CASUALTY ACTUARIAL SOCIETY

Canadian Institute of Actuaries / Institut canadien des actuaires

SOCIETY OF ACTUARIES®

11th Survey of Emerging Risks – Executive Summary

October 2018

Document 218026

11th Survey of Emerging Risks

AUTHOR Max J. Rudolph, FSA, CFA, CERA, MAAA
Rudolph Financial Consulting, LLC

SPONSOR Joint Risk Management Section of the Canadian Institute of Actuaries, Casualty Actuarial Society and Society of Actuaries

Caveat and Disclaimer

The opinions expressed and conclusions reached by the author are his own and do not represent any official position or opinion of the Canadian Institute of Actuaries, the Casualty Actuarial Society or the Society of Actuaries or their members. The Canadian Institute of Actuaries, the Casualty Actuarial Society and the Society of Actuaries make no representation or warranty to the accuracy of the information.

Copyright © 2018 by the Canadian Institute of Actuaries, Casualty Actuarial Society and Society of Actuaries. All rights reserved.

11th Survey of Emerging Risks – Executive Summary

Emerging risks are a key component for enterprise risk management (ERM) practitioners with time horizons longer than a few months. For example, a pension plan's life cycle will last decades beyond the company it services and it must consider risks to investments and longevity far into the future. A life insurer who writes a term policy on a child could have that liability on its books for a full century. As much as the world has changed in the last 100 years, change occurring in the next 100 years is likely to accelerate even faster.

Unknown unknown risks are the Black Swans, things that happen but cannot be prepared for. Unknown knowns are another form of emerging risk that reflects ignorance of the future. This can reflect instances where historical data is not predictive, but also includes risks without data where a practitioner or theorist is not able to provide useful techniques to analyze the risk in the future. A risk may be an unknown known for one analyst and a known known for another.[1]

Practitioners use time horizon to determine what risks are important within an ERM context. It is a challenge to align incentives with the needs of a business, especially when incentives are based on short-term objectives. It is easier to align the incentives of business owners with long-term goals for a firm.

The emerging risk practitioner needs to think like an owner. André Choquet wrote eloquently about the need for pension plans to consider both the life cycle of the business and the plan, and the need for independence.[2] Assumptions previously considered stable, or trending, may now exhibit discontinuities. Here are some examples where a previously stable assumption could become an emerging risk. Life expectancy could lengthen if a cure for cancer is found, or shorten due to a pandemic or volcanic event that causes worldwide crops to fail. Morbidity costs increase as heat waves become more common due to both climate change and older populations driven by demographic changes. An owner mentality would more likely recognize the need to optimize the value of the firm over many years.

This survey attempts to track the thoughts of risk managers about emerging risks across time. It is the 11th survey of emerging risks conducted by the Joint Risk Management Section (JRMS), a collaboration of the Canadian Institute of Actuaries (CIA), Casualty Actuarial Society (CAS) and Society of Actuaries (SOA). Trends are as important as absolute responses, helping risk managers contemplate individual risks, combinations of risks and unintended consequences of actions and inactions. The survey responses, and especially the comments, give risk managers a way to anonymously network with peers and share new ways they think about risk. Each survey enhances the knowledge of those who participate by helping them think more deeply about the topic, and it is anticipated that the reader will benefit in this way as well.

---

[1] The extension of this definition results from a brief discussion between the researcher and Professor Paul Johnson, an adjunct professor at the Heilbrunn Center for Graham & Dodd Investing at Columbia Business School.
[2] Choquet, André, From Pension Risk Management to ERM, *Risk Management Newsletter,* July 2006, https://www.soa.org/Library/Newsletters/Risk-Management-Newsletter/2006/July/rmn-2006-iss8-choquet.aspx

Copyright © 2018 Canadian Institute of Actuaries, Casualty Actuarial Society, and Society of Actuaries

Note that an Executive Summary hits the high points of the survey, a Results section provides commentary about the survey, and detailed survey results can be found in Appendix II. This appendix allows the reader to scan specific sections or questions based on their level of interest, and includes every comment received.

Executive Summary

Every year is unique, and 2017 was no exception. Geopolitical tensions, hurricanes, wildfires and more created opportunities for recency bias, while a total solar eclipse and less-heralded positive events may have productive benefits to health and longevity. Risk management evolution is captured by trends in the *11th Survey of Emerging Risks*, completed in November 2017.

One shift in practice is a tendency to look at emerging risks only over a period covering tactical time horizons, meaning a company's short-term projections that last less than five years. In one question, the survey asks risk managers to consider the top emerging risks when looking out to 2050. The differences are enlightening. The results shift away from economic risks, which are expected to cycle, and toward environmental, technological and societal risks.

Companies should consider both near-term and longer-term emerging risks, looking out over a time horizon consistent with the liabilities held. Risk managers can assist with this task, providing qualitative and quantitative analysis across the longer time frame. As with other risk identification and assessment work, risk managers need to be aware of the potential for groupthink. This is especially true when they are embedded in the business units.

The year's survey continues to highlight the outsized role of cyber risks, along with an improving global economic outlook and upward trending geopolitical risks. These key findings emphasize a need for ERM to adjust along with the risks themselves. It can be useful to bring in outsiders to the risk team who think differently due to alternative experience, whether a life expert helping a casualty shop or a retail risk expert providing input to an investment shop.

A complete French version of this research report will be published at a later date.

Copyright © 2018 Canadian Institute of Actuaries, Casualty Actuarial Society, and Society of Actuaries