

Revolutionising the Indian insurance industry through big data and data analytics



Bajaj Allianz General Insurance's Sourabh Chatterjee believes that in order to be relevant to customers of today, insurers in India need to get past the old way of selling, buying, underwriting and pricing insurance and embrace the new mindset of connectivity and data processing.



In the increasingly hyper-connected digitised world that we live in, businesses have access to voluminous amount of data or big data, which is reshaping businesses globally. The Indian insurance industry is no different. It is undergoing a paradigm shift in the way products are designed, engagement with customers, customer service and processing claims.

Insurers are in the business of pricing and covering risks. Historically, insurers hire actuaries who assess the risk by looking at the history of loss and claims on each portfolio to derive an appropriate premium for customers. However, in today's interconnected world, underwriting insurance is undergoing a radical transformation. We are gradually moving towards a predictive and prescriptive age where machine, artificial intelligence and algorithm are becoming stronger to bring out a new age prescriptive model.

Earlier insurers had mainly relied on precedents to predict the cost of future property damage claims, now real-time weather and sensor data can alert the company to an impending probability of snow, ice, or flooding in low-lying

areas through digital channels to warn their customers and employ loss minimisation resources.

Traditionally, an insurer looks at the make and model of a vehicle to arrive at the cost of a policy. However, these factors are largely generalised and an impersonal method of determining premium. With the advent of technology and the ability to monitor different types of data feeds, insurers now have substantial internal and third-party data.

Such real-time data gives insights into behavioural aspects which static data cannot provide. This will pave way for granular/modular/personalised/customised pricing, thereby enabling insurers to offer the most competitive premium rates based on actual usage and customised products based on customer's need.

Connected devices

Today, we have connected vehicles and smartphone applications that can track driving habits and share them directly with an insurer. Connected devices installed in the car that use telematics monitor speed, acceleration, braking

and cornering to provide driving summary and real-time information on driving behaviour. This gives insurers a lot more data to work with when underwriting insurance policies.

In India, telematics not only help save on fuel costs, maintain the engine health, etc, but also help make roads safer by incentivising good driving habits. Additionally, real-time information transmitted to the insurer ensures risk-based pricing on actuals and prevents fraudulent auto and personal injury claims.

In addition to telematics, India is witnessing fast growth in the usage of smart devices which run on the internet of things (IoT). These range from smart watches, TVs, smart fridges, fitness devices, smartphones to almost any device used today which can be connected to the internet to manage and improve our lives. Actuaries can use IoT to assess the data that they receive from these devices and track the individual's lifestyle and choices for more precise pricing of insurance policies. For example; a smart fridge could help assess the quality of food being ingested, remind users of expiry dates of packaged food, etc.

A major revolution is also underway in the Indian health insurance sector due to the growing prevalence of wearable technology that can keep tabs on levels of activity and diet. Insurers can use the data from these devices to reward healthy and fitness-conscious customers and offer differential personalised health insurance rates to them.

Insurers today have set up large data analytics teams consisting of a mix of data scientists, actuaries and statisticians looking into the opportunities and challenges that new age risks and these wearable technologies bring in.

To summarise, the world of connected devices is the world of sensors, and the right mechanism to read, store and analyse the data these sensors generate. IT architecture must be looked at from a different perspective, where stacking, storing and active business intelligence algorithms need to be on the forefront. Only this will help companies from descriptive, to diagnostic analytics as the AI learns. Once the AI-based business intelligence has enough data and patterns, it can churn out results which can predict customer behaviour (predictive analytics) and ultimately move towards favourable responses or how

to get customers to engage in a way, ie, prescriptive behaviours using prescriptive analytics.

Fraud detection

Beyond helping insurers set more efficient and accurate usage-based premiums, big data has also proven itself to be useful for insurers in cracking down on fraud.

Indian insurers have increasingly started to deploy big data to tackle fraudulent claims. This is done through profiling and predictive modelling of claims by actuaries and statisticians, text mining from police reports and identification of anomalies in a large group of similar cases. Predictive modelling guesses the probability of an outcome given a set amount of input data, while text mining turns text into numbers or meaningful indices, which can then be incorporated into other analyses such as police data, witness statements and so on. Variables within each claim are matched against the profiles of past claims which were known to be fraudulent.

For instance, in the future, by using blockchain and smart contracts, an insurer can manage claims in a responsive and transparent manner, where in it can help record and verify the customer data on the occasion of claims. Once a claim is lodged by an insured, blockchain can ensure that only valid claims are being paid. It will be able to identify a trend when multiple claims are submitted for the same accident, thereby detecting if there's any fraud. If the criteria for the claim is met, blockchain can trigger the payment, thus, increasing the speed to claim settlement.

The Indian insurers' claims departments are progressively analysing information for more significant data points and connections. Text mining can interpret claims adjusters' handwritten notes and scan a claimant's social media accounts for suspicious activity in nearly real time. This extensive information helps insurers in not only identifying consumers/entities that are potential moral hazards but also helps prevent anti-selection of risk within the insurance industry.

Usage in marketing

The other major use of big data in insurance is in marketing for insurers. Gaining a complete understanding

of a customer by analysing all of the available data, insurers can offer new types of products and cross-sell products based on the customer interest. Thus, offering dynamic need-based insurance which will 'precisely' meet their needs. Data is already being used extensively to draw up personas of customers online to target them with specific products, and even more so on retargeting of customers for cross-sell and upsell. It gives insights into a customer's propensity to buy and channels through which he/she will buy. Indian insurers are leveraging this practice to move beyond offering 'one-size fits all' annual policies to offering personalised policies specific to a customer's need.

While the use of big data in insurance brings about a unique set of challenges in dealing with securing customer data and concerns over privacy, it is undoubtedly a tool that can alter the insurance industry in a positive manner.

Privacy must be a major point of consideration, with requisite client permissions in place. Insurers must focus on risk rather than personal profile of the customer in the long run.

The Indian government and the regulatory authorities have introduced various digital initiatives such as linking Aadhaar to insurance policies, eKYC, digital lockers, unified payments interface, and also a mandate for e-insurance accounts, which are creating enabling systems for simplification of transactions. The India Stack, will enable insurers to reach hitherto untapped customers throughout the country and especially in the hinterlands providing them customised products as per their need.

The insurance industry of India is nearing a tipping point with big data in the form of offering smarter customer service and products, and more efficiently priced premiums. In order to be relevant to the customers today, the industry needs to get past the retrograde way of selling, buying, underwriting and pricing insurance and embrace the new mindset of connectivity and data processing. I believe the day is not far away when the insurer will change from being purely a source of claims payments to a trusted adviser. ■

Mr Sourabh Chatterjee is president & head - digital & technology at Bajaj Allianz General Insurance.