Running the numbers

Finity's Colin Brigstock on actuaries breaking into general insurance, lessons from Christchurch, and why Big Data is nothing new

By John Deex

FINITY CONSULTING CO-FOUNDER AND former chairman Colin Brigstock is retiring after a long and distinguished career.

It's a career that has helped forge personal lines pricing as we know it, and bring Big Data to the fore long before the phrase was even coined.

He says at last he'll have a break from "having to reinvent myself every 18 months" to keep pace with a rapidly changing industry.

Some 42 years ago, when he was completing his studies, actuaries were all about life insurance and had very little to do with general insurance.

"When I joined NRMA in January 1976 I was their first actuarially trained employee, and one of only a handful of actuaries in Australia who were working in general insurance at the time," he tells *Insurance News*.

Shortly after starting with NRMA Insurance, Mr Brigstock was selected as one of a small group brought together by the Institute of Actuaries to develop a strategy to expand the role of actuaries in general insurance.

"This was achieved fairly successfully over the years," he says. "We have a legislated role in general insurance now, but back then it was far from that. [Pricing the risk] was done in a very unsophisticated way.

"General insurance hadn't been seen as a natural place for actuaries to play, but that has certainly changed over the past 40 years."

Mr Brigstock believes NRMA Insurance was ahead of its time, and he was fortunate to start at such a forward-thinking organisation.

"John Lamble and Des Liddy had come together in that organisation in the late 1960s and they had done their research on best practice across the world, and seen that an investment in data and in sound pricing would just be absolutely fundamental to the business.

"When I walked into the place in '76 there was already a pretty good infrastructure for me to work with in terms of data and access to computer facilities."

Mr Brigstock says when he joined NRMA Insurance it covered about one-third of New

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South Wales motor vehicles, and when he left 15 years later it had almost half.

"NRMA made a huge investment in data, and relying on what that data was telling them to price the business appropriately, and we were just doing that better than anybody else in the marketplace.

"It was a key driver of NRMA's growth. We had consistently good growth and very good underwriting profits, largely through superior risk selection."

Mr Brigstock even has the honour of having an actuarial method named after him.

He explains that he "wrote a very simple paper" about NRMA Insurance's modelling and pricing approach.

"A year or so after I wrote it, a group of general insurance actuaries wrote a textbook for general insurance, and the technique I explained in this paper got written up as the Brigstock Method in that textbook, and so I have had that attached to me ever since."

Towards the end of his time with NRMA Insurance, Mr Brigstock was involved in the push to get the NSW Government to privatise the compulsory third party motor insurance system.

"That was largely an NRMA-driven initiative and there was a small team of us within NRMA that designed what that would all look like and put together all the arguments that eventually the Government accepted. As a result, in 1989, the NSW scheme went into private underwriting, and it has been private ever since."

In 1990 Mr Brigstock joined Trowbridge Consulting because he "wanted to try his hand at the consulting game, rather than internal management in a big organisation".

In 2000 Trowbridge merged with Deloitte, to become Deloitte's local actuarial arm, and about three years later Mr Brigstock became the managing partner of that business.

"However, it became very difficult for an actuarial business like ours to reside inside a big auditing firm, so in 2005 the general insurance actuarial part of the old Trowbridge exited the relationship we had with Deloitte, and that's when Finity was created.

"I was the managing director for the first couple of years, then I stepped back from that role to focus on client relationships and I have been chairman of the firm for the past 10 years. Really, I've only had two jobs in my whole career, because Trowbridge, Deloitte and Finity has largely been working with the same group of people."

Mr Brigstock says one of the biggest actuarial challenges of his career has been understanding and assessing liabilities arising from the Christchurch earthquakes in 2010/11.

He was the actuarial adviser to AMI Insurance, which insured one-third of the houses in Christchurch and which became insolvent after the February 2011 quake.

"I have been working with the government-owned entity that took over those liabilities ever since," he says.

"It still amazes me that, all these years later, we have still got quite a way to go before all of the claims will be settled, and it has been a very challenging and tricky piece of work."

Mr Brigstock says a couple of crucial lessons were learned from the quakes. Firstly, they showed up limitations in models used to assess earthquake risk.

"Christchurch was always seen as somewhere that could suffer earthquake risk, but from a major earthquake happening in the Southern Alps and reverberating down.

"What wasn't appreciated was that there was actually a fault line under Christchurch. Most of the insurers ended up exceeding their reinsurance covers in that market.

"My client had bought what it thought was a very adequate level of cover, and well in advance of what any of the prudential standards suggested, but the event was even much larger than that."

Secondly, insurance product design was not good.

"More than 90% of the policies over there were full-replacement policies without a sum-insured limit. That meant that whatever it was going to cost to rebuild those houses, the insurer was up for it. That has now changed as a result of the earthquakes."

Looking ahead, Mr Brigstock feels insurtech and Big Data will have an impact on the industry, but they may not be as disruptive as some would lead you to believe.

And Big Data, while a recent term, is not necessarily a new concept.

"I've been dealing with Big Data my whole working life. It just happens to be that I can deal with a lot more of it now because of the technology environment available to process data so quickly, and the techniques that can find the patterns in the data. Previously, it was a much more laborious process.

"Insurance has always been a Big Data game. Big Data is about knowing your customers and knowing them more intimately than your competitors. What risk they represent, what their insurance needs are and what their behaviours might be. That's where all the value is in Big Data. It's not the data itself, it's how you can actually harness that data to understand a lot more about your customers and potential customers."

Mr Brigstock accepts that technology has brought, and will continue to bring, huge changes.

"The overall objective is the same, but the techniques, the data and the technology that's available to us these days, just makes it quicker to get to the point where you can actually start making decisions about what you might do about the pricing.

"Going back to when I first started in the industry, when we were going to do a pricing review, the amount of computer processing time that was needed meant we could only ever do the job twice a year, at Easter and Christmas time.

"We needed about 72 hours of constant computer processing time just to churn through all the data. Today, I can do that on my laptop, sitting at my desk in 10 minutes. It just shows what technology has done for the ability of the actuary to get to the nub of what the underlying experience is… A lot more focus now goes on designing what your response is going to be."

Mr Brigstock does not shy away from the fact increasing amounts of data and analysis will leave some high-risk insureds exposed to potentially unaffordable premiums.

Address-level household pricing is already common, he says, and it is a natural and financially prudent outcome that insurers charge premiums that reflect the "true" level of risk.

"On the models we have built here, we put a risk rating for every peril at address level and the price falls out of that. One of the things this leads to is a more explicit understanding of the true cost associated with living in areas with very high peril exposures – areas that also tend to be the more attractive lifestyle choices."

Mr Brigstock sees insurtech as having a gradual, not revolutionary, impact on the industry.

"The bits and pieces I see emerging are aimed at taking individual pieces of the customer experience and finding ways to use technology to enhance those.

"I don't necessarily see that being overly disruptive in that one day the industry looks like this, and the next day is it completely different. I can see a lot of incremental changes coming in different aspects of how insurers interact with their customers.

"Most insurers have got big investments in older-world processing systems, and the challenge is, how do you actually integrate these more flexible dynamic customer interfaces into some of these older systems?

"A number of insurers are working on that, but it appears to be quite a struggle."

Mr Brigstock focused on motor insurance for a large part of his career, and is fascinated by the disruptive potential of in-car technology.

He describes autonomous vehicles as one of the big "elephants in the room".

> "I suspect within a short period of time, within the next year or two, we will see telematics play a bigger role."

"As cars get the technology that will eventually see them become autonomous, we are likely to see reductions in claims frequency. But while there is a big mix of cars with that technology and cars without [it] on the road, then it is going to put a brake on how much that frequency will reduce, and it is going to be offset by a higher average claim size.

"What we are finding is that the cost of repairing damaged vehicles is rising. Reinstating all the technology back to its pre-accident state is the expensive thing. Where all the vehicle detection technology is embedded in the windscreens, the cost of replacing windscreens can be as high as $5000 and sometimes more.

"Longer term, the development of autonomous vehicles could potentially change the whole structure of the motor insurance market. It's not clear to me whether individuals will buy motor cars in 20 or 30 years' time, or whether they have a more flexible, long-term arrangement with the supplier of a motor vehicle."

Telematics has yet to take off in Australia, and Mr Brigstock believes this is partly due to the way the physical damage and bodily injury components in the Australian motor insurance market are separated into two distinct covers.

"The markets where telematics has taken off are where all the risk is underwritten in the one product. In Australia, because of the separation, the economics of it are not quite there yet for it to work just on the physical damage part of it.

"But that is changing. I suspect within a short period of time, within the next year or two, we will see telematics play a bigger role.

"Once the economics work, in terms of assessing the risk of an individual for motor insurance, you are not going to need to ask a customer many questions.

"Once they have put a couple of hundred kilometres behind them and shown what their driving behaviours are, telematics has the ability to really modernise the way a motor insurance product and the relationship with the customer is managed.

"Most of that data is already being recorded inside the car – you won't need an app or a box. It is a matter of that being unlocked for use by the insurer."

For now, aged 62, Mr Brigstock's long and intriguing career has reached a turning point. His wife, three dogs, golf game and passion for photography will become his focus.

But he's not ruling out getting back behind the wheel at some point, and he'll stay on top of industry issues.

"I'm planning to have a pretty complete break to start with, but I imagine I will stay in touch with the industry in some way," he says.

"I've had a couple of approaches about whether I might be interested in joining some boards. I expect that will come down the track at some point."

With his industry knowledge and experience, you have to imagine he won't be too short of offers, and there may be a few more reinventions of Colin Brigstock yet to come.