report.

results were noted for financial services entities where 60.8% described the change in volume and complexity of risks as “mostly” or “extensively.” In summary, most leaders, regardless of type of organization, continue to believe the risks they face are complex and numerous.

Some of those risks have actually translated into significant operational surprises for the organizations represented in our survey. About 11 percent (10.8%) noted that they have been affected by an operational surprise “extensively” in the last five years and an additional 22.6% of respondents noted that they have been affected “mostly” in the last five years. An additional 32.8% responded “somewhat” to this question. Collectively, this data indicates that the majority of organizations are being affected by real risk events that emerged with unexpected frequency, consistent with what we found in our 2009 and 2010 studies.

<u>Question</u>	Description of Response (Full Sample)				
	Not at All	Minimally	Somewhat	Mostly	Extensively
<b>To what extent has the volume and complexity of risks increased over the past five years?</b>	1.1%	11.0%	33.3%	38.5%	16.1%
<b>To what extent has your organization faced an operational surprise in the last five years?</b>	5.3%	28.5%	32.8%	22.6%	10.8%

Relative to our 2009 and 2010 studies, we do not observe a reduction in the rate of operational surprises affecting organizations “mostly” or “extensively.” The responses to these two questions indicate that organizations continue to face an increasing volume of risks that are also growing in complexity and that can ultimately create significant unanticipated operational issues.

## **Embrace of an Enterprise-Wide Approach to Risk Oversight**

There have been growing calls for more effective enterprise risk oversight at the board and senior management levels in recent years. Many corporate governance reform experts have called for the adoption of a holistic approach to risk management widely known as “enterprise risk management” or “ERM.” ERM is different from traditional approaches that focus on risk oversight by managing silos or distinct pockets of risks, such as chief technology officers managing the information technology infrastructure while general counsels manage legal and regulatory risks, absent the additional step of obtaining an enterprise view of the portfolio of risks facing an organization.

The ERM approach emphasizes a top-down view of the inventory of key risk exposures potentially affecting an enterprise’s ability to achieve its objectives. Boards and senior

executives seek to obtain knowledge of these risks with the goal of preserving and enhancing stakeholder value.

To learn more about factors related to the adoption of ERM in organizations we surveyed, we asked a series of questions about the status of ERM implementation in their organizations. Because the term “ERM” is used often, but not necessarily consistently understood, we provided respondents (as we did for the 2009 and 2010 reports) the following definition of enterprise risk management, which is the definition included in the Committee of Sponsoring Organizations of the Treadway Commission’s (COSO’s) **Enterprise Risk Management – Integrated Framework**:

*“Enterprise risk management is a process, effected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.”*

**COSO’s Enterprise Risk Management – Integrated Framework (2004)**

We also emphasized to respondents key aspects of this definition by noting that ERM is a formal process; that it is enterprise-wide; and that it addresses risks in a portfolio manner, where interactions among risks are considered. We asked respondents to consider the COSO definition of ERM as they responded to a series of additional questions about the state of ERM in their organizations.

For the full sample, we found that just over one-third (35.6%) of the respondents have no enterprise-wide risk management process in place and have no plans to implement one. An additional 14.9% of respondents without ERM processes in place indicated that they are currently investigating the concept, but have made no decisions to implement an ERM approach to risk oversight at this time. Thus, on a combined basis, over half of our respondents have no formal enterprise-wide approach to risk oversight. While only a small number (14.9%) of respondents believe they have a complete formal enterprise-wide risk management process in place, this is higher than the 11% in the 2010 report and the 9% in the 2009 report who reported they had complete ERM processes in place. When you examine the trend over the

*Just over half of the organizations in the full sample have no formal enterprise-wide approach to risk oversight. However, the result is quite different for the subset of public companies where 78.4% believe they have partial or complete ERM in place.*

three year period from 2009 to 2011, it appears that there is a modest, but growing, trend towards the embrace of an ERM approach to risk oversight.

We separately analyzed the results for just the public companies represented in our sample. There is a noticeable difference in that subgroup relative to the full sample. About a quarter (23.5%) of public company respondents report they have complete ERM processes in place and an additional 54.9% disclose that they have partial ERM processes in place. In total, 78.4% of public companies state they have partial or complete ERM processes in place (as compared to 38.4% of the full sample). We also looked at the largest organizations in the sample and found that they appear to have more mature ERM processes. About one-third (32.3%) of the largest organizations report they have complete ERM processes in place and an additional 38.7% of the largest organizations state that they have partial ERM processes in place. In total, 71% of the largest organizations in our sample report that they have partial or complete ERM in place. Finally, we examined the results for those respondents at financial services, insurance, and real estate entities (hereinafter referred to as “financial services entities”). Almost 23% (22.7%) of those respondents report that their ERM processes are complete while an additional 29.9% indicated their ERM processes are partially complete.

Description of the State of ERM Currently in Place	Percentage of Respondents			
	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
No enterprise-wide management process in place	35.6%	6.5%	11.8%	16.5%
Currently investigating concept of enterprise-wide risk management, but have made no decisions yet	14.9%	3.2%	3.9%	15.4%
No formal enterprise-wide risk management process in place, but have plans to implement one	11.1%	19.3%	5.9%	15.5%
Partial enterprise-wide risk management process in place (i.e., some, but not all, risk areas addressed)	23.5%	38.7%	54.9%	29.9%
Complete formal enterprise-wide risk management process in place	14.9%	32.3%	23.5%	22.7%

The variations in results highlight that the level of ERM maturity can differ greatly across organizations of various sizes and types. While variations exist, the results also reveal that there is a notable percentage of firms in all categories that have no ERM processes or are just beginning to investigate the need for those processes.

While the vast majority of organizations in the full sample (83.5%) do not have a formal policy statement regarding its enterprise-wide approach to risk management, the presence of a formal policy is more common in the largest organizations (38.7%), public companies (43.1%), and financial services entities (28.9%).

Ironically, a majority of the respondents in the full sample indicated that their organization's risk culture is one that is either "strongly risk averse" (11.4%) or "risk averse" (40.7%). An additional 34.9% of our respondents indicated that they are in an organizational culture that is "risk neutral." Thus, it is somewhat surprising to see the overall lack of ERM maturity for the full sample given their description of organizational risk tolerance.

The greater maturity in ERM processes for larger organizations, public companies, and the financial services industry may be due to an even greater percentage of respondents who indicated their risk culture was "strongly risk averse" or "risk averse." Fifty-eight percent of the largest organizations, 65.3% of the public companies, and 56.7% of the financial services companies indicated the risk culture is "strongly risk averse" or "risk averse." Perhaps their relatively lower appetite for risk taking in those organizations is one of the drivers for more advanced ERM processes as compared to the full sample.

## State of Risk Oversight Maturity

Despite growing complexities in the risk environments for organizations in our survey and despite the fact that a majority of the entities are self-described as being "risk averse" or "strongly risk averse," the level of risk management sophistication still remains fairly immature for most responding to our survey. When asked to describe the level of maturity of their organization's approach to risk oversight, we found that 24.1% described their organization's level of functioning ERM processes as "very immature" and an additional 24.1% described their risk culture as "developing." So, on a combined basis 48.2% self-describe the sophistication of their risk oversight as immature to developing. Only 2.2% responded that their organization's risk oversight was "robust," consistent with responses noted in our 2009 and 2010 reports.

*Most organizations describe the level of ERM maturity as very immature to evolving. Few describe their processes as robust.*

	Very Immature	Developing	Evolving	Mature	Robust
What is the level of maturity of your organization's risk management oversight?	24.1%	24.1%	37.2%	12.4%	2.2%

In general, the largest organizations, public companies, and financial services entities believe their approach to ERM is more mature relative to the full sample. As shown in the table above, 14.6% of the full sample respondents describe their organization's approach to ERM as either "mature" or "robust." In contrast, 38.7% of the largest organizations, 23.5% of the public companies, and 16.5% of financial services entities indicate their ERM approaches are either "mature" or "robust."

While the level of risk oversight maturity is higher for these subsets of organizations than the full sample, it is important to note that a significant majority of these subsets of organizations do not describe their approaches to ERM as being "mature" or "robust." When you consider the results concerning the changing complexity and volume of risks facing most organizations, along with growing expectations for improved risk oversight, it is surprising that there is an overall lack of ERM maturity across many organizations.

In a separate question, we asked respondents about their current stage of risk management processes and reporting procedures. Just over half (52%) either have no structured process for identifying and reporting risk exposures to the board or they track risks by silos with minimal reporting of aggregate risk exposures to the board. An additional 30.5% describe their risk management processes as informal and unstructured with *ad hoc* reporting of aggregate risk exposures to the board. Only 17.4% believe their enterprise risk oversight processes are systematic, robust, and repeatable with regular reporting of top risk exposures to the board.

Most organizations appear to lack some of the most fundamental methodologies that would allow them to develop a consistent and reliable view of risk. For 60.5% of the organizations responding to our survey, management does not provide a report to the board of directors describing the entity's top risk exposures on at least an annual basis. Over 60% of our full sample does not maintain any risk inventories on a formal basis or they maintain risk inventories for only some of their key business functions. If they do, most indicate that they report less than 10 top risks.

*A majority of organizations do not maintain risk inventories or maintain those inventories for only some of their key business functions.*

The results are quite different for the largest organizations and public companies where 61.3% and 72.5%, respectively, are reporting the entity’s top risk exposures to the board of directors. Just over 45% of the largest organizations indicated that they maintain risk inventories at the enterprise level while around 59% of the public companies indicated they maintain risk inventories at the enterprise level. While 59.8% of financial services entities report the top risk exposures to the board, only 37.2% of those organizations maintain risk inventories at an enterprise level. So, there is notable variance in this type of risk tracking and reporting across size and industry group.

We also asked whether organizations go through a dedicated process to update their key risk inventories. As shown in the table below, there is substantial variation as to whether they go through an update process. But, when they update their risk inventories, it is generally done annually.

Frequency of Going Through Process to Update Key Risk Inventories	Percentage of Respondents			
	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
Not at all	44.9%	12.9%	9.8%	24.0%
Annually	33.1%	48.4%	56.9%	46.9%
Semi-Annually	7.6%	19.4%	15.7%	9.4%
Quarterly	9.6%	12.9%	13.7%	15.6%
Monthly, Weekly, or Daily	4.8%	6.4%	3.9%	4.1%

The majority of organizations (except for the largest ones) have not formally defined the meaning of the term “risk” for employees to use as they identify and assess key risks. If they have defined “risk,” most companies only focus on “downside” risks (threats to the organization). Very few (18.2% and 18.9%, respectively) provide explicit guidelines or measures to business unit leaders on how to assess the probability and impact of a risk event. We also found this result for public companies (where 27.5% and 34%, respectively, provide guidelines for probability and impact) and for financial services (where 22.7% and 20.6%, respectively, provide these guidelines). The largest organizations were more likely to provide guidelines to assess probability of a risk event (45.2%) or impact of a risk event (48.4%).

Most organizations (74.6%) have not provided or only minimally provided training and guidance on risk management in the past two years for senior executives or key business unit leaders. This is similar for the largest organizations (where 46.7% provided no or only minimal training and guidance), public companies (49% provide no or minimal training and guidance), and financial services (66% provide no or minimal training and guidance). Thus, the overall relative



immaturity of ERM processes in organizations may be due to a lack of understanding of the key components of an effective enterprise-wide approach to risk oversight.

There is notable variation across organizations of different sizes and types in how key risks are communicated by business unit leaders to senior executives. For the full sample, the majority (69.8%) communicate key risks merely on an *ad hoc* basis at management meetings. Only 32.9% of the organizations surveyed scheduled agenda time to discuss key risks at management meetings. The communication of key risks is more likely to be scheduled for discussion at management meetings for the largest organizations or publicly traded companies, as shown below. Written reports prepared on a monthly, quarterly, or annual basis occurred regularly across all types of organizations.

How are risks communicated from business unit leaders to senior executives? <sup>1</sup>	Percentage of Respondents			
	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
<i>Ad hoc</i> discussions at management meetings	69.8%	41.9%	43.1%	56.8%
Scheduled agenda discussion at management meetings	32.9%	51.6%	54.9%	33.7%
Written reports prepared either monthly, quarterly, or annually	37.0%	45.1%	51.0%	59.0%

<sup>1</sup> Respondents could select more than one choice. Thus, the sum of the percentages exceeds 100%.

While we do see a shift towards more scheduled agenda discussions in 2011 relative to the findings in 2010 (29% scheduled agenda time in 2010), the findings are still relatively similar across the three years that we have conducted surveys. Overall, there seems to be room for improvement in the nature of risk information being reported to senior executives. Almost half (43.4%) of our respondents admitted that they were “not at all satisfied” or were “minimally” satisfied with the nature and extent of the reporting of key risk indicators to senior executives regarding the entity’s top risk exposures. A similar level of dissatisfaction (48%) was observed in our 2010 report. In contrast, only 26.6% are “mostly satisfied” or “very satisfied” with the nature and extent of reporting of key risk indicators to senior executives.

	Not at All Satisfied	Minimally Satisfied	Somewhat Satisfied	Mostly Satisfied	Very Satisfied
How satisfied are you with the nature and extent of reporting of key risk indicators to senior executives regarding the entity's top risk exposures?	15.0%	28.4%	30.0%	21.3%	5.3%

The results for subsets of public companies and the financial services entities are very similar to the full sample results shown above. The organizations that appear to be more satisfied with the nature and extent of risk reporting are the largest organizations. One-third of the largest organizations are “not at all satisfied” or “minimally satisfied” with the nature and extent of key risk indicators reported to senior executives about the top risk exposures. But, 33.3% of the largest organizations are “mostly satisfied” to “very satisfied.”

*The most commonly stated barrier to strengthening risk management processes is the view that “risks are managed in other ways besides ERM.”*

### Impediments to Enterprise-Wide Risk Oversight

Ironically, the self-described lack of risk management maturity and the observation that many respondents have experienced actual operational surprises in the last five years do not appear to be significant motivators for organizations to make changes in risk management practices. There appear to be several perceived impediments that prevent management from taking action to strengthen their approach to risk oversight.

We asked respondents whose organizations have not yet implemented an enterprise-wide risk management process to provide some perspective on that decision. While respondents could indicate more than one impediment, the most common response (in 50.9% of the cases) was that they believe “risks are monitored in other ways besides ERM.” This strikes us as interesting and paradoxical, given the lack of risk oversight infrastructure highlighted by the data discussed in the prior pages of this report.

The next most common responses were “no requests to change our risk management approach” have been made (33.3% of respondents with no ERM process in place said this) and “too many pressing needs” keep them from launching an ERM process (noted by 32.4% of respondents without any existing ERM processes). Thirty percent of those same respondents also noted a belief that they “do not see benefits exceeding the costs.”

These findings are similar to those reported in our 2010 and 2009 report. So, there has been little change in the nature of barriers to embracing an ERM approach to risk oversight. Instead, there appears to be a strong confidence that existing risk management processes are adequate to address the risks that may arise, even though just under half of the full sample describe their risk oversight processes as very immature or minimally mature, and a large proportion of our respondents indicated an overall dissatisfaction with their current approach to the reporting of information to senior executives about top risk exposures.

Respondents provided more depth about some of the primary barriers. The table below contains a summary of those that the respondents described as a “barrier” or “significant barrier.” Competing priorities and a lack of sufficient resources appear to be the most common barriers to adopting an ERM approach to risk oversight. A lack of perceived value and a lack of visible ERM leadership among boards and senior executives also affect ERM implementation decisions. The ordering of these most common barriers is consistent with the ordering of results reported in our 2010 and 2009 reports. The results are also very similar for each of the subsets we examined (largest organizations, public companies only, and financial services).

<b>Description of Barrier</b>	<b>Percentage Believing Barrier is</b>		
	<b>“Barrier”</b>	<b>“Significant Barrier”</b>	<b>Combined Percentage</b>
<b>Competing priorities</b>	30.4%	23.4%	53.8%
<b>Insufficient resources</b>	32.1%	21.7%	53.8%
<b>Lack of perceived value</b>	24.4%	15.4%	39.8%
<b>Perception ERM adds bureaucracy</b>	21.8%	12.1%	33.9%
<b>Lack of board or senior executive ERM leadership</b>	15.5%	10.1%	25.6%
<b>Legal or regulatory barriers</b>	4.7%	0.7%	5.4%

### **Emerging Calls for Enterprise-Wide Risk Oversight**

In spite of these findings, our survey results indicate that expectations for improving risk oversight in these organizations may be on the rise. Respondents noted that for 10.1% of the organizations surveyed, the board of directors is asking senior executives to increase their involvement in risk oversight “extensively” and another 25.7% are asking for increased oversight “mostly.” Board expectations for increased senior executive involvement in risk

oversight is most dramatic for public companies and the largest organizations, as shown in the table below.

Extent to which the board of directors is asking for increased senior executive involvement in risk oversight	Percentage of Respondents			
	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
“Extensively”	10.1%	19.4%	17.6%	11.3%
“Mostly”	25.7%	38.7%	45.1%	39.2%

These expectations are possibly being prompted by increasing external pressures now being placed on boards. In general, boards and audit committees are beginning to challenge senior executives about existing approaches to risk oversight and they are demanding more information about the organization’s top risk exposures.

In addition, and perhaps due to the board’s interest in strengthened risk oversight, the chief executive officer (CEO) is also calling for increased senior executive involvement in risk oversight. Almost half (44.5%) of the respondents indicated that the CEO has asked “mostly” or “extensively” for increased management involvement in risk oversight, which is almost identical to what we saw in our 2010 report. An additional, 27.2% of our respondents indicated that the CEO has expressed “somewhat” of a request for increased senior management oversight of risks.

*Almost two-thirds of organizations experience “somewhat” to “extensive” pressure from external parties to be more transparent about their risk exposures.*

We also asked respondents to describe to what extent external factors (e.g., investors, rating agencies, emerging best practices) are creating pressure on senior executives to provide more information about risks affecting their organizations. While a small percentage (9.5%) of respondents described external pressure as “extensive,” an additional 20.4% indicated that external pressures were “mostly” and another 29.4% described that pressure as “somewhat.” Thus, on a combined basis just under two-thirds of our respondents believe the external pressure to be more transparent about their risk exposures is “somewhat” to “extensive.” Interestingly, external pressures are notably stronger for the largest organizations, public companies, and financial services entities. As the table on the next page reveals, these organizations perceived the external pressures to provide more information about risks facing the organization to be much greater than the overall sample of firms.

Extent that external parties are applying pressure on senior executives to provide more information about risks affecting the organization	Percentage of Respondents			
	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
“Extensively”	9.5%	6.5%	18.0%	17.7%
“Mostly”	20.4%	25.8%	26.0%	43.8%
“Somewhat”	29.4%	51.6%	38.0%	25.0%

Several other factors are prompting senior executives to consider changes in how they identify, assess, and manage risks. For the overall sample, respondents noted that regulator demands and a desire to better anticipate unexpected risk events are the two most frequently cited factors for increasing senior executive involvement. However, as illustrated by the table below, regulator demands, emerging corporate governance requirements, and emerging best practice expectations are notably stronger for the largest organizations, public companies, and financial services entities.

Factors “Mostly” or “Extensively” Leading to Increased Senior Executive Focus on Risk Management Activities	Percentage of Respondents Selecting “Mostly” or “Extensively”			
	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
Regulator Demands	37.5%	41.9%	52.9%	60.8%
Unanticipated risk events affecting organization	34.3%	38.8%	40.0%	39.0%
Emerging best practice expectations	31.3%	41.9%	47.1%	49.5%
Emerging corporate governance requirements	31.2%	45.1%	48.0%	43.1%

## Risk Oversight Leadership

Despite strong interest in improving senior executive leadership in risk oversight, very few organizations (24.3%) have created a chief risk officer (CRO) position to lead and coordinate the organization’s risk oversight processes. This is similar to the 23% of respondents in our 2010 report who indicated their organization has a CRO position (our 2009 report found only 17.8% had appointed a CRO). The designation of a chief risk officer is much more common for the largest organizations, public companies, and financial services entities where 41.9%, 48.1%, and 40.2%, respectively, have made such designations.

For firms with a chief risk officer position, the individual to whom the CRO most often reports is the CEO or President (55.7% of the instances for the full sample). Interestingly, for 21.5% of the organizations with a CRO position, the individual reports formally to the board of directors or its audit committee. These lines of reporting are similar to what we noted in our 2010 report.

*Few organizations have appointed an individual to serve as Chief Risk Officer (CRO); however, that designation is much more common in the largest organizations, public companies, and financial services entities.*

When you examine the largest organizations, public companies, and financial services entities separately, there are some notable differences as shown in the table below. Direct reporting to the CEO and/or President is most common for financial services firms. However, for the largest organizations and public companies more CROs report formally to the board of directors than noted in the full sample.

To Whom Does the CRO Formally Report?	Percentage of Respondents			
	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
Board of Directors or Committee of the Board	21.5%	30.8%	33.3%	15.4%
Chief Executive Officer or President	55.7%	38.5%	37.5%	61.5%
Chief Financial Officer	19.0%	23.1%	20.8%	17.9%

Some organizations choose to coordinate risk oversight using a management committee structure. We found that 34.5% of the organizations have an internal risk committee (or equivalent) that formally discusses enterprise level risks. This is an increase from the 30% we reported in 2010 and the 22% we reported in 2009. The presence of an internal risk committee was more likely to be present in the largest organizations, public companies, and financial services entities where 54.8%, 53.8%, and 54.6%, respectively, of those organizations had an internal risk committee.

Thus, when combining the 24.3% of organizations with a chief risk officer position with the 34.5% of organizations with a risk committee, over half of the organizations represented by our survey have formally designated an individual or executive committee with explicit responsibility for overseeing enterprise-wide risks.

For the relatively few organizations with a formal executive risk oversight committee, those committees met most often (46.9% of the time) on a quarterly basis, with an additional 29.2% of the risk committees meeting monthly. These results did not differ notably for the subsets of largest organizations, public companies, or financial services entities.

The officer most likely to serve on the executive risk committee is the chief financial officer (CFO) who serves on 85.5% of the risk committees that exist among organizations represented in our survey. The CEO/President serves on 66.4% of the risk committees while the chief operating officer serves on 52.7% of the risk committees. In about a third of the organizations surveyed, the general counsel, chief risk officer, and/or the internal audit officer also sit on the risk committee.

### **Board of Director Involvement in Enterprise Risk Oversight**

Many regulators are now calling for meaningful improvements in board-level risk oversight, especially as it relates to strategic risk management. In fact, the SEC's proxy disclosure rules focus explicitly on the need for greater disclosure about the board's role in risk oversight. Specifically, effective February 28, 2010, public companies began providing information in proxy statements that discusses how the company perceives the role of its board and the relationship of the board and senior management in managing the material risks facing the company. The SEC rules suggest that companies may want to address whether individuals who supervise the day-to-day risk management responsibilities report directly to the board as a whole or to a board committee and/or how the board or committee receives information from such individuals.

To shed some insight into current practices, we asked respondents to provide information about how their organization's board of directors has delegated risk oversight to board level committees. We found that only 34.1% of the respondents in the full sample indicated that their boards have formally assigned risk oversight responsibility to a board committee. This is noticeably different from the largest organizations and public companies where 74.2% and 62.7%, respectively, of those organizations' boards have assigned to a board committee formal responsibility for overseeing management's risk assessment and risk management processes. For those boards that have assigned formal risk oversight to a committee, most are assigning that task to the audit committee.

*About one-third of the boards in the full sample have formally assigned risk oversight responsibilities to a board committee; however, board delegation to a committee is noticeably more common for the largest organizations and public companies.*

In light of these formal committee assignments for oversight of the enterprise’s risk management processes, we wanted to determine to what extent the full board reviews and discusses in a specific meeting the top risk exposures facing the organizations. Surprisingly, less than half (48.8%) of those responding indicate that the full board has those discussions on a formal basis. In a separate question, we asked about the extent that the board formally discusses the top risk exposures facing the organization when the board discusses the organization’s strategic plan. We found that 8.7% of the boards do not discuss top risk exposures at all when discussing the organization’s strategy, while another 54.3% only discuss top risk exposures “minimally” or “somewhat.” Only 37% indicated those discussions about top risk exposures in the context of strategic planning are “mostly” or “extensively.”

	Not at All	Minimally	Somewhat	Mostly	Extensively
To what extent are the top risk exposures facing the organization formally discussed when the board discusses the organization’s strategic plan?	8.7%	17.4%	36.9%	25.5%	11.5%

When we separately analyzed this for the largest organizations, public companies, and financial services entities, we did find a higher percentage of respondents who indicated their boards discuss in a specific meeting the top risk exposures facing the organizations. Almost two-thirds (61.3%) of the largest organization boards have those kinds of discussions, while 74.0% of public companies and 57.9% of the financial services entities do. Despite those findings, however, over half of the largest companies, public companies, and financial services entities described the extent that the top risk exposures are discussed when the board reviews the organization’s strategic plan as “not at all,” “minimally,” or “somewhat.” This indicates that the extent of board discussions about the integration of top risk exposures in the context of the strategic plan remains relatively immature even among organizations that are perceived to be more advanced in terms of their risk oversight. Thus, there appears to be a continued disconnect between the oversight of risks and the design and execution of the organization’s strategic plan.

### Impact of Risk Oversight on Strategic Planning and Execution

The current economic crisis continues to highlight the increasing importance of more explicit focus on the interrelationship of risk taking and strategy execution. We asked several questions to obtain information about the intersection of risk management and strategy in the organizations we surveyed.



We found that 43.7% of organizations in our survey currently do no formal assessments of strategic, market, or industry risks and almost half (44.2%) noted that they do not maintain any risk inventories on a formal basis. Thus, just under half of the organizations in the full sample have no processes for assessing strategic risks. Over two-thirds (69.8%) noted that they do not have a standardized process or template for identifying and assessing risks. These results are in line with what we found in the 2009 and 2010 reports.

But, when we focus on the largest organizations, public companies, and financial services entities we do find more explicit focus on emerging strategic, market, or industry risks. Only 19.4% of the largest organizations do not formally assess strategic, market, or industry risks, whereas only 23.5% of the public companies and 25.3% of financial services entities fail to formally assess strategic, market, or industry risks.

Of those in the full sample that do attempt to assess strategic risks, most do so in a predominantly qualitative (22.5%) manner or by using a blend of qualitative and quantitative assessment tools (32.1%). This dominance of a qualitative approach holds true for the subgroups (largest organizations, public companies, and financial services entities) as well.

*Just under half of the organizations in our survey do no formal assessments of strategic, market, or industry risks.*

Similarly, 42.5% of those surveyed also fail to conduct any formal assessments of operational/supply chain related risks and 40.4% fail to formally assess reputational and political risks.

The risk areas with greater frequencies of formal assessment appear to be those related to financing/investing/financial reporting risks, information technology risks, and legal/regulatory risks. For financing/investing/financial reporting risks, 70.7% of respondents indicated that they do some form of assessment, with 41.2% indicating that their assessments of those risks are mostly quantitative. While the percentages of respondents who formally assess information technology risks and legal/regulatory risks are much higher than the percentage of respondents assessing strategic, operational/supply chain, and reputational/political risks, the assessments tend to be mostly qualitative assessments, not quantitative assessments. This is what we found in our 2009 and 2010 reports as well.

Even though the majority of organizations appear to be fairly unstructured, casual, and somewhat *ad hoc* in how they identify, assess, and monitor key risk exposures, responses to several questions indicate a high level of confidence that risks are being strategically managed in an effective manner. We asked several questions to gain a sense for how risk exposures are integrated into an organization's strategic planning and execution. About 51.3% of our

respondents believe that existing risk exposures are considered “mostly” or “extensively” when evaluating possible new strategic initiatives. Almost 30% of the respondents believe that their organization has articulated its appetite for or tolerance of risks in the context of strategic planning “mostly” or “extensively.” And, 37.6% of the respondents indicate that risk exposures are considered “mostly” or “extensively” when making capital allocations to functional units.

Extent that	Percentages		
	“Mostly”	“Extensively”	Combined
Existing risk exposures are considered when evaluating possible new strategic initiatives	37.2%	14.1%	51.3%
Organization has articulated its appetite for or tolerance of risks in the context of strategic planning	23.3%	6.3%	29.6%
Risk exposures are considered when making capital allocations to functional units	27.9%	9.7%	37.6%

What is uncertain is how respondents arrive at that level of confidence when a majority of their organizations fail to maintain any risk inventories on a formal basis, almost half do no formal assessments of risks, including strategic risks, and very few provide any guidance on how business unit leaders should assess risk probabilities or impact (18.2% report that they provide guidance on probability and 18.9% provide guidance on impact).

Responses to the question about the extent respondents believe the organization’s risk management process is a proprietary strategic tool that provides unique competitive advantage provide insight about how risk management is viewed in those organizations. Two-thirds responded to that question by indicating “not at all” or “minimally.” Thus, there may be a lack of understanding of how an effective ERM process can be informative to management as they execute their strategic plan, and/or the organization has not developed its process well enough to consider a proprietary strategic tool.

	Not at All	Minimally	Somewhat	Mostly	Extensively
To what extent do you believe the organization’s risk management process is a proprietary strategic tool that provides unique competitive advantage?	39.8%	27.0%	22.7%	8.9%	1.6%

## Linkage of Risk Oversight and Compensation

The linkage between executive compensation and risk oversight is also receiving more attention. In fact, the SEC's proxy disclosure rules require public companies to provide information about the relation between compensation policies and risk management and risk-taking incentives that can affect the company's risks, if those compensation policies and practices create risks that are reasonably likely to have a material adverse effect on the company. Shareholder activism and negative media attention are also creating more pressure for boards of directors to consider how existing compensation arrangements might contribute to excessive risk-taking on the part of management.

*Most organizations do not include risk management activities as an explicit component in determining management compensation.*

Emerging best practices are identifying ways in which boards can more explicitly embed risk oversight into management compensation structures. Ultimately, the goal is to link risk management capabilities to individual performance assessments so that the relationship between risk and return is more explicit. For enterprise-wide risk oversight to be sustainable for the long term, members of the management team must be incented to embrace this holistic approach to risk oversight. These incentives should be designed to encourage proactive management of risks under their areas of responsibility as well as to enhance timely and transparent sharing of risk knowledge.

We asked respondents about the extent to which risk management activities are an explicit component of determining management performance compensation. We found that in 33.8% of the organizations surveyed, risk management is "not at all" a component of the performance compensation and for another 32.2% the component is only "minimally" considered. Thus, in two-thirds of the organizations surveyed, the extent that risk management activities are an explicit component in determining management compensation is non-existent or minimal.

While the largest organizations, public companies, and financial services entities are more likely to factor risk management activities into performance compensation, around half of those subsets of our sample are "not at all" or only "minimally" doing so as illustrated by the table on the next page. The increasing focus on compensation and risk-taking should lead more organizations over time to consider modifications to their compensation policies and procedures.

Percentage of Respondents Selecting “Mostly” or “Extensively”				
To what extent are risk management activities an explicit component in determining management performance compensation?	Full Sample	Largest Organizations (Revenues >\$1B)	Public Companies	Financial Services
Not at All	<b>33.8%</b>	12.9%	17.6%	19.6%
Minimally	<b>32.2%</b>	32.3%	33.3%	32.0%

## Risk Disclosures

For the subset of publicly traded companies, we asked about the extent that the organization’s public disclosures of risks in their Form 10-K filing had increased in the past five years. We found that one-third (33.3%) believed their disclosures had changed “mostly” while an additional 25.5% believed their disclosures had changed “extensively.” We find these rates of change in disclosure noteworthy given that those same organizations indicated that the extent to which the volume and complexity of risks had increased over the past five years was “mostly” for 27.5% and “extensively” for 31.4%. Thus, the realization that the organization’s risk profile has changed is also affecting its risk disclosures in the Form 10-K.

## Summary

While we do notice a modest trend towards more advanced enterprise-wide risk oversight from 2009 through 2011, most of the key elements of effective ERM are at best moderately mature. What we do observe is that the largest organizations, public companies, and financial services entities are more advanced in their risk oversight processes than the full sample of organizations. Thus, enterprise-wide risk management maturity does vary across different sizes and types of firms.

Despite the growing demand for more effective risk oversight that has emerged from the recent financial crisis, including new SEC disclosure requirements, the level of enterprise-wide risk oversight across a wide spectrum of organizations remains fairly immature. Most organizations have still not fully embraced the need for a top-down, enterprise-wide perspective of risk oversight. Results from all three years of our surveys continue to find that the approach to risk oversight in many organizations continues to be *ad hoc* and informal, with little recognized need for strengthened approaches to tracking and monitoring key risk exposures, especially emerging risks related to strategy. The results from the survey suggest there may be an urgent need for some entities to evaluate existing risk management processes in light of perceived increases in the volume and complexity of risks and operational surprises being experienced by management.

Our report highlights several areas that offer opportunities for improvements in risk oversight and the potential danger of an apparent overconfidence in the effectiveness of less formal or *ad hoc* approaches to risk management. Organizations may need to begin with some basic risk management fundamentals to ensure that senior management is explicitly charged with identifying and assessing key risk exposures and that there is a disciplined, structured process that leads to consistent risk identifications and measurements at the top of the organization. As expectations for more effective enterprise-wide risk oversight continue to unfold, it will be interesting to continue to track changes in risk oversight procedures over time.

### Author Bios

All three authors serve in leadership positions within the Enterprise Risk Management (ERM) Initiative at NC State University (<http://www.erm.ncsu.edu>) The ERM Initiative provides thought leadership about ERM practices and their integration with strategy and corporate governance. Faculty in the ERM Initiative frequently work with boards of directors and senior management teams helping them link ERM to strategy and governance.

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**Bruce C. Branson, Ph.D.**, is a professor of accounting and associate director of the Enterprise Risk Management (ERM) Initiative at NC State University. His teaching and research is focused on financial reporting and includes an interest in the use of derivative securities and other hedging strategies for risk reduction/risk sharing. He also has examined the use of various forecasting and simulation tools to form expectations used in financial statement audits and in earnings forecasting research. He earned his Ph.D. at Florida State University.

**Bonnie V. Hancock, M.S.**, is the executive director of the Enterprise Risk Management (ERM) Initiative, and is also an executive lecturer in accounting at NC State's Poole College of Management. Her background includes executive positions at both Progress Energy and Exploris Museum. She has served as president of Exploris, and at Progress Energy, has held the positions of president of Progress Fuels (a Progress Energy subsidiary with more than \$1 billion in assets), senior vice president of finance and information technology, vice president of strategy and vice president of accounting and controller. She currently serves on the board of directors for AgFirst Farm Credit Bank and Powell Industries.

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