

Welcome to the new issue of *Seeing Beyond Risk*, the quarterly electronic publication from the Canadian Institute of Actuaries (CIA). Each issue presents the latest actuarial thinking from experts.

In this issue, Sylvain Fortier, chief risk and finance officer at UNI Financial Corporation, describes the skill and expertise actuaries bring to the banking and financial industry, particularly in the area of operational risk management.

We are sure you will find this article informative and thought-provoking, and we encourage you to distribute it among your friends and colleagues.

## Risk Management in the Banking Sector: an Actuary's Contribution

By Sylvain Fortier, ACIA

The banking industry, specifically its risk management and regulatory standards, is changing at a dizzying pace. This field presents a wide range of risks covering a variety of business lines, and these risks require analysis by experts capable of quantifying them accurately. Institutions gain a major competitive edge from improved knowledge of and control over their risks and the interaction among them.

Actuaries use predictive modelling, data mining, and statistical tools to analyze and manage daily activities from a risk management, financial performance, and business development standpoint. Their rigorous training is relevant to all financial institutions, including banks and credit unions, all the more so since the advent of the professional [Chartered Enterprise Risk Analyst](#) (CERA) qualification in 2009. Globally recognized, CERA requirements guarantee specific and in-depth training in enterprise risk management.

### RISK MANAGEMENT: THE EARLY DAYS

Today, an increasing number of actuarial students see the potential offered by the banking industry. Moreover, this sector is ripe with opportunities for actuaries in search of new professional challenges.

In my case, a series of interesting circumstances led me to this industry. Once I had completed my actuarial undergraduate degree, I didn't see myself working in a traditional actuarial field such as insurance or pensions. I therefore decided to pursue a master's degree in finance and insurance at



Université Laval, where two professors, actuaries by training, steered me toward risk management.

In 1997, with the field in its infancy, risk management job offers weren't exactly pouring in. While the largest banks had set up teams a few years earlier, smaller institutions were merely dipping their toe in the water by creating a few risk management positions, specifically in management of credit risk, market risk, assets/liabilities, and operational risks.

Subsequent financial crises forced global regulatory bodies to implement regulations based on historical data and predictive analytics, as well as quality controls for these models. Also, risk governance became a mainstay of corporate governance.

### RISK MANAGEMENT TODAY

Risk management committees operating within boards of directors now play a role in managing financial institutions. Since the 1990s, there has been a series of model-based regulatory standards.



Internal credit scoring models appeared in Basel II, the 2004 international banking standard that requires, among other things, that financial institutions maintain enough capital reserves to cover risks incurred by credit operations. Stress-testing is now an essential component of financial institutions' risk and equity management. At the same time, business development sectors continue to reap the benefits of predictive models to better target the supply of products and services to clients and to optimize their liquidity and capital investment strategies on behalf of the institutions. We are beginning to see electronic financial advisors (also known as robo-advisors), that use predictive models and business rules created with the use of the banks' extensive databases.

## OPERATIONAL RISK MANAGEMENT

The rapid growth of the industry and of these operational processes has placed the emphasis on implementing operational risk management. Although this expertise has existed for two or three decades, most institutions are still collecting information and data on operational losses, and much remains to be done in this area.



Sylvain Fortier, ACIA, is chief risk and finance officer at UNI Financial Cooperation, and general manager at Acadia Financial Services, a mutual fund dealer in New Brunswick. He holds a bachelor's degree in science, with a specialization in actuarial mathematics and a minor in commerce from Concordia University, as well as a master's degree in business administration, specializing in finance and insurance from Université Laval. Mr. Fortier was the leader in changing the risk culture at UNI upon his arrival in August 2015. He played a key role in obtaining the federal charter for the organization, a first in Canada for a credit union. With his solid expertise and experience, he has succeeded in building a credible and solid relationship with the authorities.

He is an Associate of the Canadian Institute of Actuaries (ACIA) and was a member of its Enterprise Risk Management Applications (ERM) Committee from 2010 to 2013. Recognized as a Chartered Enterprise Risk Analyst (CERA) by the Society of Actuaries, he was also a member of the research team of the Joint Risk Management Section (JRMS) from 2010 to 2013.

Changes in technologies and business practices, such as cyber risks, pose new challenges in the field of risk management. The industry continues to develop its capacity to properly identify operational risks and to measure them more accurately. In my opinion, operational risks should receive greater attention from corporate boards and from financial institutions' senior management committees. These risks have proven the downfall of many companies.

Integrated risk management also remains a challenge for institutions and for regulatory bodies. Properly understanding and quantifying the interaction among various risks and building risk management into existing corporate structures remain poorly understood concepts for a number of institutions. Reputational and strategic risks often derive from deficient management of one or more other risks. Methodologies in this field can be expected to continue developing in the years to come.

## ACTUARIES HAVE THE EXPERTISE TO HELP

Actuaries are trained to identify distributions in data and to develop mathematical models for predicting the behaviour of large cohorts or changes in business/risk models. The banking sector is certainly one of the most data-rich industries, which makes it a preferred field for actuaries to demonstrate their full potential. Actuaries offer the banking sector significant added value, be it in integrated risk management, specific risk management, or client behaviour modelling when it comes to the supply of services and products. As the banking industry, risk management, and regulatory standards continue to evolve, businesses in this sector would do well to look to the significant expertise and contributions actuaries can bring. 