The art of underwriting in the automated age

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Summary

Whenever mankind reaches a new stage in its technological evolution, people either prosper on new opportunities or flounder as old ways decline.

This has been the case for all of the major moments in human development. Think the invention of the wheel; the adoption of agriculture; the foundation of cities; and the industrial revolution, to name a few.

We are currently in the midst of another of these great milestone moments: the digital age. In this age, data and information are critical currencies in economies all over the world.

The rapid proliferation of data has allowed an increasing number of tasks to become automated. This has radically altered the shape of countless trades and professions.

While we typically associate this phenomenon with the primary and secondary industries, the past decade has seen some tertiary and quaternary-sector functions also become automated.

Insurance is not isolated from this. Many insurance services have been automated to various degrees recently, including distribution, claims and broking.

Of all the insurance services, however, it is underwriting that has been most affected by digital automation.

The ease with which data can be acquired and transformed into accurate risk modelling has meant that many risk selection and pricing tasks can be handled by automated systems.

Since successful underwriting is inextricably linked to the profitable growth of an insurance business, this has serious implications for the bottom line of many companies.

However, it also has serious implications for the actual people involved in the underwriting profession. Many have questioned whether their roles will remain relevant in the future.

But no matter how automated underwriting becomes, could the insurance industry really survive without human oversight?

This edition of the Suncorp Group’s Insurance Insights white paper series will argue that human judgement and intuition is still as important as it ever has been in driving positive underwriting results and profitable growth.

However, the influence of technology will continue to dramatically reconfigure the underwriting workforce.

This white paper will also examine how the profession will continue to evolve in the coming decade.

Insurers will have to think creatively to ensure their people have all the skills and experience required.
The underwriting profession has profoundly changed during the past 10 years. Underwriters have never had as many resources available to them as they do now. An array of established and emerging tools and technologies, such as telematics, mobile applications, GIS mapping, sensors and drones, have allowed the profession to assess and price risks with unprecedented precision.¹

Of course, it is always important to assess risks with a high degree of accuracy, but this precision becomes even more critical in times of difficult financial conditions. The insurance industry is experiencing these conditions at present. Investment yields from bond markets have stalled and the insurance market is extremely competitive. Insurers are facing a struggle to achieve profitable growth. Consultancy firm Finity has predicted that the insurance trading results of Australian insurers will drop from 14.9 per cent in 2014 to 13.2 per cent in 2017 as a result of the present market conditions. Premiums in the liability, commercial property and financial lines are all currently affected by market competition.²

Those companies that achieve growth in the current climate will have done so by focussing on the fundamentals of insurance, particularly the robust management of their risk appetite and stringent pricing.

This view is supported by Gen Re Chief Executive Tad Montross, who recently noted: “Cycles destroy confidence. The confidence void erodes discipline, creating many challenges that can only be countered with supreme commitment to an underwriting culture, a set of underwriting principles and consistent execution.” He concluded that the “ruinous impact of the underwriting cycle” could be avoided by making decisions based on disciplined thinking and judgement, rather than reacting to external factors.³

Essentially, if insurers’ underwriting processes are functioning well, they will have the opportunity to make a profit. For this reason, any technology that assists in making the risk selection and pricing process more accurate will be welcome.

Many of the low-dollar-value transactions were automated during the past decade, starting with the personal home and motor insurance lines. Small business commercial underwriting followed, particularly in the property, liability and commercial motor lines.⁴

Automated underwriting has created a vast cache of data, which is allowing underwriters to develop ever more accurate predictive models of risks. These models, in turn, make the automated processes more accurate and reliable, creating a positive feedback loop. Data and automation is also giving underwriters much greater insights into the needs and behaviours of customers. This is allowing the industry to both modify existing products and create new offerings in order to better meet customer expectations.⁵

1 Gail McGiffin, The future of underwriting, Ernst & Young, 2014
3 Tad Montross, Underwriting: Cycles, confidence & consistency; Gen Re, 2015
4 Gail McGiffin, The future of underwriting; Ernst & Young, 2014
5 Frank Ellenbürger and Mary Trussell, The valued insurer, KPMG International, 2013
But, just like any other profession or trade that has encountered some form of automation, there have been implications for the underwriting workforce.

People are no longer required to assess all risks – especially when it comes to low-risk small business customers.

Furthermore, the benefits of scale and technology have enabled many underwriting teams to centralise to a single location, or to select capital and regional cities.

The shift has been so great that many have questioned whether the profession faces extinction.6

**Art and science**

However, people are not obsolete just yet. Human influence is still critical to the effectiveness of underwriting.

In 2007, Tad Montross referred to the practice of underwriting as a marriage of art and science.

In this characterisation, ‘science’ denotes the technical aspects of underwriting; pricing risk with data analysis and historical information.7 Science is very much the senior partner, and has become even more prominent thanks to the rise of automation and data. Montross light-heartedly claimed science comprised 72 per cent of the relationship and later revised this up to 83 per cent.8

However, the ‘art’ is still critical.

The art of underwriting is the intuitive judgment exercised by individual underwriters, based on experience and expertise. It is crucial to achieving positive results.

Underwriters practice this art when they use the data and processes as an aide to their expertise and experience. They can make more informed decisions about the insurer’s risk appetite. They can refine existing products and create more specialised ones.

For all the advances in technology, you still need people to set and adjust the risk parameters in which the processes will function. You still need people to assess and interpret the data to ensure it is still working within these parameters.

According to KPMG International’s Frank Ellenbürger and Mary Trussell, “Data and analytical capability must be balanced with deep business understanding to ensure the analysis is appropriately directed.”9

Furthermore, there are still many risks that cannot be factored into an automated process, particularly when it comes to larger businesses.

Corporate customers typically have a range of complex risk exposures that require policies that can often be equally complex. There is plenty of ambiguity to deal with before you can provide the best solution.

Likewise, risk engineering services are increasingly becoming an important way for insurers to add value to their underwriting services and differentiate themselves in the eyes of brokers and customers – especially corporate customers.

These situations require human knowledge and intuition to interpret all the facts, attributes held by skilled, experienced underwriters.

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6 Gail McGiffin, *The future of underwriting*, Ernst & Young, 2014
According to Montross, “Models do not eliminate the art in underwriting, but rather move some of the art from the point of sale back earlier into the decision chain … while automated underwriting may eliminate or reduce the number of judgments at the point of sale, the art/judgments are even more critical at the construction of the product.”

This situation is also mirrored in the broader financial services sector. A report by Innovation & Business Skills Australia claims there is currently increased demand for graduates with analytical skills rather than traditional “number crunchers.”

“Growing mountains of data on customer behaviour and preferences require financial services staff to be able to sort, draw conclusions and effectively communicate what the data is saying,” the report stated.

The fears of extinction are misplaced.

The experience gap

Nevertheless, if not extinction, the underwriting workforce is certainly undergoing an evolution. This will create both positive impacts and difficulties.

In a 2014 paper, The future of underwriting, Ernst & Young Principal Gail McGiffin anticipated the shift will “liberate underwriters to spend more time on higher-value activities, such as account planning, solution development, agent partnering, and nuanced risk assessment and decision making.”

“The focus will shift away from internal processes and specific transactions (where underwriters have historically invested their time and energy) and emphatically toward market-facing relationships and sales,” she added.

McGiffin forecasts that underwriters will become “well-rounded ‘Renaissance people’ – masters of many trades.” Positions will begin to resemble other roles traditionally found in insurance businesses, such as sales executives, analysts and strategic advisers.

Ultimately, this will benefit the industry.

However, insurers face a critical challenge in ensuring current and future underwriting talent are able to handle their changing responsibilities.

Just as it is reinforcing the importance of experienced, skilled underwriters, automation is also making it more difficult for young underwriters to develop skills and experience.

To extend Montross’s metaphor, underwriters can be seen as a mix of scientist and artisan. They follow data-driven processes, but also hone their craft with practice.

Until recently, entry-level recruits to the underwriting profession would cut their teeth on basic risks and processes. This meant learning how to assess risks on a decision tree, typically working on commercial insurance packages for small businesses.

Eventually they would develop the skills and insights required to handle more ambiguous and complex risks and progress to mid-market, corporate and specialty underwriting teams.

The most advanced would ultimately use their expertise to help the insurer determine its risk appetite.

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10 Tad Montross, Underwriting Art vs Science, Gen Re, 2007
11 Financial services environment scan 2014, Innovation & Business Skills Australia, 2014
12 Gail McGiffin, The future of underwriting, Ernst & Young, 2014
13 Gail McGiffin, The future of underwriting, Ernst & Young, 2014
Since these entry-level underwriting tasks are now automated, new recruits are entering the profession at a higher level. They are forced to learn on much more complex risks that require higher-level skills they have not had the chance to develop.

The older generation of underwriters have been critical in passing on their knowledge and experiences to the more recent additions. However, as they transition into retirement, there is a real risk a skills gap will emerge.14

The next generation, who will ultimately set the risk appetite of their businesses, will not have had the depth of experiences as their predecessors. This will also be exacerbated if underwriters continue to evolve into Renaissance masters of many trades, as McGiffin predicts. Recruits will require an even more comprehensive range of expertise.

Bridging the gap
How does the industry balance the use of data and technology and the career development of its people to ensure the art of underwriting is not lost?

The aviation industry has experienced similar problems for the past few decades thanks to the prevalence of automated flight systems leading to an erosion of skills.

These flight systems have undoubtedly made air travel much safer. However, as a consequence many people in the industry have not experienced a major accident, which is making it harder to prepare emergency response procedures for when one does occur.15

During typical commercial flights, pilots spend most of their time programming the automated systems. Manual flying is limited to takeoffs and landings.16

According to a US Federal Aviation Administration (FAA) report in 2013, some pilots have subsequently become too reliant on automated systems and are “not prepared to deal with non-routine situations”.

The report combined data from past accidents with observations of working pilots to determine that many pilots now either find manual flight difficult or make mistakes using their flight computers. “They are accustomed to watching things happen…instead of being proactive,” the report stated.

As a result, the FAA concluded the overreliance on computer-driven flight decks is the biggest threat to global airline safety today.

In response, the aviation industry has revised its training courses to include increased focus on manual flight and handling rare, but potentially deadly, malfunctions without relying on procedures and automation. There have also been suggestions to improve cockpit design and computer displays to avoid “information overload” so pilots can make clearer decisions.17

For the insurance industry, reducing the use of data and automation is not the answer. Less-accurate underwriting will weaken insurers’ abilities to select risks and compete in the market. This will also be to the detriment of brokers and customers.

Instead, a potential solution can be found in the way the industry sources and educates underwriting talent.

14 Gail McGiffin, The future of underwriting, Ernst & Young, 2014
15 Aviation insurance posing increasing challenges, Allianz Australia, 5 December 2014
The orthodox methods will need a rethink. In the past, the personal lines underwriting teams were a fertile recruitment ground. Since home and motor products were among the first automated, these days have long since passed.

The industry has to broaden its scope beyond the underwriting talent pool and look at other business functions that share similar skills.

For instance, experienced members of claims management, actuarial and distribution teams will normally develop an excellent understanding of product wordings and how they respond.

The decisions that claims managers, in particular, make on a daily basis are not so far removed from the risk assessments previously fulfilled by entry-level underwriters.

In many cases, with some additional training, claims and distribution have the requisite knowledge of risk and product design to be able to move seamlessly into an underwriting team.

Here, automation technology can have a positive impact. By capturing vast amounts of information, technology can be used as a powerful educational aide – “to help institutionalise knowledge”, as McGiffin puts it.18

While many claims managers have made the jump into underwriting – and vice versa – in the past, this has largely been down to the individuals making the move themselves.

However, the industry can’t rely on ad hoc moves to ensure its underwriting workforce is staffed with the necessary levels of experience. Employers should consider adopting a talent strategy that creates a clear path from claims and distribution to underwriting.

This means that when employers hire recruits to claims and distribution teams, they will also be looking for people who could ultimately shift to underwriting.

Effectively, their time in claims and distribution would be a ‘risk apprenticeship’, including training and on-the-job development that focuses on the underwriting skills and expertise. It would provide a solid foundation for eventual work in the corporate and specialty lines.

Suncorp Commercial Insurance has been focusing on talent rotation between the underwriting, claims and distribution teams.

This objective of this is build new levels of experience outside an individual’s existing area of expertise. People from other parts of the business usually also bring fresh perspectives and new ideas to an existing team. They can help dissipate unconscious bias and provide counterpoints to entrenched views, which can only ever be beneficial.

These rotations can take many forms. Some have moved into new roles on a permanent full-time basis, while others have taken a temporary secondment to fill a vacant role.

Projects, whether short or long term, are also extremely effective. They provide an unmatched opportunity to assemble people from a variety of disparate disciplines and expose them to each other’s skills and experiences.

Once a project is complete, the team members will have become proficient in skills they wouldn’t have encountered otherwise. This is a huge positive for both the business and these individuals.

18 Gail McGiffin, The future of underwriting, Ernst & Young, 2014
If underwriters are to become masters of many trades, the skills learnt in all of these different teams will be vital.

Similar developments are happening across the financial services sector. There is an increased demand for professionals with a wide range of skills, knowledge and experience to work in different areas of a business.  

**Finding new talent**

However, simply cycling through the existing talent pool will not be sufficient either. The industry must also renew its workforce.

There have been numerous discussions during the past decade about what insurers – and brokers for that matter – must do to attract new talent.

As a first step, insurers must focus on becoming an employer of choice. Their recruitment and retention strategies must reflect the preferences and behaviours of potential recruits in order to achieve this goal.

The two most important factors that younger employees consider when selecting jobs are workplace flexibility and career development. More young people leave jobs due to a lack of career development than inadequate pay, and the majority have an expectation of flexible work.  

While this gap is being addressed, it will be absolutely critical to retain experienced underwriters in the workforce as mentors for the next generation. They will play a vital role in helping to educate recruits.

Insurers should formalise a mentor program so underwriters, claims managers and distribution team members of all levels of experience can share their expertise. It is also important that businesses can provide employment conditions that encourage them to stay involved and pass on their knowledge as they approach retirement, such as part-time hours and job-share positions.

Several businesses in the financial services sector, including the Suncorp Group, the Commonwealth Bank and Deloitte, have successfully implemented talent strategies with these factors in mind. Suncorp’s initiatives to accommodate and encourage working from home, flexible hours and specialist career pathways have been particularly beneficial.

Insurers should also consider expanding their graduate programs to target people from other industries with transferable skills and international talent pools.

As the current decade draws to a close, the developing world is forecast to contribute the majority of people to the global tertiary-educated talent pool. India, Brazil and Indonesia are predicted to not have enough domestic jobs for their graduates.

Insurers could look to tap into this surplus talent to boost their underwriting teams.

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19 Financial services environment scan 2014, Innovation & Business Skills Australia, 2014
20 Naomi White, Tomorrow’s insurance workforce: The future trends impacting the insurance industry, Suncorp Commercial Insurance, 2014
21 Naomi White, Tomorrow’s insurance workforce: The future trends impacting the insurance industry, Suncorp Commercial Insurance, 2014
22 Naomi White, Tomorrow’s insurance workforce: The future trends impacting the insurance industry, Suncorp Commercial Insurance, 2014
The role of education

External education organisations also have a role to play to ensure their courses are properly addressing present and future skill requirements.

While insurers and brokers undoubtedly need to address this issue, the education on offer must also change with the times.

Recent comments from several industry figures have drawn attention to the fact that many courses on offer to both brokers and insurance professionals must be updated to current standards and conditions. Martin McAvenna, the former general manager of AIMS; Val Phinn, the director of Brisbane’s Financial Services School and Gold Seal Managing Director Sheila Baker have all called for a revamp of education regimes.23 24

The fact that the Diploma of Insurance Broking was among the five tertiary financial services courses with the least enrolments in 2014 adds weight to their claims.25

The manufacturing industry is facing a comparable challenge in getting enough skilled professionals to manage the increased levels of automated technology.

While technology has replaced many entry-level manufacturing jobs, the industry still requires a range of advanced engineering and process control roles in order to perform at the optimal level.

These roles are proving difficult to fill. The US National Association of Manufacturers has reported that the industry has more advanced manufacturing jobs on the market than there applicants available to fill them.26

As a result, the Association and its fellow industry organisations have led a push for a greater education of future technical skills to students of all ages. They have also sought to promote these advanced manufacturing professions as a prosperous career that is continuing to evolve alongside technology.

Returning to insurance, there is an ongoing debate within the industry about whether a wider range of formal education options – such as an undergraduate degree – will help address this problem or become an unnecessary hurdle for potential recruits.

However, more formalised education options can help promote the industry as a viable career option, particularly for those exploring careers in other financial service disciplines. It could have the effect of enhancing the reputation and prestige of an insurance career, particularly in the eyes of high-school graduates.

There must be a collective effort in order to develop educational resources that properly address these needs. Insurers, brokers and reinsurers should work together to share knowledge and expertise and partner with organisations like NIBA, ANZIIF, TAFE and other education providers to build a career environment that is attractive and sustainable.

24 ‘Call to revamp broker education “from ground up”’, Insurance News, 4 May 2015
26 Jerry Jasinowski, ‘Closing The Skills Gap for New Manufacturing Workers’, The Huffington Post, 7 August 2015
Conclusion

The underwriting profession is not at risk of extinction. Rather, it is at the next stage of its evolution.

The industry will always need intuitive, experienced people to determine risk appetites, manage the performance of portfolios and create new products.

Data and automation are not threats. They are merely resources to help underwriters better perform their tasks. This is unequivocally a positive for the insurance industry.

However, the industry must ensure it is still giving underwriters – particularly the younger generation – every opportunity to learn and hone their craft as they progress through their careers.

Now that entry-level underwriting tasks are automated, insurers must develop new ways to teach recruits the basics of risk selection. If they don’t, it will be a matter of time before novice underwriters are thrown into the deep end to work on complex risks before they fully grasp them. Without the benefit of experienced judgement, they will have to rely on data alone. This could lead to missed opportunities or, worse, crippling errors.

Insurers must look beyond their traditional training regimes and career pathways to develop their underwriting talent.

They must look to rotate talent through different roles, such as claims and distribution, so they are exposed to the principles of risk selection and pricing. They should also use the data they’ve accumulated as an educational aide.

Insurers should identify people who share the qualities and traits needed to be a successful underwriter and provide training and support to help them make the transition.

The industry must also look to collectively deepen its talent pool. The horizons must be broadened to encompass other financial services graduates, both from Australia and abroad. The education on offer must be continuously updated to ensure it is meeting the requirements of the modern underwriting profession.

The future is far from bleak. Humans, not machines, will continue to play a vital role in driving the performance of insurance businesses for some time to come.

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