

# Data-driven innovation in life and health insurance



Data is one of the engines driving innovation in life and health insurance. **RGA's Marc Sofer** discusses how the newest data sets, together with existing data and novel analytics, are impacting the industry's growth and development.



We live in an increasingly interconnected world. Everything from shoes to toothbrushes and more are connected to the newest bendy screen smartphone and to the cloud. Combine this data with information about spending habits gleaned from banking, credit card and mobile wallet transactions, and it's easy to see how pictures of an individual's wealth and health can be generated.

As a result, every company is interested in understanding how measurable behaviour can impact core business operations and future strategic directions. Most of these efforts are focused on loyalty, customer engagement and streamlining customer purchases.

Life and health (re)insurance companies are no different. Companies have spent the past several years organising and digitising existing data assets, making it easier for advanced analytics teams to create management information dashboards and statistical models.

## Focus on streamlining

In Asia, life and health insurance company data-modelling efforts have mainly been focused on two goals: Streamlining underwriting processes to speed policy issuance as well as simplify consumer needs analysis and

cross-sell, and improve non-disclosure/fraud detection to maintain premium rates and protect the bottom line. Given the massive underinsured populations in many Asian countries, as well as the fraudulent activity that occurs in several markets across the region, these efforts are strategically wise.

Efforts to date to achieve these goals have been admirable. At this point, however, our industry is merely scratching the surface of what potentially can be achieved by using existing data sources, gaining access to new permissioned data, and leveraging advanced statistical techniques such as machine learning and deep learning.

Let's delve a bit further into the data sources that life and health (re)insurers are interested in as well as the ways that this data can be utilised in the operations of life and health risk carriers.

## Novel data sources

Existing life and health insurer data assets are still extremely useful, both in terms of understanding customer preferences and in pricing and managing risk. The competitive hunger to acquire more and richer data, however, is steady and increasing. Data-related partnerships are being developed

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by insurers with telecommunications companies, wearable device companies and social networking companies, business partnerships involving data matching and sharing are being made on a continuous basis, and this is all expected to accelerate.

- **Agency customer data:** Data gathered from existing distribution channels can be further enhanced if the correct incentives could be given to sales agents to collect more comprehensive customer financial needs analysis data as a part of the new business acquisition process. These data can improve our understanding of customers and at the same time assist regulator goals of ensuring products sold are aligned with customer needs and circumstances.
- **Bancassurance customer data:** Most insurers in Asia have long-standing distribution relationships with banks. Banks have long viewed the insurance underwriting process as unnecessarily cumbersome and a barrier to greater sales. With appropriate customer permissions, bank-specific customer data could also become available for utilisation.
- **Wellness programme data:** These programmes offer opportunities for insurers to gather novel data by enabling more frequent engagement with their policyholders. Built-in incentives reward customers for behaviours deemed healthy, such as exercising, getting medical check-ups, and watching one's food intake. These programmes can be win-wins, as they allow insurers to collect more detailed permissioned customer data from biometric health check-ups, wearable tracking devices or other activities. Such programmes need to be engaging so that customers would want to share usable

personal data in exchange for valuable monetary incentives and health insights.

- **Credit data:** For many years, a multitude of non-biometric data sources have been shown to be correlated to mortality and other insurance-related risks. Twenty years ago, for example, credit behaviour emerged as a metric that could simplify buying a car, insuring a house, or acquiring a credit card. More recently, insurers in the US and India have begun utilising custom-built scores based on credit behaviour in order to streamline underwriting.
- **Driving data:** Driving behaviour has also been shown as correlative with both accident and sickness mortality risk. Indeed, individuals with infractions on their motor vehicle reports experience higher all-cause mortality than those with clean driving records. This data is currently being used in the US to refine life and health insurance pricing.

### Applications

These new data sets have great potential to:

- Streamline operational processes such as underwriting and claims adjudication
- Increase customer engagement and loyalty by creating incentives for lower-risk health behaviours
- Reduce anti-selection, fraud, and non-disclosure by comparing applicant and customer disclosures against electronic health records
- Allow insurers to assess and price risk more accurately by finding new premium rating factors

While we have already seen insurers using AI in claims processes, there's a high probability it could also become part of underwriting processes as well. In that event, data

from an ever-increasing number of sources would be used in conjunction with a variety of machine learning and deep learning techniques to arrive at underwriting decisions that are currently made by automated rules based underwriting engines and in some cases human underwriters.

### Move to simplify

Integration of permissioned bank data into the underwriting process, for example, could allow insurers to cut down significantly on medical and financial information requirements, enabling simpler and more customised application experiences. Similarly, product recommendations could be more precisely tailored, based on data outlining customer financial needs, creating value for all parties involved.

Permissioned electronic health records data, might also allow insurers to complete the underwriting process with limited applicant disclosure and input. Insurers would have more ability to check disclosures against third-party data, which would help avoid anti-selection, non-disclosure and fraud.

### Data privacy

While the future for new data acquisition and utilisation looks bright, insurers and their partners must ensure they work within the confines of the latest data privacy and discrimination regulations to ensure consumer interests are respected. At the same time, regulators would want to ensure that data and information privacy regulations permit innovation.

Opportunities are real and growing for life and health insurers to utilise data and advanced analytics to streamline operational processes in ways that both improve the customer experience and the bottom line. Many insurers today are reaping the benefits of such work while preparing the way for future partnerships and utilisation of new data sources. The power of insurers' existing data assets will be intensified when mortality and morbidity risk can be linked and combined with new sources of data pertinent to the risks presented.▲