

ERM Benchmark Survey Report

A report on PACICC's sixth ERM benchmarking survey

September 2018

2011
2012
2013
2014
2015
2016
2017
2018

Member Survey on ERM Practices

A report on PACICC's sixth ERM benchmarking survey

September 2018

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Executive summary

PACICC is the industry-funded, non-profit resolution authority for Canada's Property and Casualty (P&C) insurance industry. The Corporation is focused on initiatives to address solvency risk in the industry. This includes annual member surveys that explore the depth and quality of the industry's enterprise risk management (ERM) programs. PACICC has surveyed its members on their ERM practices six times now over the past eight years. These ERM surveys encourage member dialogue on industry best practices and highlight practical elements that underpin a robust risk management program. For purposes of this survey, the breakpoint between "larger companies" and "smaller companies" is deemed to be \$500 million in annual direct written premium (DWP). This report presents four findings from the latest survey, conducted earlier in 2018.

First, the survey examined changes over time in industry-wide responses and confirms differences in corporate governance practices between larger and smaller firms in the industry – including which parties are responsible for ERM management, receive direction from Head Office, have access to the Board of Directors or a Board Committee and are part of the Executive Management Team. Although ERM is the responsibility of Chief Risk Officers in larger companies, we find these responsibilities are spread across a number of positions in smaller companies. The percentage of larger companies taking direction from a Head Office has increased compared to smaller companies. While most parties with ERM responsibilities have access to the Board or a Board Committee overseeing ERM, this is no longer more pronounced for larger companies. A greater percentage of ERM managers in smaller firms reported that they were part of the firm's Executive Management Team.

Second, the survey shows differences in the approaches taken to risk management between larger and smaller companies in the industry. Although the gap continues to close, more larger companies have a formal process in place to identify new and emerging risks compared to smaller companies. A larger percentage of respondents in larger firms said that ERM is highly embedded in or accepted by the business. The number of respondents viewing this as a regulatory exercise has fallen over time. Most larger companies responding to the survey said they maintain a risk register of all material risks identified. The percentage of smaller companies engaged here is increasing. Most larger companies said they have a business continuity plan and cyber protection plan in place for the entire organization. This is not the case with smaller companies.

Third, the survey identified the increased emphasis that companies attach to Own Risk and Solvency Assessment (ORSA) Economic Capital Models (ECM). An increasing percentage of both large and smaller companies have engaged external resources to complete and/or review their ORSAs. Uptake here is almost identical. Over the past year, both larger and smaller companies reported greatest use of their ORSA results for capital management and ERM. A growing number of both larger and smaller companies report use of an ECM on a regular basis. Over the past year, larger companies used their ECM for capital management and ERM. Smaller companies used it principally for capital management, ERM and strategic planning purposes.

Fourth, the survey enquired about top emerging risks – in the next three years and over the next 10 years. In the near term, respondents said the top issues were cyber security and industry competition. Over the longer term, there was a shift in focus to technological change and the effect that this will have on how products are delivered to market. The top four long-term risks remain unchanged from last year.

PACICC will continue to publish annual survey results in order to enhance industry education on the merits of a robust ERM program. These surveys help to foster industry dialogue and increase effective risk management oversight and practices in the industry.

Introduction

Enterprise Risk Management (ERM) is widely considered a best practice for P&C insurance companies to employ in managing risks. Top-performing companies distinguish themselves through demonstrated superior risk management capabilities and practices. Their financial performance is influenced by how well they integrate risk management across the organization. Canada's insurance regulators have strongly recommended that P&C insurance companies seek to enhance their processes for managing risks on an enterprise basis. Risk management is essential to the business of insurance. Key risk areas include: underwriting, credit, market, liquidity, operational, strategic, reputation and emerging risks.

In its role as the resolution authority for Canada's P&C insurance industry, PACICC is committed to assisting member companies in strengthening the depth and quality of their risk management programs. This will help to mitigate industry solvency risk. PACICC has distributed ERM surveys to its members (in strict confidence) six times now over the past eight years – in 2011, 2013, 2015, 2016, 2017 and 2018. The surveys were developed in consultation with PACICC's Risk Management Advisory Committee (an industry advisory committee of risk management experts). Survey questions encourage dialogue among members regarding leading ERM practices and highlight practical elements that underpin a robust ERM program.

PACICC issues follow-up reports to members with aggregate industry-level results showing how well the industry is managing enterprise risks, where progress is being made and where further attention may be required. This report presents 2018 survey findings and includes comparisons against past results. Members of the Advisory Committee are listed in Appendix I. The full list of survey questions appears in Appendix II.

Background

PACICC's ERM benchmark survey initiative has three goals:

1. Encourage dialogue among industry stakeholders regarding ERM best practices;
2. Highlight practical elements that underpin a robust ERM program; and
3. Identify areas where further progress may be needed.

Questions in the 2018 survey focused on company characteristics, governance procedures, ERM framework and practices, Own Risk and Solvency Assessment (ORSA), Economic Capital Models (ECM) and tools and resources. PACICC has omitted some questions from past ERM surveys where there was clear industry consensus (consistent 90%+ support). An example is the use of a risk appetite statement outlining specific goals, benchmarks, parameters and limits – considered a best practice. The complete list of survey questions in Appendix II includes 2018 responses as well as benchmark responses from when each question was posed for the first time. This enables the reader to see how responses have changed over time and the magnitude of the change.

Industry response to the latest ERM survey was very strong.

- Market share references relate to the most recent published figures (2017 DWP) for the industry.
- Direct and related-company responses were received from 108 companies in the industry.
- Responses accounted for 81.7% of total private industry DWP
- 17 of the 20 largest firms in the industry responded to the survey.
- 71.2% of respondents are regulated by OSFI, accounting for 66.8% of total private industry DWP
- Respondents with more than \$1 billion in DWP accounted for 68% of industry market share.
- Respondents with more than \$500 million in DWP accounted for 75.5% of industry market share.

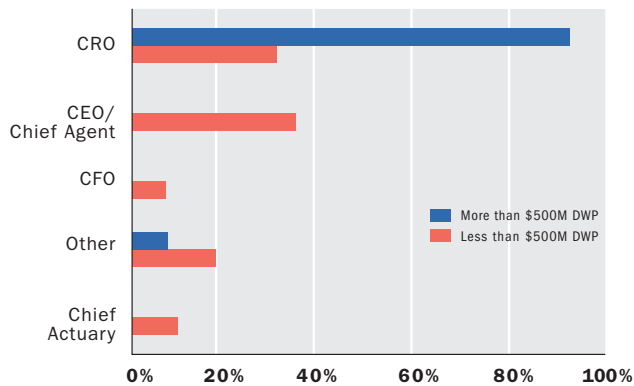
2018 ERM Survey Findings

1. Differences in governance

This year's survey confirms differences in corporate governance practices both over time and between larger and smaller companies in the industry. We note differences in the parties who are responsible for ERM management, receive direction from a Head Office, have access to the Board of Directors or a Board Committee and are part of the Executive Management Team.

Primary responsibility for managing company's ERM

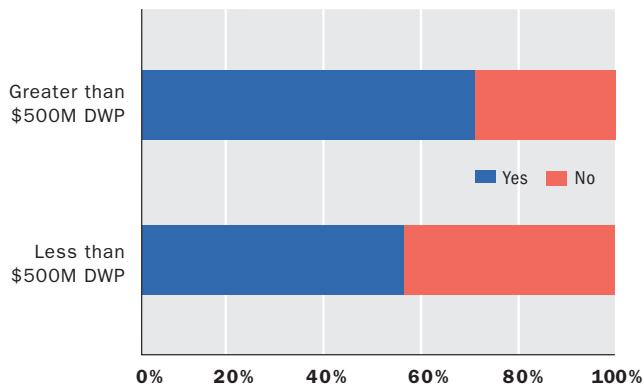
Larger vs. smaller companies (2018)



In 2018, 51% of respondents said ERM was the responsibility of their Chief Risk Officer, up from 46% in 2013 when the question was first posed. In 2015, 52% of larger firms said their CRO had primary responsibility for managing the company's ERM program. This has increased to 93% in the latest Survey. Two-thirds (67%) of smaller firms responding to the survey said this responsibility is shared between the Chief Executive Officer or Chief Agent, Chief Financial Officer, Chief Actuary or another party (e.g. Vice President of Finance).

Person managing ERM receives direction from a head office

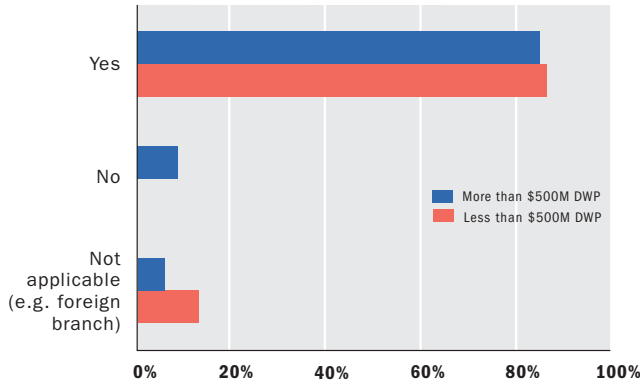
Larger vs. smaller companies (2018)



While there has been little change in collective responses on autonomy since this question was first posed two years ago (62% Yes in 2016 vs. 60% in 2018), there are differences between larger firm and smaller firm responses. The percentage of larger companies taking direction from a head office increased from 55% in 2016 to 71% in 2018. The trend has been the opposite for smaller companies, from 65% in 2016 down to 57% in 2018.

Person managing ERM has access to Board or Board Committee

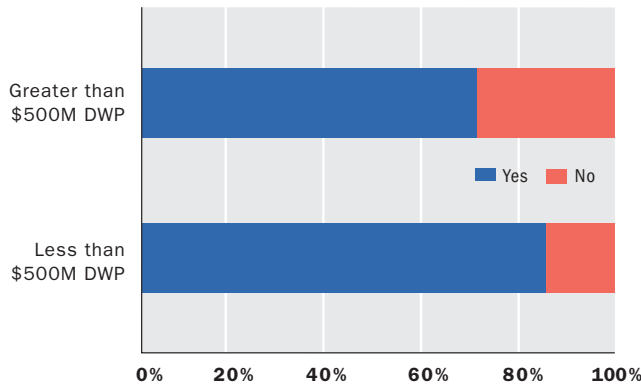
Larger vs. smaller companies (2018)



The percentage of parties with ERM responsibilities having access to the Board or a Board Committee overseeing ERM has increased slightly over time (from 86% in 2011 to 87% in 2018). While this used to be more pronounced for larger companies (94% for larger firms vs. 85% for smaller companies last year), that has changed in the latest survey. Now, 87% of parties in smaller firms now have access to the Board or Board Committee, vs. 86% in larger firms.

Person managing ERM is part of Executive Management Team

Larger vs. smaller companies (2018)



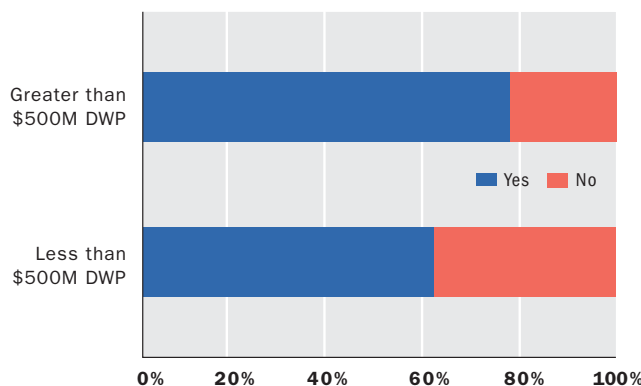
With task specialization and a larger number of staff in larger companies, there may be less likelihood for the person with ERM responsibilities to be part of the firm's Executive Management Team. Collectively, the number of respondents answering Yes has increased slightly over time, from 75% in 2011 to 78% in 2018. In the latest survey, a greater percentage of ERM managers in smaller firms reported that they were part of the Executive Management Team (87%) compared to those in larger firms (71%).

2. Approaches to risk management

Survey results continue to show differences in the approaches taken to risk management between larger and smaller companies in the industry.

Company has a formal process in place to identify new and emerging risks

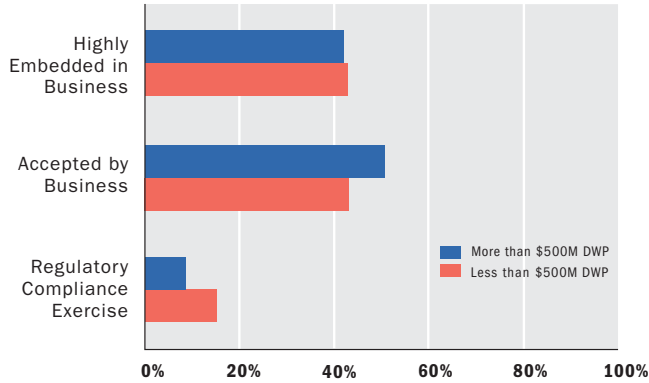
Larger vs. smaller companies (2018)



There has been some improvement over time with firms implementing a formal process to identify new and emerging risks (from 68% in 2016 to 72% in 2018). Results of the latest survey show this trend is led by larger firms in the industry, but there has been some convergence. The percentage of larger firms answering in the affirmative was 83% in 2016 compared to 79% in 2018. Smaller firms are showing marginal increases, from 60% in 2016 to 63% in 2018.

How does your company view ERM

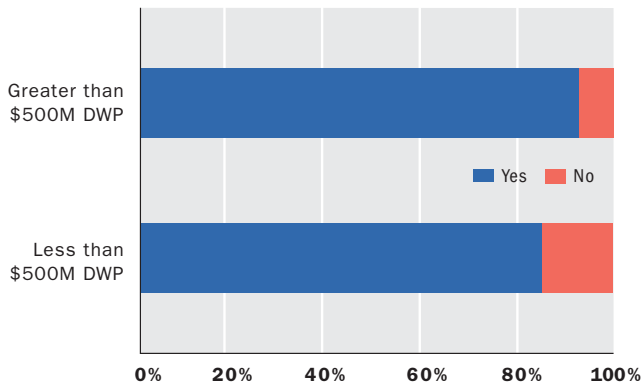
Larger vs. smaller companies (2018)



There has been growing acceptance of ERM by all respondents since this question was first posed – 81% acceptance in 2015 vs. 90% in 2018. A larger percentage of respondents in larger firms answered favourably in the latest survey (93%) compared to respondents in smaller firms (86%). The number of respondents viewing this as a regulatory exercise has fallen over time, from 19% in 2015 down to 9% in 2018.

Company maintains a risk register of all material risks identified

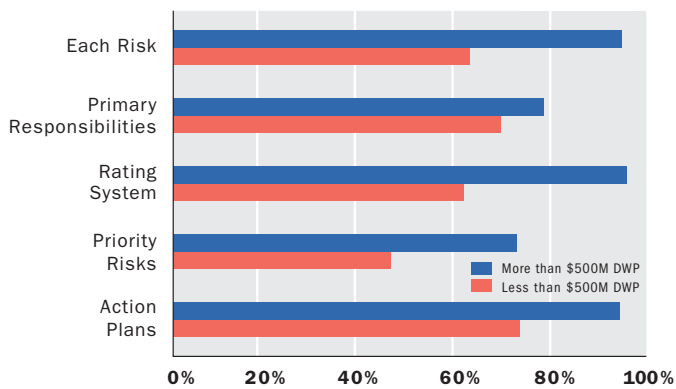
Larger vs. smaller companies (2018)



The percentage of respondents who said they maintain a risk register of all material risks identified has increased dramatically over time, from 79% in 2011 to 90% in 2018. This is led by larger firms in the industry, with 93% of their respondents answering in the affirmative in the latest survey, compared to 87% of respondents from smaller firms. Results here from both larger and smaller firms are very encouraging.

Company risk profile addresses...

Larger vs. smaller companies (2018)



The Survey enquired about specific risks that companies' risk profiles address. Responses show that larger firms appear more focused on management practices (93%), consistent process and rating systems (93%) and action plans (93%). Smaller firms are more focused on action plans (73%) and primary responsibilities (70%).

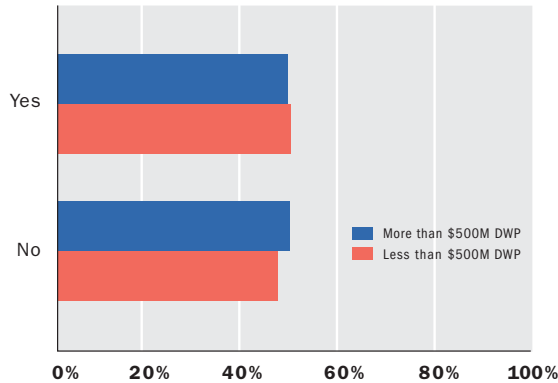
The percentage of firms employing a business continuity plan has increased, from 88% in 2016 to 91% in 2018. Most firms test once a year for disaster recovery (75% in 2018, compared to 67% in 2016) and business continuity (71% in 2018, compared to 45% in 2015). Most organizations have a cyber protection plan in place (93% in 2018, compared to 89% in 2016). This is tested once a year by 51% of respondents (47% in 2016) or on an ad hoc basis by 41% of respondents (44% in 2016).

3. Importance of ORSA and ECM

A third area of interest in the Survey is the importance that companies attach to Own Risk and Solvency Assessment (ORSA) Economic Capital Models (ECM).

External resources engaged to complete and/or review ORSA

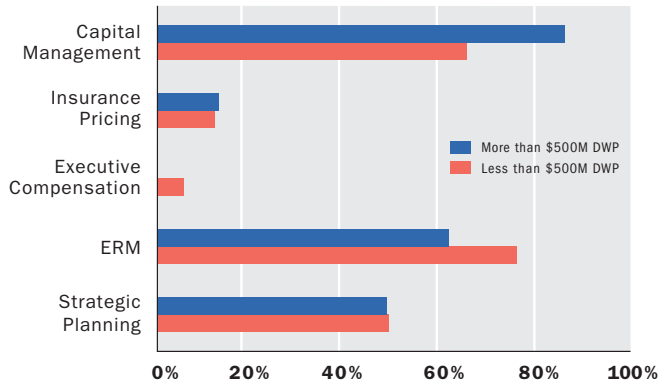
Larger vs. smaller companies (2018)



A growing percentage of all respondents have engaged external resources to complete and/or review their ORSAs – 52% in 2018, compared to 42% when the question was first posed in 2015. Larger firm use of external resources increased from 35% to 50% over the past two years, while smaller firm use increased from 34% to 53% over the same time period. Firms now have almost identical experiences using external resources to complete or review their ORSAs.

Your company uses its ORSA results for...

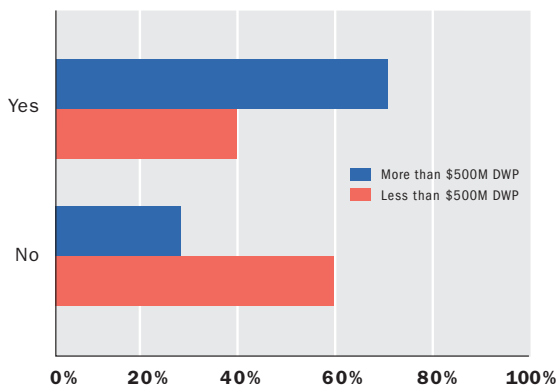
Larger vs. smaller companies (2018)



Over the past two years, all firms have reported significantly greater use of their ORSA results in most areas probed: capital management (73% in 2018 vs. 70% in 2016); insurance pricing (12% in 2018 vs. 9% in 2016); executive compensation (5% in 2018 vs. 0% in 2016); ERM (72% in 2018 vs. 75% in 2016) and strategic planning (50% in 2018 vs. 45% in 2016). This year, firms made greatest use of their ORSA results for capital management (86% for larger firms; 67% for smaller firms) and ERM (64% for larger firms; 77% for smaller firms).

Company uses an Economic Capital Model on a regular basis

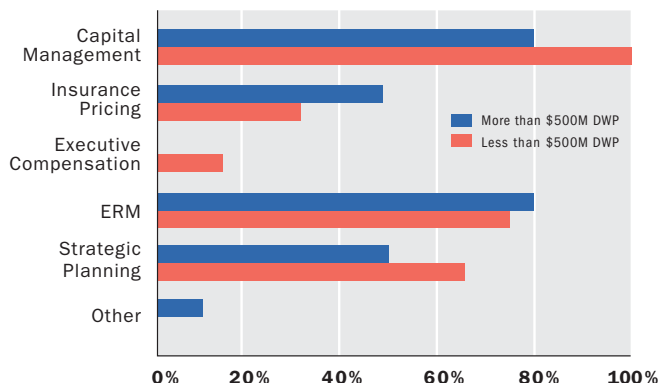
Larger vs. smaller companies (2018)



A growing number of companies are using an economic capital model on a regular basis. The total number of respondents answering in the affirmative has increased from 31% in 2015 to 49% in 2018. Larger company use has increased from 56% to 71% in just the past two years. Over the same time period, smaller firm use also increased, from 32% to 40%.

If ECM used regularly, the ECM results were used for...

Larger vs. smaller companies (2018)



This year, 71% of larger firms indicated that they used an economic capital model regularly. For these firms, the greatest use made of their economic capital model was for capital management (80%) and ERM (80%). Only 40% of smaller firms reported using an economic capital model regularly. For these firms, greatest use was made for capital management (100%), ERM (75%) and strategic planning purposes (67%).

4. Top emerging risks

The survey enquired about top emerging risks – in the next three years and over the next 10 years. No sample risks were provided to prompt replies. Answers were rolled up into summary categories.

Top emerging risks confronting your company over the next 1 to 3 years

(All respondents)

1. Cyber security	16.1%
2. Industrial competition	16.1%
3. Technological change	14.1%
4. Government regulation	13.1%
5. Climate change	10.1%
6. Political Environment	10.1%
7. Economic uncertainty	9.0%

Top emerging risks confronting your company over the next 3 to 10 years

(All respondents)

1. Technological change	21.0%
2. Industry competition	11.6%
3. Climate change	9.5%
4. Cyber security	9.5%
5. Human capital	8.4%
6. Government regulation	7.3%
7. Political environment	7.3%

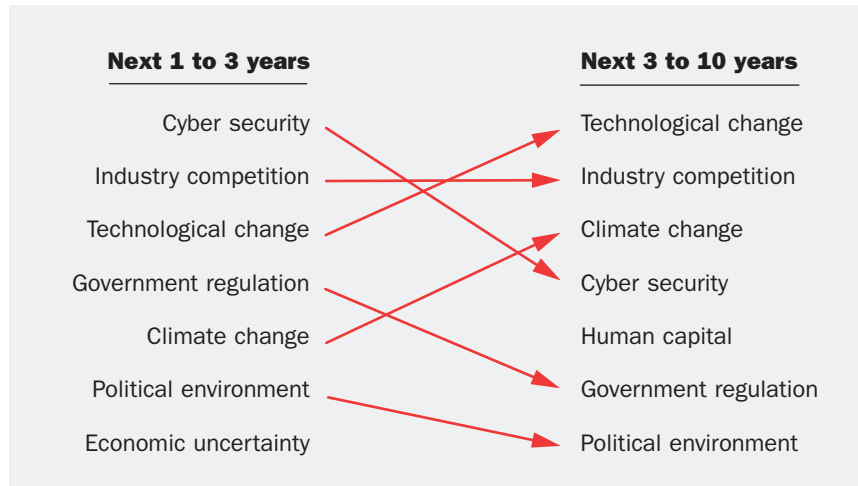
In the near term, the top risk issues for respondents were cyber security and industry competition (both at 16.1%). Concern about several high-profile data breaches over the past year likely account for the industry’s increased focus on cyber security. This ranked third in last year’s list of short-term risks. In a highly competitive industry, respondents continue to view competitor actions and reactions as “risks” to their operations – on par with cyber security concerns. These two issues accounted for one-third of responses regarding short-term risks.

Over the longer term, the effect of technological change was the number one risk cited by respondents (21%), clearly ahead of industry competition (11.6%), climate change (9.5%) and cyber security (9.5%). There was no change in the order of the top four long-term risks cited by respondents in the 2017

and 2018 ERM surveys. Respondents have seen technological change reshape the business of insurance with new ways of measuring, controlling and pricing risk (e.g. artificial intelligence, blockchain, Internet of Things, telematics, cloud computing, Insurtech, FinTech, etc.). They fully expect this trend to continue over time.

Top emerging risks

(All respondents)



This graph compares respondents' summary responses over the two time periods (1 to 3 years and 3 to 10 years). The top six short-term risks (accounting for more than 90% of responses) remained on the list of long-term risks. Top-of-mind concerns for respondents were cyber security and issues related to

industry competition (pricing, new products, commoditization, etc.) which cause uncertainty in the marketplace. In the longer term, respondents' clear concern is on technological change and industry competition (unchanged in second place over the longer term). Concerns about the political environment decreased over the longer term.

Survey comparison

Following is a table summarizing responses to common questions appearing in past ERM surveys (2011, 2013, 2015, 2016, 2017 and 2018).

■ Responses highlighted in green show improvement since the previous survey.

Questions	2011		2013		2015		2016		2017		2018	
	Yes %	No %	Yes %	No %	Yes %	No %	Yes %	No %	Yes %	No %	Yes %	No %
Do you maintain a risk register of all the material risks identified by your company?	79	21	79	21	77	23	92	8	96	4	90	10
Is the individual with primary responsibility for managing your company's enterprise risks part of the company's executive management team?	75	25	87	13	87	13	89	11	88	12	78	22
Does this individual have direct access to the Board of Directors?	86	14	100	0	97	3	90	10	88	12	88	2 N/A 10
Does your company's risk profile address...												
• Information relating to each risk?	83	17	92	8	88	12	88	12	80	20	84	16
• "Owner" or person primarily responsible?	75	25	92	8	84	16	77	23	86	14	87	13
• Consistent process and rating system?	78	22	78	22	79	21	83	17	78	22	82	18
• Prioritization of individual risks?	76	24	75	25	63	37	69	31	76	24	69	31
• Action plan to mitigate priority risks?	81	19	83	17	81	19	65	35	78	23	91	9
Which key risk areas are explicitly addressed in your company's risk profile... (check all that apply)												
• Underwriting risk?	93	7	100	0	97	3	98	2	100	0	98	2
• Credit risk?	94	6	86	14	92	8	90	10	98	2	96	4
• Market risk?	95	5	94	6	95	5	96	4	98	2	98	2
• Liquidity risk?	87	13	83	17	89	11	83	17	94	6	90	10
• Operational risk?	90	10	87	13	97	3	98	2	100	0	100	0
• Strategic risk?	84	16	77	23	82	18	86	14	90	10	86	14
Does your company... (check one box)												
• Form an aggregate measure of its enterprise risks?	10		13		9		8		14		6	
• Manage risks individually?	48		47		37		33		38		32	
• Both?	42		40		54		59		48		62	
Has your company's risk management function been assessed by an external (independent) advisor?			30	70	35	65	40	60	46	54	46	54

Key risk management terms used in this survey

The survey document included the following definitions to ensure common understanding among respondents.

Enterprise Risk Management (ERM)

A process (implemented by an entity's Board of Directors, management and other personnel, applied in strategy setting and across the entity) designed to identify potential events that may affect the entity, to manage risk to be within its risk appetite, and to provide reasonable assurance regarding the achievement of entity objectives.

Risk appetite

The degree of risk (broadly measured, in quantitative terms) that an insurance company is willing to accept in pursuing its business goals and values. Risk appetite requires an insurer to consider its total risk-taking philosophy, including the expectations of its shareholders. A risk appetite statement can also include qualitative factors.

Risk profile

A summary of the most material risks an insurer faces (perhaps five to 10), ranked on an appropriate basis considering severity and probability. Some insurers may also compile a more extensive list (e.g. Risk Catalogue or Risk Register) including less significant risks.

Risk tolerance

Requires an insurance company to consider, in quantitative terms, exactly how much of its capital it is willing to lose, as well as its tolerance of volatility in earnings and other measures of performance and value.

Risk limits

Requires an insurance company to consider in detail how much risk that individual managers should be allowed to take.

Appendix I – PACICC’s Risk Management Advisory Committee

The Risk Management Advisory Committee provides PACICC’s Board of Directors with ongoing technical expertise regarding current and emerging risk management issues. The Advisory Committee oversees the work of PACICC’s Risk Officer’s Forum and is composed of senior industry risk officers who are supported by a PACICC Administrator.

2018 Advisory Committee Members*

Susan Meltzer	Aviva Canada (Committee Chair)
Sanjeev Agarwal	AIG Canada
Randy Besse	SGL Canada
Brandon Blant	Intact Financial Corporation
Manon Débigaré	Desjardins General Insurance Group
Randy Musselman	The Guarantee Company of North America
Committee Administrator:	Ian Campbell, Vice President, Operations, PACICC

* Dinesh Garbharran (formerly of TD Insurance) retired from the Advisory Committee in 2018. PACICC thanks him for his contributions to the work of the Risk Management Advisory Committee.

Forum Mandate

The Forum seeks to enhance risk management within the P&C insurance industry by:

- Discussing and sharing risk management best practices within industry;
- Reviewing and communicating topical risk management information;
- Serving as a risk management resource for PACICC and for insurance regulators;
- Discussing major existing risks and significant emerging risks within the industry; and
- Providing resources, references and information to facilitate research of risk management and related governance topics.

Forum Membership

Membership in the Forum is open to staff of any Canadian licensed insurer or reinsurer (Federal, Provincial and Territorial) with management responsibility for ERM in their respective organizations. This includes PACICC member insurers and risk officers with insurers and reinsurers that are not PACICC members.

Forum Activities

Forum activities include a series of half-day, in-person Forum meetings (held in Toronto) as well as a series of Emerging Risks Webinars.

- **Forum meetings** – feature a guest speaker addressing a topical industry issue followed by two panel sessions featuring industry experts and senior risk officers from the industry who seek to engage attendees in frank discussion on a variety of current ERM issues and topics.
- **Emerging risks webinars** – feature recognized experts who delve into technical aspects of a single ERM issue. Webinars enable Forum members across Canada to easily participate from remote locations. Questions are received in advance to help guide the online discussion in real time, in a talk show format. Links to all past webinars are available on the PACICC website for future on-demand rebroadcast.

Appendix II – 2018 ERM Survey Questions

Following are summary responses (Total) for each of the questions posed in the 2018 ERM Survey, in bold. Percentages are rounded and may not add to 100%. In brackets is the 2018 breakdown for large companies (Greater than \$500M in DWP) vs. small companies (Less than \$500M in DWP). Also included is the benchmark Total for each question along with the year that that question was first included in the survey.

Company characteristics

1. a) What was your company's total Direct Written Premium in 2017?

All replies are received in strict confidence.

- b) Please specify the nature of your company. (Select one)

- Domestic (Canadian-owned company) – **58% Total** (Large 57%; Small 53%); 66% Total in 2016
- Subsidiary of a foreign parent – **20% Total** (Large 36%; Small 17%); 19% Total in 2016
- Branch of a foreign parent – **22% Total** (Large 7%; Small 30%); 17% Total in 2016

- c) At what level is your organization regulated? (Select one)

- Federal – **41% Total** (Large 43%; Small 40%); New question in 2018
- Provincial – **34% Total** (Large 14%; Small 43%); New question in 2018
- Both – **25% Total** (Large 43%; Small 17%); New question in 2018

2. Does your company have a documented Enterprise Risk Management (ERM) framework of policy with established procedures?

- Yes – **96% Total** (Large 100%; Small 93%); 87% Total in 2013
- No – **4% Total** (Large 0%; Small 7%); 13% Total in 2013

3. Does your organization have a Board-approved risk appetite statement?

- Yes – **92% Total** (Large 93%; Small 7%); 51% Total in 2013
- No – **8% Total** (Large 7%; Small 10%); 49% Total in 2013

4. a) Who has primary responsibility for your company's ERM framework? (Select one)

- CEO or Chief Agent – **24% Total** (Large 0%; Small 37%); 28% Total in 2013
- Chief Risk Officer – **51% Total** (Large 93%; Small 33%); 46% Total in 2013
- Chief Actuary – **6% Total** (Large 0%; Small 10%); Option not included in 2013
- Chief Financial Officer – **6% Total** (Large 0%; Small 7%); Option not included in 2013
- Other (Please specify) – **13% Total** (Large 7%; Small 20%); 28% Total in 2013

- b) Does the person with primary responsibility for managing ERM receive direction for risk management activities from a head office?

- Yes – **60% Total** (Large 71%; Small 57%); 62% Total in 2016
- No – **40% Total** (Large 29%; Small 43%); 38% Total in 2016

5. a) Does the person with primary responsibility for managing ERM have direct access to the Board of Directors or to the relevant Committee of the Board? (Select one)
- Yes – **87% Total** (Large 86%; Small 87%); 86% Total in 2011
 - No – **2% Total** (Large 7%; Small 0%); 14% Total in 2011
 - Not applicable (e.g. foreign branch) – **10% Total** (Large 7%; Small 13%); Option not included in 2011
- b) Is the person with primary responsibility for managing ERM part of the company's executive management team?
- Yes – **78% Total** (Large 71%; Small 87%); 75% Total in 2011
 - No – **22% Total** (Large 29%; Small 13%); 25% Total in 2011
6. Do ERM activities in your company help to determine executive compensation? (Select one)
- Yes – **12% Total** (Large 29%; Small 7%); 7% Total in 2015
 - Minimally – **32% Total** (Large 36%; Small 30%); 39% Total in 2015
 - Not at all – **56% Total** (Large 36%; Small 63%); 54% Total in 2015
7. Has your company's ERM function been assessed by an external (independent) advisor? (Select one)
- In the last year – **16% Total** (Large 7%; Small 17%); 23% Total in 2015
 - In the last 3 years – **22% Total** (Large 13%; Small 17%); 12% Total in 2015
 - More than 3 years ago – **8% Total** (Large 0%; Small 13%); 0% in 2015
 - Not assessed – **54% Total** (Large 57%; Small 53%); 65% Total in 2015

ERM framework and practices

8. Which of the following key risk categories are explicitly addressed in your company's ERM program? (Select all that apply)
- **Underwriting risk** – Risks assumed through the insurance contracts written and reinsurance ceded by your company – **98% Total** (Large 100%; Small 97%); 93% Total in 2011
 - **Credit risk** – Risks related to changes in the credit quality of counterparties or intermediaries to which your company is exposed (including reinsurance receivables) – **96% Total** (Large 97%; Small 90%); 94% Total in 2011
 - **Market risk** – Risks that arise from volatility in financial markets, including changes in interest rates, bond and stock prices – **98% Total** (Large 100%; Small 93%); 95% Total in 2011
 - **Liquidity risk** – Risks related to possible cash-flow shortfalls, including cash calls following major loss events, credit-rating downgrades, problems accessing financial markets – **90% Total** (Large 93% Small 83%); 87% Total in 2011
 - **Operational risk** – Risks arising from potential deficiencies with respect to people, processes or systems in any of the risk areas noted above, as well as claims management and information technology – **100% Total** (Large 100%; Small 97%); 90% Total in 2011
 - **Strategic risk** – The risk of loss arising from strategic business decisions – **86% Total** (Large 93%; Small 80%); 84% Total in 2011

ERM framework and practices (continued)

- 9.** Does your company have a formal process in place to identify new or emerging risks?
- Yes – **72% Total** (Large 79%; Small 63%); 68% Total in 2016
 - No – **28% Total** (Large 22%; Small 37%); 32% Total in 2016
- 10.** Does your company consider ERM to be primarily: (Select one)
- A regulatory compliance exercise – **9% Total** (Large 7%; Small 13%); 19% Total in 2015
 - Accepted by the business – **47% Total** (Large 50%; Small 43%); 41% Total in 2015
 - Highly embedded in the business and valued by Senior Management and Board of Directors (or equivalent) – **43% Total** (Large 43%; Small 43%); 40% Total in 2015
- 11.** Which of the following impacts are considered in your company's ERM framework while assessing risk? (Select all that apply)
- Potential impact on income/earnings – **87% Total** (Large 100%; Small 87%); 92% Total in 2015
 - Potential impact on regulatory capital – **95% Total** (Large 100%; Small 93%); 94% Total in 2015
 - Reputational impact – **91% Total** (Large 93%; Small 90%); 79% Total in 2015
- 12.** How broadly has your company communicated principles in its risk appetite statement? (Select all that apply)
- Communicated to the Board – **90% Total** (Large 100%; Small 87%); 95% Total in 2015
 - Communicated internally to senior management – **84% Total** (Large 93%; Small 80%); 92% Total in 2015
 - Communicated internally to all employees – **38% Total** (Large 36%; Small 40%); 14% Total in 2015
 - Communicated externally – **18% Total** (Large 22%; Small 17%); 15% Total in 2015
- 13.** Does your company maintain a risk register of all of the material risks identified by the company?
- Yes – **90% Total** (Large 93%; Small 87%); 79% Total in 2011
 - No – **10% Total** (Large 7%; Small 13%); 21% Total in 2011
(If No, please skip to question #15)
- 14.** Does your company's risk profile address the following? (Select all that apply)
- Information relating to each risk (including causes and triggers), existing management practices or controls? – **85% Total** (Large 93%; Small 63%); 83% Total in 2011
 - Person(s) primarily responsible for managing each risk? – **73% Total** (Large 79%; Small 70%); 75% Total in 2011
 - A consistent process and rating system used to measure and assess the severity and probability of each risk? – **83% Total** (Large 93%; Small 63%); 78% Total in 2011
 - Prioritization of individual risks based on the ratings assigned? – **69% Total** (Large 71%; Small 50%); 76% Total in 2011
 - Action plans to mitigate priority risks? – **91% Total** (Large 93%; Small 73%); 81% Total in 2011

15. How does your company manage enterprise risks (for example, as related to economic capital)?
(Select one)

- Forms an aggregated measure of its enterprise risks – **6% Total** (Large 14%; Small 0%); 10% Total in 2011
- Manages risks individually – **32% Total** (Large 14%; Small 33%); 48% Total in 2011
- Both – forms aggregated measure of its enterprise risks and manages risks individually – **66% Total** (Large 64%; Small 68%); 42% Total in 2011

16. Which of the following methodologies and techniques does your company use to assess risk?
(Select all that apply)

- Key risk indicators – **82% Total** (Large 79%; Small 83%); 86% Total in 2015
- Loss event data – **76% Total** (Large 86%; Small 63%); 62% Total in 2015
- Economic capital modelling – **51% Total** (Large 86%; Small 48%); 48% Total in 2015
- Facilitated workshops – **43% Total** (Large 71%; Small 27%); 41% Total in 2015
- Interviews – **65% Total** (Large 71%; Small 53%); 52% Total in 2015
- Other – **13% Total** (Large 14%; Small 13%); Option not included in 2015

17. Which area of your company leads the review of new products and lines of business prior to launch?

- Underwriting – **79% Total** (Large 93%; Small 70%); Option not included in 2015
- Corporate Actuarial – **28% Total** (Large 14%; Small 30%); 47% Total in 2015
- Enterprise Risk Management – **14% Total** (Large 7%; Small 17%); 40% Total in 2015
- Finance – **20% Total** (Large 14%; Small 23%); 47% Total in 2015
- Legal – **18%** (Large 14%; Small 20%); 27% Total in 2015
- Other – **11% Total** (Large 14%; Small 10%); Option not included in 2015

18. Does your company systematically quantify the operational risks deemed material to the organization?

- Always – **34% Total** (Large 29%; Small 40%); 20% Total in 2015
- When possible – **54% Total** (Large 64%; Small 50%); 65% Total in 2015
- Never – **9% Total** (Large 7%; Small 10%); 15% Total in 2015

19. Does your company employ business continuity planning for the entire organization?

- Yes – **91% Total** (Large 93%; Small 90%); 88% Total in 2016
- No – **7% Total** (Large 7%; Small 7%); 12% Total in 2016

If Yes...

a) How often do you test disaster recovery?

- Once a year – **75% Total** (Large 86%; Small 63%); 67% Total in 2016
- Every 2 to 3 years – **10% Total** (Large 7%; Small 13%); 11% Total in 2016
- Every 3 to 5 years – **0% Total** (Large 0%; Small 0%); 4% Total in 2016
- Ad hoc basis – **15% Total** (Large 7%; Small 17%); 16% Total in 2016

ERM framework and practices (continued)

b) How often do you test business continuity?

- Once a year – **71% Total** (Large 79%; Small 60%); 45% Total in 2015
- Every 2-3 years – **13% Total** (Large 7%; Small 13%); 11% Total in 2015
- Every 3-5 years – **0% Total** (Large 0%; Small 0%); 15% Total in 2015
- Ad hoc basis – **17% Total** (Large 14%; Small 20%); 29% Total in 2015

20. Does your company have a cyber protection plan in place for the entire organization?

- Yes – **93% Total** (Large 93%; Small 93%); 89% Total in 2016
- No – **7% Total** (Large 7%; Small 7%); 11% in 2016

If Yes, how often is this cyber protection plan tested?

- Once a year – **51% Total** (Large 57%; Small 43%); 47% Total in 2016
- Every 2-3 years – **2% Total** (Large 0%; Small 3%); 5% Total in 2016
- Every 3-5 years – **0% Total** (Large 0%; Small 0%); 5% Total in 2016
- Ad hoc basis – **41% Total** (Large 36%; Small 43%); 44% Total in 2016

Own Risk and Solvency Assessment (ORSA) and economic capital

21. In your company, is the Chief Risk Officer or head of ERM responsible for ORSA?

- Yes – **82% Total** (Large 86%; Small 80%); New question in 2018
- No – **16% Total** (Large 7%; Small 20%); New question in 2018

22. Has your company engaged external resources to assist in completing and/or reviewing its ORSA?

- Yes – **52% Total** (Large 50%; Small 53%); 42% Total in 2015
- No – **43% Total** (Large 50%; Small 40%); 58% Total in 2015

23. Does your company use its ORSA results for: (Select all that apply)

- Capital management – **73% Total** (Large 86%; Small 67%); 70% Total in 2016
- Insurance pricing – **13% Total** (Large 14%; Small 13%); 9% Total in 2016
- Executive compensation – **5% Total** (Large 0%; Small 7%); 0% Total in 2016
- ERM – **72% Total** (Large 64%; Small 77%); 75% Total in 2016
- Inform strategic planning – **50% Total** (Large 50%; Small 50%); 45% Total in 2016
- Other – **7% Total** (Large 0%; Small 10%); Option not included in 2016

24. Does your company use an economic capital model on a regular basis?

- Yes – **49% Total** (Large 71%; Small 40%); 31% Total in 2015
- No – **51% Total** (Large 29%; Small 60%); 69% Total in 2015

If Yes, does your company use its economic capital model results for: (Select all that apply)

- Capital management – **92% Total** (Large 80%; Small 100%); 89% Total in 2015
- Insurance pricing – **42% Total** (Large 50%; Small 33%); 42% Total in 2015
- Executive compensation – **8% Total** (Large 0%; Small 17%); 16% Total in 2015
- ERM – **77% Total** (Large 80%; Small 75%); 79% Total in 2015
- Inform strategic planning – **59% Total** (Large 50%; Small 67%); Option not included in 2015
- Other – **9% Total** (Large 10%; Small 3%); Option not included in 2015

Tools and resources

25. What technological tools currently support (that is, identify, analyze and report) risk management activities in your company? (Select all that apply)

- In-house developed applications – **36% Total** (Large 29%; Small 43%); 36% Total in 2015
- Excel / MSOffice suite – **86% Total** (Large 86%; Small 87%); 85% Total in 2015
- Third-party applications – **41% Total** (Large 43%; Small 40%); 38% Total in 2015
- Other – **2% Total** (Large 14%; Small 0%); Option not included in 2015

26. How many full-time equivalent (FTE) employees are assigned to your company's risk management function?

- Larger company average – **10.6 FTE employees** (7.25 FTE employees in 2017)
- Smaller company average – **2.3 FTE employees** (1.5 FTE employees in 2017)

27. What are your company's plans for 2018 regarding resources in the ERM function? (Select one)

- Planning to increase headcount or allocation to external resources – **22% Total** (Large 21%; Small 23%); 20% Total in 2015
- Planning to decrease headcount or allocation to external resources – **0% Total** (Large 0%; Small 0%); 0% Total in 2015
- No changes planned to headcount or allocation to external resources – **78% Total** (Large 79%; Small 77%); 80% Total in 2015

Tools and resources (continued)

28. What are your company's plans for 2018 regarding tools in the ERM function?

(Select one)

- Planning to increase investment in tools – **18% Total** (Large 21%; Small 17%); 24% Total in 2015
- Planning to decrease investment in tools – **0% Total** (Large 0%; Small 0%); 0% Total in 2015
- No changes planned to investment in tools – **82% Total** (Large 79%; Small 83%); 76% Total in 2015

29. Have you, or your company's designate, participated regularly in Risk Officer's Forum meetings and/or Emerging Risks Webinars during 2017?

- Yes – **84% Total** (Large 93%; Small 73%); 37% Total in 2015
- No – **16% Total** (Large 7%; Small 23%); 63% Total in 2015

30. What are three emerging risks confronting your company over the next 1 to 3 years?

2018		2017	
1. Cyber security	16.1%	1. Industry competition	20.3%
2. Industry competition	16.1%	2. Technological change	19.7%
3. Technological change	14.1%	3. Cyber security	18.4%
4. Government regulation	13.1%	4. Climate change	13.8%
5. Climate change	10.1%	5. Government regulation	11.2%
6. Political environment	10.1%	6. Consumer preferences	7.9%
7. Economic uncertainty	9.0%	7. Political environment	3.3%

31. What are three emerging risks confronting your company over the next 3 to 10 years?

2018		2017	
1. Technological change	21.0%	1. Technological change	32.5%
2. Industry competition	11.6%	2. Industry competition	19.4%
3. Climate change	9.5%	3. Climate change	10.1%
4. Cyber security	9.5%	4. Cyber security	8.5%
5. Human capital	8.4%	5. Consumer preferences	8.5%
6. Government regulation	7.3%	6. Government regulation	6.9%
7. Political environment	7.3%	7. Human capital	4.6%

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