

# Who Reads What Most Often? A Survey of Enterprise Risk Management Literature Read by Risk Executives

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*This study provides the results of a survey on the most important risk literature read by executives working in the area of enterprise risk management, and it highlights excellent opportunities for academics to closely collaborate with practitioners to conduct research in these key areas of need. We discuss problems and challenges risk executives have encountered that were not addressed in the literature. Overall, the key findings of our survey are as follows: First, surprisingly, COSO (Committee of Sponsoring Organizations of the Treadway Commission) was not considered a key source of information and guidance. Second, major challenges still remain for new implementers. Third, much more work is needed in the areas of research and case studies so that risk executives can learn from the experiences of others who have successfully implemented enterprise risk management. Fourth, many areas clearly remain to be explored and discussed before a common understanding or methodology for enterprise risk management could be considered to be in place; and fifth, we find that experienced risk executives are not only much more familiar with the literature, but they also find publications about 'risk in general' very useful at early and advanced stages of enterprise risk management implementation.*

## I. Introduction

■ Enterprise risk management (ERM) is an important discipline that is gaining popularity and recognition, both as a governance best practice and as “just good management”. More and more risk executives in related roles are getting involved or are being assigned the challenging task to implement ERM.

So, what exactly is meant by “enterprise risk management”? Enterprise risk management has been defined by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) as: “...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 risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.”<sup>1</sup>

The first question many beginners ask, as well as those

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<sup>1</sup> See page 2 of *Enterprise Risk Management – Integrated Framework*, Executive Summary, by COSO, September 2004.

further down the path, is: "What available research can I read to learn about this methodology or to increase my knowledge base?" There is general consensus that research and learning from others can shorten the learning curve and help avoid expensive mistakes or even the risk of failure in any project or change management initiative. Academics are entering this new field as well from a documentation and research perspective and are finding that unlike most other disciplines, there is very little already written that they can use as reference material. While a number of recent surveys have been conducted on ERM, to our knowledge no study has explored the literature that risk executives are reading nor examined the perceptions of available literature.<sup>2</sup>

This paper provides the results of a survey conducted during the Fall of 2007 by The Conference Board of Canada (CBoC)<sup>3</sup> to the member organizations of its Strategic Risk Council (SRC).<sup>4</sup> The survey served two purposes: to determine how useful risk executives find published literature about enterprise risk management and to uncover weaknesses and needs in the current resources available on this critical topic. More specifically, we investigated what leading ERM practitioners used for their research materials with a view to answering a number of research objectives such as:

1. determining ERM tools and techniques most frequently used by respondents;
2. identifying the most widely read and highly evaluated materials in the eyes of ERM practitioners;
3. assessing whether there were potential gaps in knowledge due to the unavailability of sources of reference material (e.g. such as this paper); and
4. investigating correlations between the experience of ERM practitioners or their organizations and the extent and types of research materials used.

Some of the results were indeed surprising. For example, over one-third of survey respondents had not referred to the Australian/New Zealand Risk Management Standard 4360 which had previously (since 1994) been generally considered the simplest, most convenient document on risk management.

Many Canadian ERM practitioners were seemingly not using the Canadian Risk Management Standard either.<sup>5</sup>

Based on the results of the survey, we identified the top 10 articles, the top 10 books, and the top 10 research reports available on ERM. Furthermore, we uncovered an important need for more information on ERM, especially detailed information on integrating risks, the impact of corporate culture, and actual case studies. For example, several respondents stated the following:

"There was a distinct lack of information on how to bring all the silos together - other than to say that a common reporting system and language are important."

"It was difficult to find true life examples of how the information was gathered and presented to show a greater risk picture."

"The impact of corporate culture on ERM implementation and practices is not well addressed in the literature."

Boards of directors want a risk culture that supports business growth.<sup>6</sup> According to the results of this survey, risk executives also want more information on developing the desired risk culture, particularly on maximizing opportunities and on how culture impacts the ERM process. As one director, David Yule stated in the report, *Risk, Governance and Corporate Performance*,<sup>7</sup> "Culture is an organization's most important risk management strategy." What is not a surprise, given the role of boards and the responsibilities of risk executives, is that boards do not want to be bogged down in the details of ERM, whereas risk executives are very much interested in knowing the "how to" of implementing ERM.

Of interest to risk executives is the evolution of the role of the Chief Risk Officer (CRO). This is evident from the ratings of the top 10 articles and research that risk executives have read. Boards look to their Chief Executive Officer (CEO) as having ultimate responsibility for managing risks; however, CEOs rely on their CRO for the necessary risk information and for coordinating the ERM process.<sup>8</sup> This is one of the main reasons why CROs are interested in learning how their role, responsibilities, and skills are leveraged within an

<sup>2</sup> Recent surveys on enterprise risk management include PRMIA (2008), Tonello (2007), Gates (2006), and Thiessen (2005), among others.

<sup>3</sup> The Conference Board of Canada is the foremost independent, not-for-profit applied research organization in Canada. The Conference Board of Canada helps build leadership capacity for a better Canada by creating and sharing insights on economic trends, public policy issues, and organizational performance. Its members include a broad range of Canadian organizations from the public and private sectors.

<sup>4</sup> The Strategic Risk Council (SRC) of the Conference Board of Canada helps organizations develop, implement, and sustain an enterprise-wide risk management process that is appropriate to their organization's unique set of goals, strengths, weaknesses, and structures. It provides strategic and operational insights into how organizations can establish risk management capabilities by integrating successful board and senior management governance principles with strategic planning processes.

<sup>5</sup> See the Risk Management: Guideline for Decision-Makers – A National Standard of Canada. Canadian Standards Association (1997 reaffirmed 2002) CAN/CSA-Q850-97.

<sup>6</sup> See Risk, Governance and Corporate Performance, May 2008, The Conference Board of Canada by Karen Schoening-Thiessen. This briefing captures the observations and concerns of 16 of Canada's most experienced directors of publicly held and public sector organizations. The directors were asked for their thoughts on the relationships between good governance, effective risk management, and strategic planning. The interview process produced a series of candid discussions and revealed common themes underlying a range of experiences and approaches.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

organizational structure where ERM is a key governing tool for corporate performance.

Overall, we present five key findings from our survey which are discussed in detail in this paper. The results of this study help highlight excellent opportunities for academics to closely collaborate with practitioners to conduct research in these key areas of need.

This paper proceeds as follows. Section II describes the survey methodology and how we selected the literature to include in the survey. Section III summarizes the survey results, highlights critical areas where additional information is needed about ERM, and describes our "Six Key Findings." A conclusion is provided in the final section.

## II. Survey Methodology

This survey was developed using input from several risk professionals experienced in ERM. The survey was web-based using the latest technology and was "pretested" with corporate risk executives for clarity and ease of use. During September 2007, email invitations were sent to 87 risk executives asking them to participate in the survey: 52 members of the Strategic Risk Council at the CBoC, and 35 members of the Strategic Risk Council of the U.S. Conference Board.<sup>9</sup> Only professionals with ERM experience were asked to participate and most had a high level of expertise in ERM. After a second email during October and follow-up telephone calls during October and November, 44 survey responses (37 Canadian and 7 U.S. organizations) had been received. Overall, the response rate was 50.6 %.

Regarding the survey questions, each respondent was asked to provide the following background information: organization, industry, title, area of expertise, years of experience with ERM, years organization has been implementing ERM, organization size, number of employees, scope of operations, benefits executive management stated as reasons to implement ERM, respondent's area of expertise, use of consultants, and use and benefit of COSO and other sources of ERM knowledge.

When selecting the literature to include, we conducted an extensive and exhaustive review of published material as of

Summer 2007 on the subject of ERM. To our knowledge, we considered all leading sources of published information before selecting the final set of 88 publications to include in the survey.<sup>10</sup> Appendix A lists these publications. In the survey, we asked respondents to rate ERM literature by responding to the following two questions:

1) Did you read this book/research paper/article and if so to what extent? (Note: Response choices were: 1=never heard of it, 2=heard of it, but not really read it, 3=read less than 10% of it, 4=read between 10-80%, and 5=Read more than 80%.)

2) In terms of adding value to your knowledge of ERM, how would you rate this book/research paper/article according to methodologies, tools, techniques and leading practices for ERM? (Note: Response choices were: 1=not really relevant to ERM, 2=some value but not a lot, 3=reasonably useful, 4=very good in ERM, and 5=a must read for ERM.)

Additional questions were also asked in the survey. The next section summarizes our results and highlights top needs for more relevant and useful literature on ERM.

## III. Survey Results

In this section, we first discuss background characteristics and related questions on ERM answered by the survey respondents before presenting the main objective of our survey, to determine the most useful literature read by risk executives. We wrap up the section by discussing critical areas of need in the ERM literature and highlighting the key findings of our survey.

### A. Survey Respondent Profile

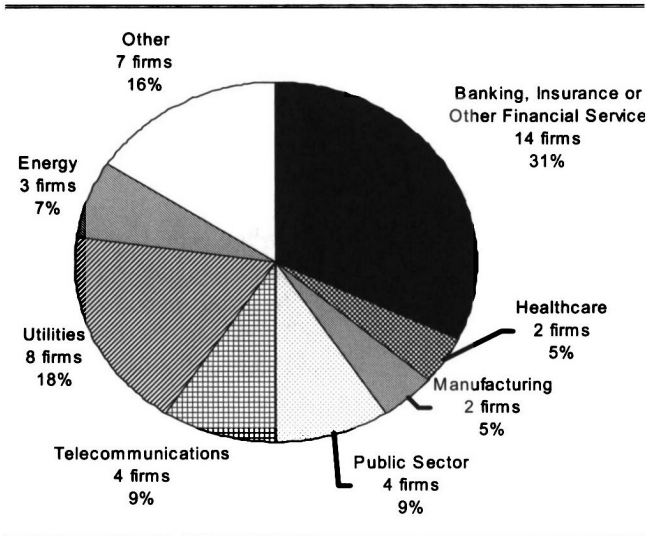
A broad range of industries were represented in the survey as shown in Figure 1: 31% in financial services, 18% in the utility sector, 9% in telecommunications, 9% in the public sector, 7% in energy, 5% in manufacturing, 5% in healthcare, and 16% in other industries. See Appendix B for a list of companies who responded to the survey and gave us permission to be identified. Since the survey was given through the CBoC, most respondents were from Canada but 16% were from the U.S. While 78% of the companies' operations were primarily in North America, 28% of the

<sup>9</sup> It is interesting to note that the Strategic Risk Council of The Conference Board of Canada has grown in memberships by over 50 % in the last 2 years. Clearly, interest in the application of ERM is growing rapidly in Canada, and most likely elsewhere.

<sup>10</sup> We also included a few books in the survey on the topic of risk, such as *Art of the Long View* and *Foiled by Randomness*, that did not specifically mention ERM.

**Figure 1. Industry Affiliation of Survey Respondents**

This figure lists the number of firms and the percentage of total firms by industry that responded to the survey.



respondents worked for companies that had operations in at least one international country (and almost all had global operations). Most organizations participating in the survey were very large and the average size was approximately \$27 billion in total assets and 18,000 employees. The largest organization participating was General Motors. However, a few small businesses participated in the survey: approximately 10% of the survey respondents had fewer than 100 employees but only one organization had assets less than \$1 million.

Table I lists the numbers of years of experience that survey respondents and companies have had with ERM. As shown, all respondents had some experience, and 95% listed risk management as their primary area of expertise. The mean ERM experience was 5.3 years and approximately 40% of the respondents had over 5 years of experience. Only one respondent had less than one year of experience with ERM and 11% had less than two years of experience. The respondents had more years of ERM experience on average than their organizations (5.3 years versus 3.8 years). Most companies who responded have implemented ERM to a certain extent. Approximately 88% of companies had over 1 year of experience and over 60% had at least 3 years of experience. These results are consistent with other surveys indicating companies are moving toward more advanced stages of ERM as external stakeholders, rating agencies, and analysts expect more information on risk management techniques being employed.<sup>11</sup>

<sup>11</sup> See Tonello (2007), page 26.

**Table I. Experience with Enterprise Risk Management**

This table summarizes the experience survey respondents and companies have with ERM. The responses are listed as a percentage of total responses.

	For how many years have you been practicing ERM?	Number of years your organization has been implementing ERM
0 years	0 %	2.3 %
>0 to 1 year	7.0%	9.3 %
>1 to 3 years	37.2%	25.6%
>3 to 5 years	16.3%	39.5%
>5 years	39.5%	23.3%
<i>Mean</i>	<i>5.3 years</i>	<i>3.8 years</i>

Most survey respondents held high positions within the organization: over one-half (52.3%) held positions at the Chief Risk Officer level or higher. The largest group in the survey held the title of Director (31.8%) while 9.1% were Chief Officers (not risk). Most respondents reported to top officials of the organization: 31% to the Chief Financial Officer and 26.2% to the Chief Executive Officer.<sup>12</sup> It is interesting to note that 24% stated they also reported functionally to the audit committee.

Table II lists the most frequently cited benefits by executive management of implementing ERM. Respondents were allowed to list multiple benefits. As shown, the most cited benefit is "Better understanding and management of risk (including an integrated view)".<sup>13</sup> This benefit, cited by 44.7% of respondents, shows a high level of acceptance of ERM and suggests companies genuinely understand the importance of this advanced risk process. The second most cited reason (18.4%), "Improve corporate governance or meet board requirements", reflects recent regulatory changes and the increased emphasis on corporate governance. Another survey by Gates (2006) has found a higher percent (66%) listing this

<sup>12</sup> In the report ERM: Inside and Out, 2005 by The Conference Board of Canada, (pp.8-9) there were 28% of CROs who reported directly to the CEO and 21% to the CFO. What is interesting to note is that the ERM: Inside and Out report had close to double the number of respondents (86 in total versus 44 for this survey); thereby showing significant involvement of the CFO in ERM and an increase of reporting to the CFO as well. The statistics also prove that ERM is on the rise as risk executives report directly to the CEO.

<sup>13</sup> We also analyzed the response to this question by industry but do not report the results separately. While at least one firm in each major industry listed this response, all utilities that responded, except for one, listed this benefit.

**Table II. Drivers for Implementing Enterprise Risk Management**

This table lists the most frequently cited responses to the open-ended question: What benefits has executive management stated as reasons to implement ERM?

Benefits of Enterprise Risk Management	% of Firms Responding (38)
Better understanding and management of risk (including integrated view)	44.7
Improve corporate governance or meet board requirements	18.4
Assist in allocation of resources	15.8
Effective decision-making	15.8
Minimize surprises	13.2
Improve risk reporting and risk controls	10.5
Achieve financial stability or better risk-adjusted returns	10.5
Improve credit rating	10.5
Compliance	10.5
Enhance shareholder or firm value	7.9
Create a risk aware culture	7.9
Best practices or achieve excellence	5.3
Support business or strategic plan	5.3

benefit.<sup>14</sup> Given that 84 % of the organizations in our study are Canadian and are less likely to be required to comply with Sarbanes-Oxley (SOX), the second place ranking is not surprising.<sup>15</sup> It is interesting to note that 10.5% listed improving their credit rating as a benefit of ERM. We expect this percentage to increase over time given that ratings agencies are now including ERM as part of their ratings process for nonfinancials.<sup>16</sup>

## B. ERM Tools and Techniques used by Respondents

Do risk executives follow COSO's ERM recommended tools and techniques? Figure 2 summarizes the survey responses. Surprisingly, 19 organizations (48.7%) responded they seldom do this, 20.5% responded "sometimes", and only

30.8 % responded "to a large extent". No organization responded "as much as possible." While COSO is the most read resource (see later discussion on this), it does not appear to be the most useful for actual practice at this time. Anecdotal input from informal surveys and roundtables indicate that COSO is written in a style that is hard to read and to absorb. It is our belief that many readers give up part way through and therefore do not refer to COSO or use its ideas in practice. However, this means that there is an important opportunity for COSO to be rewritten in the future. Protiviti's (2006) "Guide to Enterprise Risk Management: Frequently Asked Questions" seems to have garnered greater readership and to be an easier document to read and understand.

So how useful are other sources of best practices and methodology for ERM? Figure 3 answers this question for the following sources: COSO, public accounting firms and consultants, professional associations (RIMS, PRIMIA, SOA, etc), newspapers and magazines, academic journals and papers, and literature in general. Response choices were: 1=seldom; 2=fair/occasional; 3=good/frequent, and 4=as much as possible. As shown in Figure 3, risk executives rated knowledge of the literature as the highest source of guidance on ERM Practices and methodology (mean rating of 3.08), followed by professional associations as the next most useful source of information (mean rating of 2.52). Consistent with Figure 2, COSO received the lowest rating of 1.81.

How useful are consultants to the implementation of ERM? 59% of the organizations have used consultants to help with their journey in ERM. In response to the question "Do you

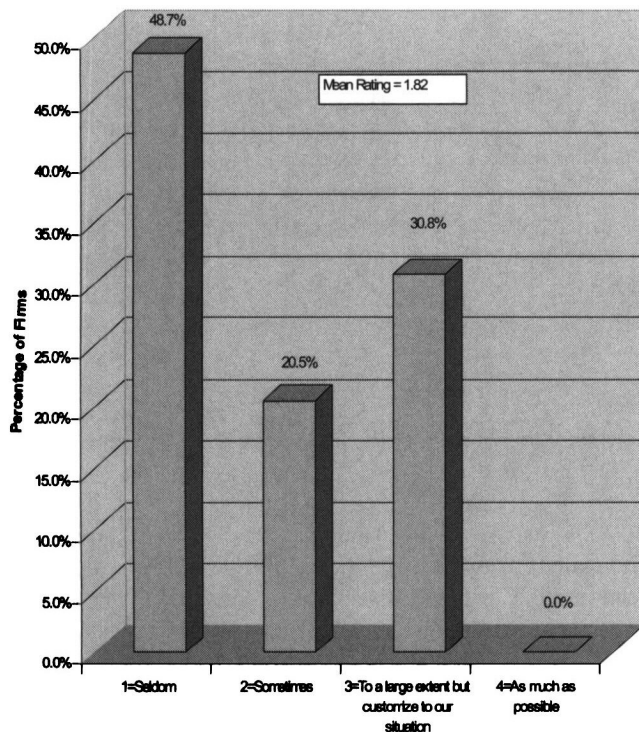
<sup>14</sup> Gates (2006) finds the most cited reason is "Corporate governance requirements" and the second most cited reason as "Greater understanding of strategic and operating risks". He points out that Canadian respondents put "Greater understanding of strategic and operating risks" at the top of their list and notes (see page 85): "... perhaps reflecting their longer experience with regulatory requirements for risk management that started in the 1990s." In Risk, Governance and Corporate Performance (2005), boards acknowledged that they predominantly view risks in two main categories: strategic and operational.

<sup>15</sup> Some Canadian companies in the sample are listed on the New York Stock Exchange and are required to comply with SOX.

<sup>16</sup> See Standard & Poor's "Enterprise Risk Management: Standard & Poor's To Apply Enterprise Risk Analysis to Corporate Ratings", May 7, 2008.

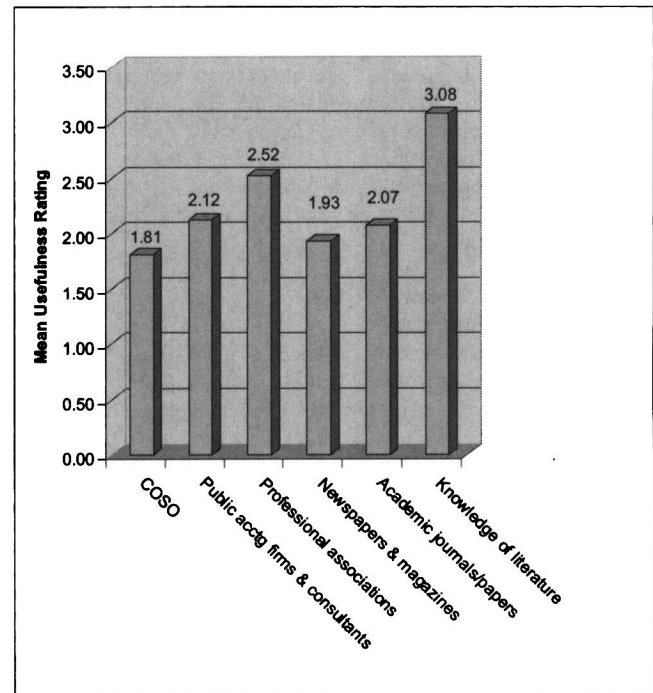
### Figure 2. Extent of Following COSO's ERM Recommended Tools and Techniques

This figure lists the responses to the question: To what extent do you follow COSO's ERM recommended tools and techniques?



### Figure 3. Usefulness of Sources of Best Practices and Methodology for ERM

This figure lists the mean response rating to the question: How useful are the following sources of best practices and methodology for ERM? Ratings response categories were: 1=Seldom, 2=Fair/Occasional, 3=Good/Frequent, and 4=As much as Possible.



feel you have learned more from reading and researching ERM than from consultants?”, it appears respondents find the literature more helpful: 53% responded “yes,” 39% responded “somewhat” and 8% responded “no,” Respondents were allowed to comment regarding their responses. The following comments illustrate some of the key concerns executives face with consultants:

1. “Consultants have no choice but to provide generic/academic frameworks and tools. Only in-house management can implement a true ERM approach for their own company because they know their business, processes, culture and just what makes sense for them that no outside party can truly know. It becomes inefficient to educate an outside party on your business just so that they can try to tell you what you should be doing (from generic models) to manage it better.”

2. “Consultants generally advocate a single perspective - often a COSO view - which we find too restrictive and compliance based. Some consultants advocate the use of Basel but it is not a very good fit for our industry. An ERM program needs to be developed from within. We have used the Australian Standard 4360 to help build our program.”

3. “Some articles (if current) are sometimes more pragmatic and “out of the box” versus consultants. Consultants seem to have capabilities around risk assessment, but less so for robust ERM framework / implementation efforts.”

While it is clear that risk executives as a group find ERM literature more helpful, several respondents indicated the benefits of consultants too:

1. “My belief is that consultants are helpful in the ‘getting started’ phase and also for specific tasks, such as facilitating a risk profiling process with an executive group.”

2. “Consultants can be useful but I want to know the theory and practice myself so that I can direct and check the recommendations of consultants.”

3. “The consultants were useful in the implementation of what we had decided we wanted as a framework. However, they provided good value in benchmarking best practices that we would not have been able to do.”

And one must be careful with the literature, as one survey respondent points out, “The problem is sorting out the good readings from the bad (or even harmful).”

We also investigated the relationship between risk

executives experience and their familiarity with ERM literature using the categories shown in Figure 3. Experience was measured as the number of years the respondent had with ERM. While we find no significant relationship between risk executives' experience and their ratings on the benefits of COSO and other major sources of ERM information, we do find that more experienced risk executives had a greater knowledge of the literature than their less experienced counterparts (Pearson correlation coefficient of 51%; significant at the 1% level). We discuss the relation between experience and the most frequently read literature in more detail in the next section.

Risk executives in higher positions had read significantly more than those in lower positions (Pearson correlation coefficient of 28%; significant at the 10% level).<sup>17</sup> We also found that risk executives in higher positions rated academic papers less useful (Pearson correlation coefficient of -19% but insignificant at the 10% level). While the result is not significant at conventional levels, it is worth noting and in contrast to the finding of almost no relationship between years of experience and usefulness of academic papers. Given that few academic papers have been published on ERM, one should not draw any strong conclusions from this result other than the indication that there is a crucial need for academics to publish more useful research on ERM.

### C. Most Frequently Read Literature on ERM

Now to the main objective of our study: to uncover the most useful literature read by risk executives. As discussed in Section II, we asked respondents to rate each reading by answering the following two questions: 1) Did you read this book/research paper/article and if so to what extent?, and 2) In terms of adding value to your knowledge of ERM, how would you rate this book/research paper/article according to methodologies, tools, techniques and leading practices for ERM? [Note: For discussion purposes, we refer to the Question 1 response as "read" and the Question 2 response as "value".]

We classified the 88 readings according to articles (24 total, which includes surveys, academic studies, and practitioner articles), books (32 total), and research reports (32 total). Table III summarizes the mean ratings of the readings for all

<sup>17</sup> Respondents were classified into the following 6 categories from entry level to the highest level positions as follows: advisor or analyst, manager or senior manager, director, chief officer (other), chief risk officer, and vice president level or higher.

publications and by type (i.e., articles, books, and research reports). Panel A summarizes the "read" and "value" ratings and Panel B analyzes the ratings based on the respondents' experience with ERM. In Panel B, risk executives with 5 years or more were classified as having "high experience" and those with less than 5 years were classified as "low experience". (Note: The mean level of experience of all risk executives was 5.3 years.) As shown in Panel A, the mean ratings for "read" and "value" do not differ

greatly according to publication type. However, in Panel B, risk executives with greater experience were more familiar with all publication types (difference of means t-test significant at the one percent level in all groups). There was no significant difference in the "value" rating based on experience.

To select the "top readings" individually, we first ranked the readings by type (i.e., articles, books, and research reports) using a weighting scheme based on the responses to the two questions. We then sorted the ranked categories into quartiles and the readings which were ranked in the top quartiles based on both questions were first considered as "top readings". Only literature rated by at least 6 respondents was considered in the final rankings.<sup>18</sup> A few articles with second quartile rankings still made the top 10 lists. The results of our "Top 10" readings are presented in Tables IV, V, and VI for the articles, books, and research reports, respectively. While our survey participants may not represent all ERM executives' familiarity with the literature, to our knowledge, we present the first survey evidence on this important topic. Anyone wishing to learn more about ERM should consider placing these publications on their "must read" list.

Table IV lists the top 10 articles on ERM sorted according to the year of publication. As mentioned earlier, we include surveys, academic studies, and practitioner articles in this category. While not indicated in the table, the highest ranked study in this category is "Risk Management Reports" by H. Felix Kloman (later Beaumont Vance), followed by "Enterprise Risk Management at Hydro One Inc." by Fraser, Quail and Kirienko (2001).<sup>19</sup>

The top 10 books on ERM are listed in Table V.<sup>20</sup> The

<sup>18</sup> It was necessary to relax this restriction when selecting two of the top ten articles read by respondents. However, both of these articles received high ratings based on value.

<sup>19</sup> It should be noted that "Risk Management Reports" was published until recently on a monthly basis so this ranking is based on a series of reports, not one specific publication.

<sup>20</sup> Actually, 11 books are listed in this table. The two COSO publications were rated separately, but can be viewed as part of the same overall publication.

**Virtually all literature is silent on how to deal with the myriad cultural, logistical, historical challenges that exist and are unique to all organizations.**

**Table III. Mean Ratings of Publications used in Survey**

This table reports summary ratings of ERM literature based on the following two survey questions: 1) Did you read this book/research paper/article and if so to what extent? Response choices were: 1=never heard of it, 2=heard of it, but not really read it, 3=read less than 10% of it, 4=read between 10-80%, and 5=Read more than 80%.) and 2) In terms of adding value to your knowledge of ERM, how would you rate this book/research paper/article according to methodologies, tools, techniques and leading practices for ERM? Response choices were: 1=not really relevant to ERM, 2=some value but not a lot, 3=reasonably useful, 4=very good in ERM, and 5=a must read for ERM. The Question 1 and Question 2 responses are reported in this table as "Read" and "Value", respectively. Panel B reports the results of ratings based on the respondents experience with ERM. Respondents with 5 years or more were classified as having "high experience" and those with less than 5 years were classified as "low experience". The panel also presents univariate tests of the differences in mean values between ratings for the high and low experience groups. The t-statistic provides a test of the null hypothesis that the mean value does not differ between the two groups. Significance levels are indicated as follows: \*\*\*1%, \*\*5%, \*10%.

Publication Type	N	"Read" Mean Rating		"Value" Mean Rating		
<i>Panel A. Ratings of Publications by Type</i>						
All	88	1.68		2.69		
Articles	23	1.42		2.68		
Books	33	1.71		2.71		
Research Reports	32	1.84		2.88		
<i>Panel B. Ratings of Publications by Type and Level of ERM Experience</i>						
Publication Type	"Read" Mean Rating			"Value" Mean Rating		
	Low Experience N=24	High Experience N=20	t-statistic (p-value)	Low Experience	High Experience	t-statistic (p-value)
All	1.38	1.92	-3.55 (0.001)***	2.78	2.68	1.22 (0.233)
Articles	1.25	1.67	-2.73 (0.009)***	2.68	2.70	-0.08 (0.935)
Books	1.45	2.09	-3.82 (0.001)***	2.89	2.65	0.96 (0.359)
Research Reports	1.59	2.22	-3.24 (0.003)***	3.03	2.67	1.17 (0.260)



**Table IV. Top 10 Articles**

This table lists the top ten articles based on the survey responses. The articles are listed by year of publication. Refer to the references for complete citation information.

Journal/Source	Date	Authors	Title
Seawack Press Inc.	1974+	Kloman, later Vance	Risk Management Reports (a monthly publication)
Conference Board of Canada	2001	Fraser, Quail and Kirienko	Enterprise Risk Management at Hydro One Inc.
Risk Management	2001	Lam	The CRO is Here to Stay
Journal of Applied Corporate Finance	2002	Harrington, Niehaus, and Risko	Enterprise Risk Management: The Case of United Grain Growers
Risk Management and Insurance Review	2003	Dleffner, Lee, and McGannon	The Effect of Corporate Governance on the Use of Enterprise Risk Management: Evidence from Canada
Journal of Applied Corporate Finance	2005	Aabo, Fraser, and Simkins	The Rise and Evolution of the Chief Risk Officer: Enterprise Risk Management at Hydro One
Journal of Accounting and Public Policy	2005	Beasley, Cluen, Hermanson	Enterprise Risk Management: An Empirical Analysis of Factors Associated with the Extent of Implementation
FT Partnership Publications	2006	London Financial Times and Ernst & Young	Mastering Uncertainty
James Lam & Associates	2006	James Lam & Associates	Emerging Best Practices in Developing Key Risk Indicators and ERM Reporting
Journal of Applied Corporate Finance	2006	Gates	Incorporating Strategic Risk into Enterprise Risk Management: A Survey of Current Corporate Practice

**Table V. Top 10 Books**

This table lists the top ten books based on the survey responses. The books are listed by year of publication. Refer to the references for complete citation information.

Publisher	Date	Authors	Title
Currency/Doubleday	1991&1996	Schwartz	The Art of the Long View
John Wiley & Sons	1996	Bernstein	Against The Gods: The Remarkable Story of Risk
Prentice Hall/FT	2000	DeLoach	Enterprise-wide Risk Management: Strategies for Linking Risk and Opportunity
Texere LLC	2001	Taleb	Fooled by Randomness
IIA Research Foundation	2001	Miccolis, Hively, and Merkle	Enterprise Risk Management: Trends and Emerging Practices
IIA Research Foundation	2002	Barton, Shenkir, and Walker	Enterprise Risk Management: Putting it All Together
Prentice Hall & FT Foundation	2002	Barton, Shenkir, and Walker	Making Enterprise Risk Management Pay Off
Committee of Sponsoring Organizations (COSO)	2004	COSO	Enterprise Risk Management - Integrated Framework: Application Techniques
Committee of Sponsoring Organizations (COSO)	2004	COSO	Enterprise Risk Management: Integrated Framework: Executive Summary
Canadian Institute of Chartered Accountants (CICA)	2006	Lindsay (Fraser, Goodfellow, Toledano)	20 Questions Directors Should Ask about Risk
Risk Insurance Management Society	2007	Vance and Makomaski	Enterprise Risk Management for Dummies

**Table VI. Top 11 Research Reports**

This table lists the top eleven research reports based on the survey responses. Eleven reports are listed due to a tie for 10<sup>th</sup> place. The reports are listed by year of publication. Refer to the references for complete citation information.

Source	Date	Authors	Title
Australia (AS) and New Zealand (NZS)	1995, 1999 & 2004	AS/NZS	Risk Management
Enterprise Risk Management	2000	Tillinghast-Towers Perrin	An Analytical Approach
Conference Board of Canada	2001	Thiessen, Hoyt, and Merkley	A Composite Sketch of a Chief Risk Officer
Standards Australia	2002	Standards Australia	Organizational Experiences in Implementing Risk Management Practices
John Wiley & Sons	2003	Lam	Enterprise Risk Management: From Incentives to Controls
Conference Board of Canada	2005	Thiessen	Enterprise Risk Management: Inside and Out
Standard & Poors	2005	Standard & Poors	Enterprise Risk Management for Financial Institutions
Guide to Enterprise Risk Management	2006	Protiviti	Frequently Asked Questions
Standard & Poor's	2006	Standard & Poor's	Criteria: Assessing Enterprise Risk Management Practices of Financial Institutions: Rating Criteria & Best Practices
The Conference Board	2006	Brancato	The Role of U.S. Corporate Boards in Enterprise Risk Management
Committee of Chief Risk Officers (CCRO)	2007	CCRO	Enterprise Risk Management and Supporting Metrics

books receiving the highest overall rating are “20 Questions Directors Should Ask about Risk” by Lindsay, Fraser, Goodfellow, and Toledano (2006) and the COSO publication, “Enterprise Risk Management: Integrated Framework: Executive Summary” (2004). This COSO publication was the most well read in our survey (mean “read” rating of 4.13; read by 74% of survey respondents) but received a mean “value” rating of 2.45, which can be viewed as an average rating. This is consistent with our findings discussed earlier regarding the COSO publications.

Table VI lists the top 11 research reports. Eleven reports are listed due to a tie for 10<sup>th</sup> place. Three research reports received significantly higher ratings than other reports and are as follows (listed in order of ranking): “Risk Management”

by AS/NZS 4360 (1995, 1999 and 2005), “Guide to Enterprise Risk Management: Frequently Asked Questions” by Protiviti (2006), and “ERM: Inside and Out” by Thiessen (2005).

Are there other useful readings we omitted from our study? We asked respondents to identify literature they found useful in early stages and advanced stages of ERM that we had omitted from our list. The most frequently mentioned publications are listed in Table VII. Panel A lists studies useful in early stages and Panel B lists ones useful in more advanced stages. Interestingly, respondents indicated that some of the best literature they have read does not necessarily mention ERM, but simply addresses various aspects of risk. The variety of risk literature fits with the fact that the respondents come from diverse lines of businesses, industries and corporate

**Table VII. Other Useful Literature for the Implementation of ERM not Included in the Survey**

This table includes the responses from risk executives about the literature they found useful in early stages and advanced stages of ERM that we omitted from our survey list. Panel A lists studies useful in early stages and Panel B lists ones useful at more advanced stages. Refer to the references for complete citation information.

<b>Panel A. At Early Stages</b>			
<b>Source</b>	<b>Date</b>	<b>Authors</b>	<b>Title</b>
UCL Press	1995	Adams	Risk
Harper and Rowe	2002	Knight	Risk, Uncertainty and Profit
Simon and Schuster	2002	Gigerenzer	Calculated Risks: How to Know When Numbers Deceive You
IRMIC, ALARM, IRM	2002	IRMIC, ALARM, IRM	A Risk Management Standard
McGraw/Hill	2004	Dallas	Governance and Risk
Deloitte and Touche	2004	Bailey, Bloom, and Hida	Assessing the Value of Enterprise Risk Management
The Conference Board	2005	Subramaniam	Keep It Simple: Getting Your Arms Around Enterprise Risk Management
Protiviti	2006	Protiviti	Enterprise Risk Management: Practical Implementation Advice
Harvard Business School Press	2006	Apgar	Risk Intelligence: Learning to Manage What We Don't Know
RMA Journal	2007	Dev and Rao	ERM: A New Way to Manage a Financial Institution
Random House	2007	Taleb	The Black Swan: The Impact of Highly Improbable Events
<b>Panel B. At More Advanced Stages</b>			
<b>Source</b>	<b>Date</b>	<b>Authors</b>	<b>Title</b>
Vintage Books	1996	Tenner	Why Things Bite Back: Technology and the Revenge of Unintended Consequences
Princeton University Press	2000	Shiller	Irrational Exuberance
IIA Research Foundation	2000	Hubbard	Control Self-Assessment: A Practical Guide
Oxford University Press	2003	Koen	Discussion of the Method
KPMG	2003	KPMG	Enterprise Risk Management: An Emerging Model for Building Shareholder Value
KPMG	2003	Hashagen	Basel II - A Closer Look: Managing Operational Risk
John Wiley & Sons	2005	Dowd	Measuring Market Risk
Risk Center	2005	Banfield	Enterprise Risk: Fighting Risk Measurement Myopia, Creating a Risk Inventory and Gap Analysis, and Dealing with Obstacles to Enterprise-Wide Risk Management
The Conference Board	2007	Hexter	Risk Business: Is Enterprise Risk Management Losing Ground?
MIT Sloan Management Review	2007	Bonabeau	Understanding and Managing Complexity Risk

structures, not to mention representing a large range of individual interests. It should be noted that only one publication was mentioned by more than one respondent (i.e. Black Swan); all others were only mentioned once. This supported the validity of our original survey lists that there were no major omissions. The Black Swan was omitted from our survey list as it was only published in April 2007 during the compilation of our survey list.

#### D. Critical Areas of Need

Answers provided to open-ended questions in the survey suggest that there is a critical need for more detailed “real world” applications on ERM. In response to the question, “What problems/challenges have you encountered in implementing ERM that were not addressed in the literature?”, the following quotes by risk executives summarize key areas of need.

1. In addition, virtually all literature is silent on how to deal with the myriad cultural, logistical, historical challenges that exist and are unique to all organizations. These (and other) challenges create very significant (and sometimes insurmountable) barriers that must be addressed if an organization hopes to manage risk on an integrated basis.

2. Many of the articles describe what the process should look like and how it should function but there are very few that provide details of how to get to that step. Many of the articles use great overarching statements that seem very much like motherhood statements. There was a distinct lack of information on how to bring all the silos together - other than to say that a common reporting system and language are important. It was difficult to find true life examples of how the information was gathered and presented to show a greater risk picture.

3. The impact of corporate culture on ERM implementation and practices is not well addressed in the literature.

#### E. Key Findings of our Survey

To summarize the most important results of our survey, we identify the following key findings. Our results help illuminate areas of need in the practice of ERM. We hope that our results are useful to practitioners wanting to learn more about enterprise risk management and also to academics interested in conducting research in this crucial area.

1. Surprisingly, COSO was not being considered and used as the key source of information and guidance.

2. Challenges remain for new implementers, especially as to specific guidance on what to do in their cultural context.

3. Much more work is needed in the areas of research and case studies so that risk executives can learn from the

experiences of others who have successfully implemented ERM. More specifically, risk executives are looking for more practical “how to’s”, sharing of experiences, impacts of different corporate culture, and best practices at the different stages of ERM implementation. This is an excellent opportunity for academics to closely collaborate with practitioners to conduct research in these key areas of need. (Note: What was read in the top 10 articles, books and research was mostly about the ‘how to’ aspects of ERM.)

4. Despite the wealth of practical experience of survey respondents, most of whom are from large companies, there clearly remain many areas to explore and discuss before a common understanding or methodology for ERM could be considered to be in place.

5. Experienced risk executives are more familiar with the literature and also find publications about ‘risk in general’ very useful at early and advanced stages of enterprise risk management implementation.

#### IV. Conclusion

Our study presents the first survey evidence of risk executives working in the area of ERM about the literature they find most effective in assisting and facilitating the successful implementation of ERM. This is the first of a planned periodic survey on this topic by The Conference Board of Canada.

Without a doubt, ERM is a paramount topic for business enterprises desiring to survive and succeed in the future. ERM is not a fad – it is here to stay and is the natural evolution of risk management to view risk at the enterprise-wide level. New external drivers are pushing risk executives to find out more about ERM and the level of interest in this topic is increasing with time. Some of the drivers for ERM are as follows: Boards are being held more accountable for risk management; stakeholders are becoming more vocal about corporate activities and demanding better management of risk; corporate disasters such as Société Générale, Enron, WorldCom, and the subprime crisis are making board members and corporate executives more aware of the consequences of ineffective risk management; ratings agencies are including this in their credit-rating analyses not only for financial firms, but also for nonfinancial firms as of 2008; globalization of corporations including increased outsourcing, supply chain management, and other factors, affects the risks and management of them; and many companies have reported significant benefits from ERM programs.

To summarize, the most important findings of our study are as follows: First, surprisingly, COSO was not considered a key source of information and guidance. Second, organizations new to ERM are still facing hurdles, despite all the resources at hand. Third, clearly, much more work is

needed in the areas of research and case studies so that risk executives can learn from the experiences of others who have successfully implemented ERM. Fourth, many areas still need to be explored and discussed before a common understanding or methodology for ERM could be considered to be in place; and fifth, experienced risk executives are not only much more familiar with the literature, but they also find publications about 'risk in general' very useful at both early and advanced stages of enterprise risk management implementation.

To help facilitate progress on the global practice of ERM, we would like to encourage academics to collaborate closely

with practitioners to conduct research and develop case studies.<sup>21</sup> We also encourage interested parties to contact The Conference Board of Canada about the Strategic Risk Council and its evolving work in ERM. This study highlights crucial areas of need on ERM, and we hope will help be a starting point to encourage and stimulate more advances in the research and practice of ERM. As Leonardo da Vinci noted over 500 years ago about the importance of knowledge in both theory and practice: "He who loves practice without theory is like the sailor who boards ship without a rudder and compass and never knows where he may cast." ■

### Appendix A. Publications Included in the Survey

The following is a list of the literature included, sorted by year of publication, in the survey including the source, author(s), year published, title, and type (i.e., articles, books, and research reports). Refer to the references for complete citation information. Publication types are indicated as follows: Articles (which includes surveys, academic studies, and practitioner articles) are indicated by a "1", books by a "2", and research reports by a "3".

Source	Date	Authors	Title	Type
Seawack Press, Inc.	1974+	Kloman and Vance	Risk Management Reports	1
Omega Systems Group	1987	Grose	Managing Risk: Systematic Loss Prevention for Executives	2
Currency/Doubleday	1991, 1996	Schwartz	The Art of the Long View	2
Committee of Sponsoring Organizations (COSO)	1992	COSO	Internal Control: Integrated Framework	2
Australia (AS)/New Zealand (NZS)	1995, 1999 & 2004	AS/NZS 4360	Risk Management	3
Toronto Stock Exchange (TSE) Committee on Corp. Gov. in Canada	1994	TSE Committee on Corp. Gov. in Canada	Where were the Directors: Guidelines for Improved Corporate Governance in Canada	3
Economic Intelligence Unit	1995	Arthur Anderson	Managing Business Risks: An Integrated Approach	3
John Wiley & Sons	1996	Bernstein	Against The Gods: The Remarkable Story of Risk	2
Standards Council of Canada	1997	Standards Council of Canada	Risk Management: Guideline for Decision-Makers	3
Conference Board of Canada	1997	Nottingham	A Conceptual Framework for Integrated Risk Management	3
Conference Board of Canada	1998	Birkbeck	Realizing the Rewards: How Integrated Risk Management Can Benefit Your Organization	3
Canadian Institute of Chartered Accountants (CICA)	1998	Bradshaw and Willis	Learning About Risk: Choices, Connections and Competencies	2
Risk Mgmt and Insurance Review	1999	Colquitt, Hoyt, and Lee	Integrated Risk Management and the Role of the Risk Manager	1

<sup>21</sup> For academics and practitioners interested in conducting collaborative research, please refer to the Financial Management Association's (FMA) initiative, Practitioner Demand Driven Academic Research Initiative (PDDARI), which was started in 2007. More information can be obtained from the FMA's website (<http://www.fma.org>) or in this issue of the *Journal of Applied Finance*.

**Appendix A. Publications Included in the Survey Continued**

Source	Date	Authors	Title	Type
Conference Board of Canada	1999	Birkbeck	Forewarned is Forearmed: Identification and Measurement in Integrated Risk Management	3
Tillinghast-Towers Perrin	2000	Tillinghast-Towers Perrin	Enterprise Risk Management - An Analytical Approach	3
Canadian Institute of Chartered Accountants (CICA)	2000	CICA	Guidance for Directors Dealing with Risk in the Boardroom	2
American Institute of Certified Public Accountants (AICPA) and CICA	2000	Lindsay	Managing Risks in the New Economy	2
Prentice Hall/Financial Times	2000	DeLoach	Enterprise-wide Risk Management: Strategies for Linking Risk and Opportunity	2
Journal of Risk Mgmt of Korea	2001	D'Arcy and Brogan	Enterprise Risk Management	1
Conference Board of Canada	2001	Thiessen, Hoyt, and Merkley	A Composite Sketch of a Chief Risk Officer	3
Canadian Centre of Mgmt Development	2001	Canadian Centre of Mgmt Devel.	A Foundation for Developing Risk Management Learning Strategies in the Public Sector: CCMD Roundtable on Risk Management	3
Treasury Board of Canada Secretariat	2001	Treasury Board of Canada Secretariat	Integrated Risk Management Framework	3
Conference Board of Canada	2001	Fraser, Quail, and Kirienko	Enterprise Risk Management at Hydro One Inc.	1
McGraw Hill	2001	Grouhy, Galai, and Mark	Risk Management	2
Random House Trade Paperbacks	2001	Lowenstein	When Genius Failed: The Rise and Fall of Long-Term Capital Management	2
IIA Research Foundation	2001	Miccolis, Hively, and Merkley	Enterprise Risk Management: Trends and Emerging Practices	2
Conference Board of Canada	2001	Thiessen	Integrating Risk Management Through a Change Management Process	3
International Risk Mgmt Institute	2001	Miccolis	ERM and September 11	1
Jossey-Bass Wiley	2001	Weick and Sutcliffe	Managing the Unexpected	2
Risk Mgmt Magazine	2001	Lam	The CRO is Here to Stay	1
Texere LLC	2001	Taleb	Fooled by Randomness	2
Standards Australia	2002	Standards Australia	Organizational Experiences in Implementing Risk Management Practices	3
The Strategy Unit: Cabinet Office Britain	2002	Strategy Unit: Cabinet Office Britain	Risk: Improving Government's Capability to Handle Risk and Uncertainty	3
The Non Profit Risk Mgmt Center	2002	The Non Profit Risk Mgmt Center	Enlightened Risk-Taking: A Guide and Workbook to Strategic Risk Management for Nonprofits	2
IIA Research Foundation	2002	Barton, Shenkir, and Walker	Enterprise Risk Management: Putting it All Together	2
CPA Australia	2002	CPA Australia	Enterprise-Wide Risk Management: Better Practice Guide for the Public Sector	3
CPA Australia	2002	CPA Australia	Case Studies in Public Sector Risk Management	3
National Association of Corporate Directors (NACD)	2002	NACD	Report of the NACD Blue Ribbon Commission on Risk Oversight: Board Lessons for Turbulent Times	3
Prentice Hall & FT Foundation	2002	Barton, Shenkir, and Walker	Making Enterprise Risk Management Pay Off	2
Journal of Applied Corporate Finance	2002	Meulbroek	A Senior Manager's Guide to Integrated Risk Management	1

Appendix A. Publications Included in the Survey *Continued*

Source	Date	Authors	Title	Type
Journal of Applied Corporate Finance	2002	Harrington, Niehaus, and Risiko	Enterprise Risk Management: The Case of United Grain Growers	1
IFAC and Chartered Institute of Mgmt Acct (CIMA)	2002	IFAC and CIMA	Managing Risk to Enhance Stakeholder Value	3
John Wiley & Sons	2003	Lam	Enterprise Risk Management: From Incentives to Controls	3
Casualty Actuarial Society	2003	Casualty Actuarial Society	Overview of Enterprise Risk Management	3
Journal of Applied Corporate Finance	2003	Chew, et. al.	University of Georgia Roundtable on Enterprise-Wide Risk Management	1
Internal Auditor	2003	Walker	ERM in Practice	1
Risk Management and Insurance Review	2003	Liebenberg and Hoyt	The Determinants of Enterprise Risk Management: Evidence from the Appointment of Chief Risk Officers	1
Risk Management and Insurance Review	2003	Kleffner, Lee, and McGannon	The Effect of Corporate Governance on the Use of Enterprise Risk Management: Evidence from Canada	1
Committee of Sponsoring Organizations (COSO)	2004	COSO	Enterprise Risk Management: Integrated Framework: Executive Summary	2
Age of Risk Management (AORM)	2004	Thompson	Risk in Perspective: Insight and Humor in the Age of Risk Management	2
HM Treasury	2004	HM Treasury	The Orange Book: Management of Risk - Principles and Concepts	2
Committee of Sponsoring Organizations (COSO)	2004	COSO	Enterprise Risk Management - Integrated Framework: Application Techniques	2
Canadian Institute of Chartered Accountants (CICA)	2005	Sabia and Goodfellow	Integrity in the Spotlight: Audit Committees in a High Risk World	2
IIA Research Foundation	2005	Sobel	Auditor's Risk Management Guide: Integrating Auditing & ERM	2
John Wiley & Sons	2005	Pickett	Auditing the Risk Management Process	2
Viking Books	2005	Diamond	Collapse: How Societies Choose to Fail or Succeed	2
Conference Board of Canada	2005	Thiessen	ERM: Inside and Out	3
Lloyds and The Economist Intelligence Unit (EIU)	2005	Lloyds and EIU	Taking Risk on Board	3
Journal of Applied Corporate Finance	2005	Aabo, Fraser, and Simkins	The Rise and Evolution of the Chief Risk Officer: Enterprise Risk Management at Hydro One	1
Harper-Collins Publishers Ltd	2005	Rosenthal	Struck by Lightning: The Curious World of Probabilities	2
Strategic Finance	2005	Stroh	Enterprise Risk Management at United Healthcare	1
Standard & Poor's	2005	Standard & Poor's	Enterprise Risk Management for Financial Institutions	3
The Economist Intelligence Unit (EIU)	2005	EIU	The Evolving Role of the CRO	3
Journal of Accounting and Public Policy	2005	Beasley, Clune, and Hermanson	Enterprise Risk Management: An Empirical Analysis of Factors Associated with the Extent of Implementation	1
Journal of Applied Corporate Finance	2005	Chew, et. al.	Morgan Stanley Roundtable on Enterprise Risk Management and Corporate Strategy	1
SMACP/AICPA	2005	Epstein and Rejc	Identifying, Measuring and Managing Organizational Risks for Improved Performance	3
Oxford University Press	2006	Coffee	Gatekeepers: The Professions and Corporate Governance	2
Conference Board (U.S.)	2006	Brancato	The Role of U.S. Corporate Boards in Enterprise Risk Management	3
John Wiley & Sons	2006	Pickett	Enterprise Risk Management--A Manager's Journey	1
James Lam & Associates	2006	James Lam & Associates	Emerging Best Practices in Developing Key Risk Indicators and ERM Reporting	1
Risk Mgmt Magazine	2006	Vance	Zen, Five Steps and ERM	1
Standard & Poor's	2006	Standard & Poor's	Criteria: Assessing Enterprise Risk Management Practices of Financial Institutions: Rating Criteria & Best Practices	3
Guide to Risk Management	2006	Protiviti	Frequently Asked Questions	3

**Appendix A. Publications Included in the Survey Continued**

Source	Date	Authors	Title	Type
Institute of Management Accountants	2006	Shenkir and Walker	Enterprise Risk Management: Frameworks, Elements, and Integration	3
Journal of Cost Management	2006	Shenkir and Walker	Enterprise Risk Management and the Strategy-Risk-Focused Organization	2
Canadian Institute of Chartered Accountants (CICA)	2006	Lindsay (Fraser, Goodfellow, Toledano)	20 Questions Directors Should Ask about Risk - Second Edition	2
FT Partnership Publications	2006	London Financial Times with Ernst & Young	Mastering Uncertainty	1
Financial Times and Prentice Hall	2001	Financial Times and Prentice Hall	Mastering Risk Volume 1: Concepts	2
The Geneva Papers on Risk and Insurance: Issues and Practice	2006	Acharuya and Johnson	Investigating the Development of ERM in the Insurance Industry: An Empirical Study of Four Major European Insurers	1
Journal of Applied Corporate Finance	2006	Nocco	Enterprise Risk Management: Theory and Practice	1
Journal of Applied Corporate Finance	2006	Gates	Incorporating Strategic Risk into Enterprise Risk Management: A Survey of Current Corporate Practice	1
Conference Board (U.S.)	2007	Tonello	Emerging Governance Practices in Enterprise Risk Management	3
IIA Research Foundation	2007	Roth and Sobel	Four Approaches to Enterprise Risk Management and Opportunities in Sarbanes-Oxley Compliance	2
AWWA Research Foundation	2007	Pollard	Risk Analysis Strategies for Credible and Defensible Utility Decisions	1
Institute of Management Accountants	2007	Shenkir and Walker	Enterprise Risk Management: Tools and Techniques for Effective Implementation	3
Committee of Chief Risk Officers (CCRO)	2007	CCRO	ERM and Supporting Metrics	3
Risk Insurance Mgmt Society	2007	Vance and Makomaski	ERM for Dummies	2
American Bankers Association	2007	Oberg and Skinner	The Bank Executive's Guide to Enterprise Risk Management	2

**Appendix B. Survey Respondents Who Gave Permission to be Identified**

This appendix only lists survey respondents who gave us permission to be identified. As a result, this is not a complete list of members of the Strategic Risk Councils for The Conference Board of Canada and the Conference Board, Inc.

Alberta Environment	Equitable Life Insurance Company of Canada
Aon Reed Stenhouse Inc.	General Motors Corporation
Bell Aliant Regional Communications	The Great-West Life Assurance Company
Business Development Bank of Canada	Hydro One Inc
Cameco Corporation	Independent Electricity System Operator
Canada Deposit Insurance Corporation	L'Alliance des Caisses Populaires de l'Ontario Limitée
Canada Revenue Agency	Ontario Power Generation Inc.
Canadian Blood Services	Pason Systems Inc.
Canadian Broadcasting Corporation	Petro-Canada
Canada Mortgage and Housing Corporation (CMHC)	Seawrack Press, Inc.
Coast Capital Savings Credit Union	The Standard Life Assurance Company



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