Article from

Reinsurance Section News

June 2020

SOCIETY OF ACTUARIES
REINSURANCE SECTION

The Impact of Digital on the Reinsurance Industry

By Michael O'Dwyer

The irony that many of today's buzzwords such as big data, ecosystems, and AI rely heavily on statistical analysis has not been lost on reinsurers, which is a sector of the industry that has been honing the same skill sets for decades. Nevertheless, patterns of change are coming into focus that reinsurers must be aware of.

First, the volume, variety and velocity of data available to reinsurers has reached new heights, with significant implications for natural catastrophe (Nat Cat) modeling in particular.

Second, reinsurers are increasingly being turned to for more than just ceding premium. Preventative health care, IoT projects, and advanced analytics are just some of the services that reinsurers will be expected to participate in, if not directly facilitate.

Finally, as the relationship between reinsurers and insurers becomes more complicated, reinsurers will need to explore direct and alternative distribution, and several interesting examples of this are already underway.

In light of these changes, which have been hastened by recent developments, The Digital Insurer has identified five key trends that reinsurers need to consider.

TREND 1) EVOLVING USE OF DATA FOR LIFE & HEALTH UNDERWRITING

New data sources and modeling techniques hold the prospect for less invasive and more accurate medical underwriting, especially for chronic conditions such as hepatitis B, diabetes and even dementia. By identifying potential customers within segments previously considered "uninsurable," such techniques can bring reassurance to those traditionally viewed as high risk. Although many of these startups can extract and parse data, the ability to interpret what this data means still requires human judgment, and, as practitioners of statistical inference, reinsurers can lead the way in partnering with efforts to make sense of medical data.

Examples of Evolving Use of Data in Life & Health Underwriting

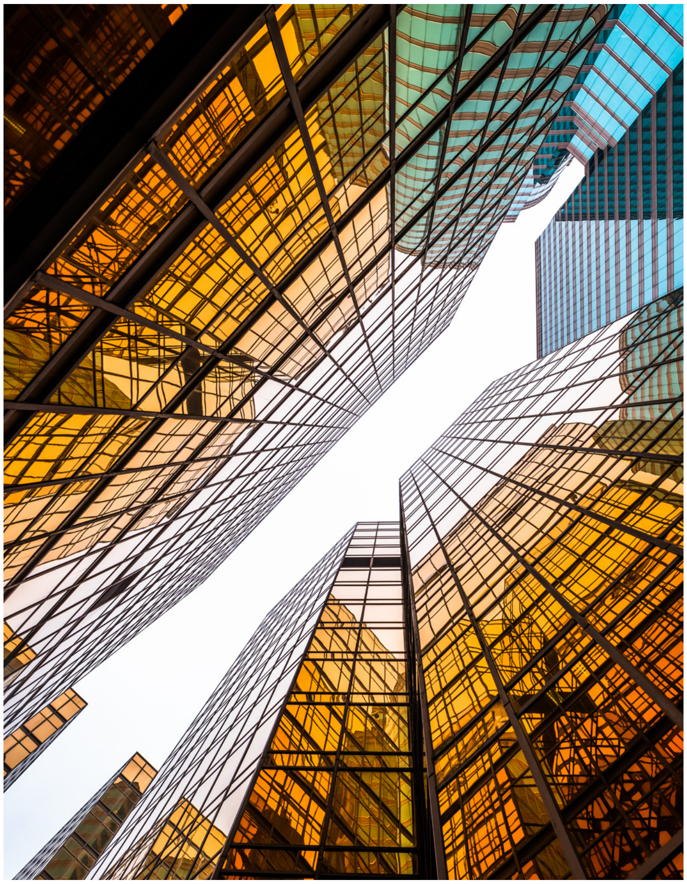
CausaCloud (China)

CausaCloud is the InsurTech subsidiary of HLT Group, a biotech that supplies advanced analytics to China's state owned health care groups. Given its access to health data, CausaCloud has developed a "medical brain" comprised of more than 3,000 disease models which it uses to aggregate medical data within oncology, immunology and rare diseases. By doing so, CausaCloud can issue new products such as policies for post-surgery breast cancer patients and those diagnosed with thyroid nodules.

Human API (USA)

Human API allows users to access, centralize and share their medical data from a range of American electronic health record (EHR) vendors, labs, pharmacies and hospitals. By coupling the insights generated from medical records with tailored health insurance products, Human API hopes to insure millions of previously "uninsurable" patients.

Copyright © 2020 Society of Actuaries. All rights reserved.



4Paradigm (China)
Founded by a team from Baidu's machine learning lab, 4Paradigm is China's pre-eminent AI startup. Working with PICC and other state-owned carriers, 4Paradigm successfully developed a data analytics engine that identify suspicious claims by parsing petabytes of claim data. For reinsurers, startups like 4Paradigm matter as they demonstrate that new underwriting models can and do exist.

TREND 2) MOVE TO PARTNERING WITH COMPANIES OFFERING RISK REDUCTION DIGITAL TECHNOLOGY

The rise of chronic diseases, particularly in Asia, has pushed life & health insurers into preventative health care services that go far beyond wellness apps. However, the fact that almost 30 percent of chronic disease sufferers are undiagnosed remains a challenge. In this case, the opportunity for reinsurers to improve loss ratios opens up new customer segments and becomes an indispensable partner for insurers seeking to develop risk reduction methods.

Wellthy Therapeutics (India)
Wellthy is bringing therapeutics and chronic disease management propositions to insurers across South East Asia. For example, Wellthy has provided its diabetes app to Aviva Singapore's critical illness policyholders. It is also the only therapeutic in S.E.A. that is allowed to be prescribed by doctors.

Liver Cloud (China)
Unlike many developed countries in the world, hepatitis B is an endemic in China. Approximately one-third of worldwide cases are reported there and 9.8 percent of the population is at risk of premature death from HBV-related liver cancer or cirrhosis. One of the startups tackling this is Liver Cloud, a Beijing-based startup with a range of non-invasive diagnostic products that is being coupled with a medical history and weight management app to promote a broader health/wellness agenda and minimize the contraction of hepatitis B.

PAI Health (North America)
Heart disease remains the deadliest disease in the western world. Although there are many smart watches trying to assess activity levels and prevent health issues before they arise, reducing the risk of cardiovascular disease is a long-term undertaking. Unlike many smart watches, PAI counts everything that elevates your heart rate, in addition to providing continuous data on activity levels, regardless of steps taken as it is based on heart rate. This not only lowers loss ratios but gives insurers insights that were never accessible before, opening up opportunities for segmentation analysis and providing engagement that maximizes renewal rates.

Naluri (Malaysia)
Naluri is a digital therapeutics solution that combines behavioral science, corporate wellness programs, and subscription-based health insurance that resembles Ping An Good Doctor's health care subscriptions. Naluri's founder has encapsulated his company's approach as, "We would rather reduce chronic disease risks for 1,000 people by 50 percent, than to superficially promote health by encouraging 10 million users to do 10,000 steps a day but not make a deep difference to their cholesterol, blood sugar and blood pressure levels."

For reinsurers, startups like Wellthy, PAI Health and Naluri will matter as insurers continue to move from indemnity to prevention, and the associated effect on loss-ratios and customer retention becomes clearer.

TREND 3) ADVANCES IN CAT MODELING

A segment of the industry that has become a bastion for reinsurers, the ability to accurately forecast and model risks associated with natural catastrophes is being reinvented with the use of advanced analytics that can parsing petabytes of satellite data. More importantly, governments are now waking up to the fact that historical data can be shared with private reinsurers in order to assist coverage and relief efforts in rural regions that are disproportionately affected by weather events.

WeatherTech (China)
WeatherTech uses satellite data, crop-weather simulation modeling, mobile technologies and deep learning (AI) to allow insurers to efficiently price and administer typhoon insurance across

Copyright © 2020 Society of Actuaries. All rights reserved.

southern China and S.E.A. Specifically, by combining satellite data and information from China's Meteorological Authority, WeatherTech is better able to price, administer and settle natural catastrophe coverage more accurately and faster than current approaches. This is particularly useful in rural regions where farmers are often compensated at the village level and government loss adjustors struggle to appraise damages quickly. Although Ping An and China United are working on similar offerings, WeatherTech's early entrance into AgriTech and integration with mobile platforms such as WeChat and Weibo has given it an advantage.

TREND 4) PARTNERSHIPS TO GET ACCESS TO PLATFORM TECH (DISTRIBUTION)

The fact that the internet has pushed insurers to embrace direct distribution is known. However, the need for reinsurers to move up-stream and work on distribution projects is still met with trepidation. Thus, reinsurers will need to assess new frontiers and consider accessing distribution channels in order to secure their place in a rapidly changing world.

BoughtByMany

A well-known broker of niche product lines, BoughtByMany has become the U.K.'s biggest pet insurer by grouping consumers that were previously considered high risk (i.e., owners of specific dog breeds) together and then negotiating with insurers on behalf of those consumer groups. BoughtByMany has also begun to develop additional niche products with the help of reinsurers, and this can be examined for global replication in other markets.

Jetty

Many InsurTechs have recognized that the core needs of millennials differ significantly from the previous generation. Jetty sells rental insurance to tenants and acts as a guarantor on leases in exchange for 5- to 10-percent of the annual rent. For renters, instead of forking over a full security deposit, they pay a one-time fee of 17.5 percent of the deposit amount. Jetty then insures and guarantees the full deposit amount for the landlord.

TREND 5) REINSURERS AS PRODUCT DEVELOPMENT PARTNERS FOR NEW CUSTOMER SEGMENTS

In addition to the disruptive nature of internet distribution channels, the emergence of new customer segments is also being driven by changing consumer behavior, and the ability to identify sub-segments within this movement will be a key success factor for insurers. Recognizing this, several InsurTechs are targeting new segments that can now be identified with digital tools, and reinsurers with global risk pools and analytical capabilities are the perfect partners for such efforts.

Datebao (China)

Despite a rich variety of InsurTechs in China, it remains a market of generic life and health products with little differentiation between insurers or products. Recognizing this, Datebao worked closely with several reinsurers to introduce new health insurance products such as the "million dollar medical product"—a low price, high limit product that is sold in one-week terms as opposed to annual policies that are standard in western markets.

Igloo (South East Asia)

Previously Axinan, Igloo cross-sells Bhinneka, Bukalapak, Lazada, RedDoorz, Shippit, and Shopee. Axinan designs a distributes simple short-term products such as travel, personal accident and device insurance. Igloo is active across Singapore, Indonesia and Malaysia, and is particularly notable for being a licensed reinsurer/insurer itself and represents a warning to those who don't see the link between digital platforms and reinsurance.

Wukongbao (China)

Although the idea of cross-selling insurance online is nothing new, Wukongbao is bringing a new level of sophistication to the practice by providing a data mining API to over 5,000 third party platforms including travel, health, auto and real estate apps. Once embedded, the Wukongbao API parses the server logs of partners in order to identify patterns in user behavior, patterns on which tailored insurance policies can be built and ultimately sold.

CONCLUSION

Ultimately, the digital insurance opportunity for reinsurers offers a range of paths including the ability to open new customer segments, improve loss ratios, and become an indispensable partner for current clients. Considering this, and the startups highlighted in this article, the lessons for reinsurers are threefold:

First, the arrival of new data sources such as medical devices coupled with real-time analytics will allow reinsurers to enter distribution by capturing market segments that were previously viewed as niche or unprofitable.

Second, developments within Nat Cat modeling will challenge a traditional stronghold for reinsurers. In this case, reinsurers will need to move fast to seek out the best and brightest within advanced analytics in order to upgrade their existing NatCat models, in addition to securing public/private partnerships that can provide access to data upon which new analytics tools rely.

Finally, as reinsurers are endowed with analytical strengths and global risk pools, their ability to partner with the next wave of on-demand services is clear, although more effort will be required to attract talent that can identify and capitalize on the possibilities emerging from such sectors. ■

Based in China, Michael O'Dwyer leads InsurTech research at The Digital Insurer. He can be contacted at *michael@the-digital-insurer.com.*

Copyright © 2020 Society of Actuaries. All rights reserved.