Actuaries Institute Podcast – The Underwriting on the Wall
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Speakers: Angat Sandhu, Peter Tilocca
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Angat: Welcome everyone to the Actuaries Institute podcast. I'm Angat Sandhu, a partner at Oliver Wyman and Chief Editor of Actuaries digital. In today's podcast, I'm joined by Peter Tilocca who has been an executive in the underwriting industry for over 25 years, both working with insurers and re-insurers. Currently Peter is the Chief Underwriter at ANZ Wealth, but has led many transformation programs there, as well as other insurers and re-insurers in the past. Peter, we'd love to have you join us today, thank you for your time.

Peter: Thank you Angat, I appreciate you having me.

Angat: Fantastic. So, Peter the underwriting process is one which is quite intrinsic to a life insurance industry. It's one which has arguably not changed as much over the years. Can you give us a sense of what changes you have seen, and what's driven the amount of, or lack of change?

Peter: I absolutely agree with you. One of my premises for getting the underwriting transformation program up and running, within ANZ, was exactly that, that underwriting hadn't changed for a long time. So, we've tinkered with personal statements and questions on personal statements. We've introduced Medi-Quick's short medical examinations, and trying to adopt whatever new medical technology there may be for us to improve the underwriting process, but that really has been just skimming around the edges, and we haven't really made wholesale changes historically, because we haven't had the tools to enable that, and I think now we're in the age where we do have those tools, to be able to really transform underwriting.

Angat: Yeah, and that's really helpful, and you made references to tools and obviously more data that exists. Do you think there's anything else about the industry or the ways of working, or the culture within organisations, that's prevented change here, or is it largely down to tools and data analytics?

Peter: Yeah, I refer to them as tools, and I think you're probably more spot on in terms of referring to it as data. We've always collected loads and loads of data, as life insurance organisations, but we haven't been really effective in using that data to make change, or to really dig deeper into that data, and what is it telling us? and now with, as people say, we're into the fourth industrial revolution, and we have all these new technologies, such as machine learning, and artificial intelligence, and quantum computing. Then, we have now the tools and the data to be able to dig deeper into that data, to look at those insights.

Angat: That's fantastic. And so, you made reference to the partnership you had with UTS, where you, within ANZ, decided to try and change the status quo. Can you

tell our listeners a little more about the process you undertook and what some of the results have been, so far?

Peter: Sure. So yeah, we identified that we needed to make changes, and as I said, we created the underwriting transformation program. We also quickly identified that, for us to try to build that capability internally, would have taken us too long, and we would've missed the boat, essentially. So, we looked for a partner. We had an outsource partner to help us, who had the right skillset to help us complete the transformation work. And we teamed up with UTS, who have a specific advanced analytics Institute, and that's all they do, across various industries. So, we started with data extraction, which anyone knows, trying to extract life insurance data in a meaningful format, can be quite challenging for us life insurers. It's not our forte.

For the first time, we extracted data across our three life insurance operational systems. Being underwriting, our mainframe where our legacy or policy maintenance system, and claims and we actually extracted all that data, and so we ended up with just over 50 million rows of data, that we provided to UTS and we just said, go work your magic. Or words to that effect.

Angat: Right and what was the hardest part of the process? Was it just that the data was of different quality, was it that the systems made it hard? Can you give us a bit more colour around that?

Peter: Sure. The way the data is captured in the systems, one of the most eye-opening things for me, was the level of data that was captured, is unknown.

Angat: Yeah, interesting.

Peter: Or N/A, for arguments sake. And obviously unknown/N/A, is not going to give you the insights that you need. There's not much you can do with that sort of data, and there was a high percentage of data that was recorded in that format. The way that, in terms of the way the data is structured, different... you can record, say, a back exclusion as a back exclusion, be spine exclusion, spinal exclusion... and so you'd end up with six different variations of what is meant to be just one thing and so, cleaning up that data, to put into a format which can be easily mined and understood. That in itself, took 3-4 months. Just that piece of work.

And it's a real eye-opener for people who want to go down this path, is to understand the length of time it takes, because we have a lot of dirty data, as an industry.

Angat: Yeah, I think that what's missing in what you mentioned is, the data governance piece is quite critical in terms of standardising what's allowed, what's not allowed, and then ensuring that the people that are entering the data stick to it.

Peter: Correct. Yeah absolutely and the more free-form text that you have, the worse it becomes, so even from our perspective, we extracted all the freeform text, and analysed to understand what people were telling us, in that freeform text, and why they were using freeform text, rather than completing the application.

Peter: So essentially ticking "no" to every underwriting question, and then waiting until the end, at the freeform text field, where you say, "is there anything else you want to tell us?", and then they go into chapter and verse about a medical condition, which could've been easily answered, throughout the personal statement. So that was very interesting to us as well, to why are people doing that?

Angat: Yeah, that's fascinating, because maybe it's shedding some light into that the forms themselves and the questions themselves are a bit complex, and individuals can't relate with them.

Peter: Correct.

Angat: And that they're using this to really share some of their perspectives.

Peter: Absolutely, and I think, again part of our lesson in changing the underwriting personal statement was, we asked people about their bodily systems, and the average person, doesn't understand what we're asking them and then we'll tick no, because they don't understand it, and then end up giving us chapter and verse in terms of the free-form text.

Angat: Interesting. And in terms of the impact, you've spent a lot of time extracting and cleansing data, partnered with a leading Institute, to conduct analytics. What have you seen in terms of the impact for your organisation for your customer's and advisors.

Peter: We've been able to reduce the number of base underwriting questions that we ask people. So rather than asking them to complete 30, 35, 40 questions depending on their medical history, we've now got it down to a base of 13 questions. We didn't particularly say, we need to get it down to 13 questions, or 10 questions. We just tried to analyse what questions were more important than others through that work that we conducted with UTS, and understanding which questions people answered, that they eventually would go and claim and so, we worked our way backwards, to understand cause of claim, and then understanding what questions people answered and what was the correlation between, those questions and cause of claim. So, we reduced it down to 13 base medical questions, which means we've conducted customer satisfaction surveys, posts with advisors.

So, they're telling us that it's taking on average, 30% less time to complete an underwriting personal statement. And what's also important to understand that, this is across all our products, so we don't change Life TPD, versus trauma, versus income protection.

Peter: It's the standard set of questions across all our benefits. So, they're seeing a 30% reduction in time taken to complete the personal statement. We're also seeing greater disclosure, but then that provides us with greater levels of acceptance to a point of sale. So, we're seeing less cases being submitted to an underwriter, because the engine can handle that.

Our point of sale acceptance rates, have increased to almost 50% of applications received, are being accepted with the point of sale acceptance rate. Those are the cases that exclude mandatory requirements.

Angat: No, I think that, that's fantastic impact, in terms of better customer experience. Clearly your advisors are satisfied, and I'm sure that would translate, for some benefits for the insurer as well. What's also interesting for the actuarial audience is that, your comment around, you getting more data, and better disclosures, because that's what provides Actuaries with better information for underwriting, pricing, and for analysis.

Peter: Just on that point, one of the great findings and one of the interesting things for me was, as we were analysing the data, and looking at the different data sets, and what they were telling us, the potential, the opportunity there, to include more pricing factors in our portfolio, and start using some of these other pricing factors, to help us return to profitability, essentially.

Angat: That's fantastic. I think, particularly because the life insurance industry, many of the Actuaries have said that the data's been pretty poor, and there's been a death of data, but I think the additional factors is fantastic and one of the reactions, when organisations talk about data analysts and getting additional data sources can be that, "how do you filter out the substance from the noise?", and what are really that factors that really make sense and can be supported by instinct or intuition.

Did you have any experiences of that, that actually the data was training some un-intuitive factors, and what was the judgment overlay on that?

Peter: Yeah, absolutely. So, again, the old saying "garbage in, garbage out." Right? So, if your data is not in a great format, you can't rely on the results, so that's why it was really important that we spent a lot of time cleaning that data and assembling it in a format which could be analysed. And then once that occurred, we did see some results, which we questioned, you just can't accept defining necessarily on face value and so, you've got to do further analysis and start having a look at some of those trends, and we even went down to the level of picking out individual applications, and reviewing those manually, to make sure that what the end result was showing us was consistent with what we believe was happening.

Peter: And so, you've got to question that, and I think for us, the really important thing was, we had a multi-disciplinary team working on this.

Peter: So, we had a pricing actuary on the team, for example, and we had a valuation actuary as well, was on the team. A data scientist was on the team. We had that multi-disciplinary perspective, to say from my area, that makes sense, but then someone would say, "well mate, that makes no sense to me." And so, you need to constantly check and validate the findings. Because when we started also, there was a lot of talk around creating black box and we were very clear upfront, to say that we didn't want a black box, because we needed to understand inputs and outputs, because if we're challenged in terms of some of the results that we're seeing, we need to be able to explain them. So, black boxes were off the table.

Angat: No, that's fantastic. I think particularly in the current regulatory and external environment we're in, I think it's extremely important to have transparency and the judgment overlay around what is helpful for reselection and pricing, but also passes the customer and community expectations test as well. So, it's great that you have a diverse set of stakeholders doing exactly that.

Angat: So Peter, as you think about the next wave of advancements in life insurance underwriting, clearly there are more data sources emerging, technology is continuing to only get better and better, we've heard of some start-ups now in the US that are really pushing the boundaries, and using pictures to do underwriting completely, or at least inform part of the underwriting, where do you see this going 3-5 years down the road, in an Australian context?

Peter: Some of the early results from the first phase of work with UTS, it showed us the power of external data sources. We only used our own internal insurance-based data for the first phase, but what we found was, what influences claims results across the board, based on socio-economic data for argument sake, there's real power in external data sources, that we can utilise, to help us, from an underwriting perspective, and probably more importantly from a pricing perspective, again, tying back in to what I mentioned previously around the additional data sources that we have and the different pricing factors, potentially, that we could use to improve the portfolio performance as well.

So, I think there's a real area where, as an industry, we can start using these external data sources to improve the experience. If you can use certain external sources as a proxy for underwriting questions as well, then again you can ask less questions and improve that customer engagement, and that experience.

What we found, also, is that the time might not be right just now, but we're coming into potentially the open banking environment, where there'll be... people are willing to share data, and I think what we found, not only here in Australia, but globally, is that, "what's in it for me?" factor.

Angat: From a customer perspective?

Peter: From a customer's perspective, absolutely. So, if there's enough of a "what's in it for me?" factor, you'll find that most people are willing to share data, that ordinarily you wouldn't have access to.

Angat: That's fascinating Peter, because the open data regime, when it comes to Australia, which hopefully is over three to four years from now, that will be quite a game changer for industries like life insurance, which have historically had far less data on the customers, than the banks and other parts of insurance as well. I think that one of the challenges (that) the industry will need to navigate is, as you rightly referred to "what's in it for me?" factor, you may only get customers that are good risks, disclosing and being open to sharing the data, so the industry will need to navigate some risk selection challenges, and also there may be a new set of ethical considerations that are, perhaps, not being faced today.

Peter: Absolutely, and we've recognised that as well, and we're just in the throes of forming our own data ethics committee. An over-arching ethics committee about what data is suitable to be used, and how do we use it? and so, we're very cognisant of that because we have taken those early steps into this new world, and so we do want to ensure that we do the right thing by customers.

Angat: Given that ANZ is obviously a large organisation, partnered with another advanced analytics institute to do this, what would your advice be to other organisations, be it small or large, that are looking to do things in this space, and what sort of challenges do you expect them to face if they go down this path?

Peter: Two main things. One is be clear what you're trying to achieve. It's really easy to look at your business with a scatter gun approach, in terms of, "I want to fix everything.", and then you'll achieve nothing, so be very clear, whether it's to fix underwriting or transform underwriting, or some other area. Just be very clear about what you're trying to do, what the problem is and how, using data. Don't look for a problem just because you've potentially got a solution. You've got to have a real problem and be very focused on that.

The real difficulty in these programs, is getting started, is having the support of the people around you, the internal people, because you can't do it on your own. You need that support, you need people to be engaged to come with you. You need the resources, you need systems, even as simple as fancy Excel spreadsheets to get started, and that's fine, but getting started is probably, the hardest part of it, because once you're on a roll, you'll find that things will flow, but getting started is definitely the hardest part.

Angat: Yeah, I think that's great counsel in terms of being very clear on the problem you're trying to solve, rather than the reverse and secondly, yeah, the hardest often is the first one, and once you can build momentum, then projects like that can become a beachhead within the organisation and get more investment and get the right kind of input.

Peter: I found as soon as we started showing a return, the benefits, then we gathered more support and the skeptics, if you like, at the front end we're turning over to our side, so... and we're producing real business benefits (which) is important as well.

Angat: Oh, that's fantastic advice, Peter, for our listeners so thank you so much for your time and insights. Good luck as you take the next step in trying to revolutionise underwriting and life insurance and our listeners would be very keen to see how you go, and we wish you all the best.

Peter: Great thanks for having me again. I really appreciate it.