



Article from

Risk Management

December 2018

Issue 43

A New Era for Risk Management: Collaboration Across Businesses Using Predictive Analytics

Remarks on the SOA Predictive Analytics Seminar in Hong Kong

By Questor Ng

The application of predictive analytics in the Asia-Pacific region has recently been gaining momentum and is expected to expand substantially in the coming years. Rising awareness and the use of predictive analytics attribute to the heightened emphasis on enhanced customer service, which edges out competition in order to drive productivity improvement and revenue growth.

A series of SOA predictive analytics seminars were held from Aug. 27–31, 2018 in Hong Kong, Taiwan, and Malaysia. The seminar in Hong Kong focused on how risk management copes with the development of predictive analytics. It was a full day event in which a number of actuarial and risk professionals from Asia and North America participated. Several international experts presented their work and shared their views with others. With keen interaction between the speakers and audience, the seminar successfully developed and nurtured an in-depth discussion and wide perspectives on the topic of predictive analysis.

The two main areas of focus in the Hong Kong seminar were:

1. Views from regulators, insurers and consultants on the increasing desires to leverage data analytics to transform the business behavior of the insurance industry; and
2. The compatibility between innovation and risk management—how predictive analytics advance and are fueled by risk management.

VIEWS FROM REGULATORS, INSURERS, AND CONSULTANTS: WHERE INNOVATION MEETS REGULATION

Technology is a key driver for the future growth of insurance industries. According to a survey by Willis Towers Watson,¹ the overall transaction volume of InsurTech M&As in Asia rose up to US\$460 million in 2017. So far, InsurTech development has focused on capabilities related to digital distribution, consumer models and data analytics. At the same time, claim management and processing applications have also become top business priorities.

It is difficult to predict whether those new initiatives, financial products, services and delivery models, can fulfill supervisory requirements. To assist the industry, regulators have to respond quickly to the rapid changes in financial technology development. For example, in 2017, Hong Kong's Insurance Authority launched two flagship programs: Sandbox and Fast Track. This provides a more flexible environment for insurers to test InsurTech initiatives. Of course, such an environment is still under certain regulatory supervision to ensure that relevant supervisory requirements are met.

So far, InsurTech development has focused on capabilities related to digital distribution, consumer models and data analytics.

With advances in technology, more and more customers can engage, not only in the traditional way, but also through various convenient innovative digital access options. Unconventional products could be designed to meet previously unmet customer needs. As a result, consumers now have access to better processes, products and services.

Regulators need to maintain a balance between consumer protection and market development.

COMPATIBILITY BETWEEN INNOVATION AND RISK MANAGEMENT

Innovation derived from predictive analytics conjures up images of disruption—breaking through and reaching new heights. The emergence of predictive analytics approaches destabilizes the current marketing, underwriting and many other aspects



of modern insurance practices. The evolution is generally perceived as incompatible with risk management, which focuses on reducing or transferring risk, primarily by imposing controls to keep things in order. In fact, evolving risk management programs focus not only on the identification, measurement, mitigation, monitoring, and communication of risk, but also on capitalizing on risk opportunities to strengthen the innovation process.²

Insurance risk process

Constant changes in insurance risk process and the advance of technology led insurers to adapt and change their business practice, such as Business to Customer (BtoC) offerings, personalized offerings, and ease of transactions. Examples include: activity trackers provided to policyholders to monitor their health metrics and telematics which are widely used in auto insurance to keep track of driving habits; as well as the artificial intelligence used to assess the policyholders' daily behavior and predict insurance risks on a real-time basis help the insurer to develop suitable and affordable products. At the same time, the information obtained can be analyzed for enhanced simplified underwriting and effective claim prediction.

Fraud detection

Advanced analytics enable insurers to analyze the habits and behavior of policyholders to provide better services and enhance underwriting. Data analytics also offer major assistance to insurance fraud prevention. Traditionally, insurance companies use statistical models to identify fraudulent claims, but handling

fraud manually, however, is very costly. Under the big data trend, predictive analytics provide some key benefits in fraud detection, such as:

1. Integrating data and information to identify low-incidence events through sampling techniques, text mining, sentiment analysis, social network analysis, etc.
2. Providing industry-wide solutions through a centralized insurance claims database that employs advanced analytics to examine the claims data collected and enable the industry to detect patterns of fraudulent insurance claims and take early preventive measures when appropriate.

Risk reporting

Risk reports are used to communicate with stakeholders, identify areas for further investigation and generate ideas on why things have unfolded as they have. These results can be sent to predictive modeling for theories testing, creating a desired level of confidence in the answer, and investigating what drives risk events. The results then can be reported back for communication to support business decisions.

LOOK INTO THE FUTURE

As we can see, use of predictive analytics adds value to every stage of the risk management cycle. It can identify anomalies through collected datasets and predict exposure on evolving business environments, generating business insights and risk mitigation strategies.

However, insurers still face the challenge of demonstrating their financial success to justify the significant efforts and resources needed to build the model and test the initiatives.

Overall, the seminar in Hong Kong provided a good forum for productive and insightful discussion among the audiences who could bring the knowledge back and apply it as building blocks in shaping the future predictive analytics development in Asia and globally. ■



Questor Ng, FSA, is chair of the Organizing Committee for the SOA Predictive Analytics Seminar, Hong Kong. Questor is chief risk officer at FWD Life Insurance Company in Hong Kong. He can be reached at Questor.ng@fwd.com.

ENDNOTES

1. Willis Towers Watson InsurTech Briefing Q4 2017 report.
2. Aaron M. Halpert, Innovation Fueled by Risk Management, Casualty Actuarial Society E-Forum, Summer 2016.