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The ever-developing presence of artificial intelligence and automation is changing the landscape of underwriting.

Innovation in underwriting

Innovation in underwriting has typically focussed on making the process faster, simpler, and less expensive. This has traditionally been achieved by increasing non-medical limits and/or reducing personal statement questions. We have sophisticated Underwriting Rules Engines, but we seem to be lagging behind when we consider other innovative advances which include more automation, and additions of alternative data sources and artificial intelligence.

COVID-19

Globally (particularly in the USA), COVID-19 accelerated innovation within underwriting, as traditional methods of underwriting were not available, or more difficult. There was a focus on the next generation of customer who proved to want a full omni-channel shopping experience and were particularly keen to engage with their insurers (interestingly, a third of new customers downloaded their insurers apps).

Within Australia, innovation driven by COVID-19 is harder to find. This is likely due to a strong government response and zero COVID policy during 2020 that meant Australia was less impacted by COVID-19 compared to other countries.

Optical Character Recognition

Digital data at outset would be the ultimate goal in making the process faster – but this is complex and requires standardised industry coding. Optical Character Recognition (OCR) is essentially where the machine is taught to read the information for us and turn unstructured data, into structured data. Data analytics is, and will continue to be, a key driver of innovation in underwriting, however data management within underwriting is often underdeveloped. Introducing OCR is one application of data analytics that could improve the underwriting process. OCR can be used to populate data fields/underwriting systems and feed data into underwriting engines based on rules development.

This has two key benefits:

1. Increasing operational efficiencies – faster processing time and less people required to manage the underwriting case load. Increased operational efficiencies is a key target for many insurers currently.
2. Providing access to data historically trapped in PDF – by doing this for historical cases you suddenly have a wealth of extra data at your fingertips.

And it doesn't end there. RGA is using OCR to develop algorithms in several markets that will help us streamline the underwriting process using this modelling.

Being able to access all this previously difficult to obtain data, gives us a better understanding of the risk in our portfolio. For example, do we have lots of customers who go white water rafting on weekends, have a family history of diabetes, or have had COVID-19? Many insurers may see legacy systems as a challenge, but in other countries they've been a key driver for insurers to seek ways in unlocking their legacy data.

Comparing your actual risk profile to the risk profile you expected can give some early warning signs that perhaps your product is more attractive to a particular cohort than you expected. This allows intervention to mitigate a potential increase in claim costs.

However, like everything, there are challenges. These include (but are not limited to):

- New technology comes at a cost – does the cost exceed the benefit? It can be particularly difficult to put a monetary value on the cost of additional data. Actuaries can help in this space!
- Accuracy – no matter how much data you use to train the model, it won't be 100% accurate. How accurate does our OCR model need to be before we turn it on?
- Regulatory requirements – what is allowable under today's regulatory requirements might not be allowed tomorrow. The USA has seen huge improvements in their underwriting processes by incorporating additional data sources such as credit data. While the use of credit data is currently allowed, it's widely believed that in the coming years, legislation will be introduced prohibiting this.

Ultimately, any innovative tools or solutions that are developed need to deliver on the underwriting promise of making sure that things work from a pricing and actuarial experience perspective, as well as for the customer. We know customers and advisers alike, want an improved journey and further use of artificial intelligence can be instrumental.

Sustainability in underwriting

We all have a part to play in ensuring the continued sustainability of the life insurance industry.

Non-medical underwriting & the importance of occupation

A big concern with sustainability is the lack of alignment. It's important to make sure that the risks we're taking on (which the underwriters ultimately decide) match up with what we've priced for. And it's also important to make sure that we're pricing for the claims we're paying. But underwriting, claims management and pricing are not always aligned.

Underwriters are extremely medically focused and undergo continual training in this space. As such, most underwriters are very comfortable determining and defending loadings & exclusions to apply to new policies. However, underwriting consists of more than just medical underwriting. A large part of the pricing for Individual Disability Income is based on occupational classes.

Given this, occupation is one example of where there can be misalignment. Pricing may assume that customers working in high-risk occupations will have different limits applied to their cover. But underwriting primarily determines the occupation risk of the customer based on their job title. And then claims assess the claim based on the duties of the role, rather than the job title, as at claim time.

Non-medical limits

Underwriters, over time, have been asked to do more with less. For example, Australia has some of the highest non-medical limits in the world.

Increasing non-medical limits is an easy win in terms of making the process faster, simpler, and less expensive. The argument of increasing non-medical limits is that the additional mortality/morbidity we expect to experience is offset by the savings in medical exam expenses. As far as sustainability goes, increasing non-medical limits can put upwards pressure on pricing if you overestimate the savings or underestimate the additional claims costs.

From an actuarial perspective, increasing non-medical limits also comes at the expense of less data. Enabling more people to get cover without underwriting, or with very limited underwriting, is great for the customer. But for the insurer it means a greater pool of customers that we know very little about and can't price differently.

Sustainability in the insurance industry is important for all. The customer, the advisers, and the insurers.

As mentioned earlier, this is a journey we travel together – this needs to work for our market, product and all aspects much align. We need to be able to ensure that we deliver on the promise we make to our consumers at the time of underwriting and paying their claim during their time of need.