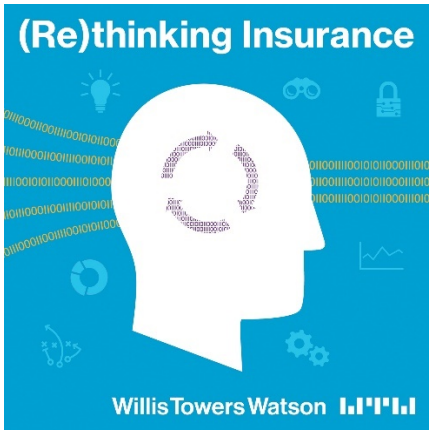

Episode 7: Preparing for emerging risks

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ANDRE GERLING: Risk is nothing bad per se. For an insurance company, actually, it's something very good and basically the single reason for an insurance company's existence.

NARRATOR: You're listening to Rethinking Insurance, a podcast series from Willis Towers Watson where we discuss the issues facing PNC, life, and composite insurers around the globe, as well as exploring the latest tools, techniques, and innovations that will help you to rethink insurance.

SINA THIEME: Hello. Welcome to Rethinking Insurance. I'm your host, Sina Thieme, and today I'm delighted to be joined by my guests Stefanie Schriek and André Gerling. Stefanie is a director in Willis Tower Watson's Cologne office, and has been with the firm and its various predecessor firms for 17 years. Her focus is mainly on risk management topics [INAUDIBLE] and reserving for property and casualty insurance.

And André is the head of analytics, service offering, and customized solutions of EMEA Northeast of Willis Reed, and he's based in Munich and London. And both of my guests are actuaries by background.

Welcome, both.

STEFANIE SCHRIEK: Thank you, Sina. Very happy to be here.

ANDRE GERLING: Likewise. Thanks, and nice to be here.

SINA THIEME: So in today's episode, we're going to explore how insurance risk management functions can prepare for emerging risks. And before we do that, let's find out a little bit more about our guests. If you've listened to my podcast before, then you know the drill. I look at search results for my guest's name and google.

And André Gerling is a great name to search for. There is an André who is the head of a team for ocean freight. One André works for urban development and planning in the City of Minden in Germany. There are also many Andrés on Facebook, the first of which is a fan of Rosetta Stone. The second one is in Brazil.

André, are those the sort of search results you had in mind as a kid when thinking about the future you?

ANDRE GERLING: Well, partly. I'm actually from Minden, so I was a bit surprised that someone is from Minden as well and has my name. I'm not on Facebook, so I can't really tell what could be or should be expected. So-- but it's an interesting list, yeah.

SINA THIEME: And Stefanie, when I google your name I get to event descriptions of where Willis Tower Watson's firm, and right after that I see a photo from 2017 showing you at the Oldies night of your local elementary school.

STEFANIE SCHRIEK: Yeah, very good.

SINA THIEME: And I guess to get to the topic, it's in our nature to be reminded of risks, particularly when we're directly facing them. So for example, youth research shows that flood insurance take up spikes the year after floods and then steadily declines thereafter. And the increasing cyber risk is particularly widely discussed right after a cyber-attack. And currently governments are considering establishing pandemic risk pools now that we're in a pandemic.

So it seems like we're focused on risks when we are directly facing them, and it seems like we're forgetting about risks that we currently don't face or that don't seem to be very likely.

Before we get into the discussion a bit more, I think it would be helpful if we can define what we mean by emerging risks first, and whether the terms emerging risks, extreme risks and uninsurable risks can be used interchangeably. Maybe, André, if you want to kick off.

ANDRE GERLING: Yeah. There are probably many definitions flying around for those three types of risks, and I can't say that I have the best one, but I've got one that kind of works for me quite well. So I would probably say emerging risks are new risks, or risks that have more recently grown into something that could be or might be big and threatening. So basically, they are on the growth path in terms of becoming extreme.

Then you've got the list of extreme risks, which are already extreme, i.e, they could reach an extreme severity, frequency, geographical scope, and they could once they materialize lead to substantial economic and financial losses. And then the next category would then be the uninsurable risks, so risks that when they materialize, they are so big that the basic principles of insurance can no longer be applied.

So basically, if you look at insurance, a set of insurance pays a premium, and only a subset of that group experiences a claim, so the collective can pay for the claims of the individual with the collective premiums. And if you've got these uninsurable risks, it basically means that insurers in this case can no longer diversify globally and across lines of business, so the concept of diversification is threatened.

So you basically have emerging risks that can emerge into extreme risks and extreme risks might become uninsurable, or some components of extremists can be uninsurable. That's a definition that works for me, but I'm sure that there are others that are equally sensible.

SINA THIEME: Right OK. It sounds like there's an overlap, but they're definitely not identical terms. In your view, what role does insurance play in the context of emerging risks or already extreme risks? Is it that insurers and reinsurers are expected to ensure their current policies cover these risks and are customer friendly limits and exclusion for inclusion someplace? Or is it that insurers are expected to develop adequate insurance solutions for these risks? Or maybe this is all a bit naive anyway, to assume the insurance industry can cover these losses.

So is the aim just for more transparency around what's covered and what isn't?

ANDRE GERLING: Well, I think the answer is yes. So, in summary, first of all, insurers have financial interest in understanding, monitoring emerging risks. So they need to understand and assess the potential consequences of the emerging risks, and they need to make sure that they understand it fully and understand the consequences of it, because they have a financial interest in it. So if they don't understand it and they materialize they might not be well protected, and it could be a threat to an insurer. So understanding emerging risks is absolutely vital for every insurance company. And then in general risk is nothing bad per se. For an insurance company, actually, something very good and basically the single reason for an insurance company's existence.

But they need to identify the risks and evaluate the consequences, and then basically quantify the impact of those risks. And then build a coverage around that, that addresses the parts that are insurable. And make sure that they're charging the right price for it, either in a dedicated standalone policy that is built around such an emerging risk, or they basically put a price tag on the [? silent ?] exposure that they already have and give in their policies.

So when the risks that are covered are potentially extreme, insurers need to make sure that in the next step they can manage whatever comes out of such materialization. So they need to manage accumulations, they need to manage the frequency, the severity, and so on. And managing basically means the question that you already mentioned in your question. Do we want to exclude it? Do we want to limit it? Do we want to keep it? Do we want to reinsure it?

How much of that insurable risk do we actually want to keep in our book, and how much of that is actually something we can carry?

Then the next thing would be when risks develop into something unmanageable, so global pandemics, global cyberattacks, climate change. Then of course insurers need to raise this. And they need to offer their expertise and their insights to tackle that.

Why? Insurers are basically the last line of defense. If something bad happens insurers need to help their clients bounce back. So if the insurers cannot carry the impact of such an extreme risk, and it is indeed partly uninsurable, then we basically got a problem once it materialized. So the transparency then obviously helps in order to prevent the risk from materializing in the first place.

So in summary, they are in for the whole way. They are the first ones that identify the risks. They know the most about it. They can quantify it. They can manage it. And they can also basically help others, say, governments, individuals, organizations, to even prevent those risks from materializing.

SINA THIEME: So Steffie, what in your view is a good first step for a risk management function to sort of get to know the unknown?

STEFANIE SCHRIEK: Yes. So I think Andre gave a very comprehensive picture of why we should do that. And what needs to be done. So let's try to focus a little bit on how can we actually do that, to get to the unknown a little better.

Usually it starts quite basic, actually, with a brief brainstorming exercise. So get as many people as possible to think about this task and include all kinds of different departments in your insurance industry in that task. So underwriters, risk managers, reinsurance people, so really the aim is to get as diverse a group together as possible. And all potential risks then shall be listed, no matter how unlikely, or no matter how maybe even ridiculous they might appear. So it is definitely allowed and probably even desired to have items like alien invasion on that list.

So once you have that, then the next step is to categorize and get a better grip on that list. So often categories that I use are something like financial, economic, political, environmental, social, technology. That all helps to get a little bit of structure to the list, and maybe to also even prioritize certain elements and certain items. Because of course when you have that huge, comprehensive list, your aim needs to be to get a prioritization to tell you which risks to first work on or to first think on in more detail.

To get that prioritization, of course, this is a very difficult task. We are already looking into the crystal ball to just getting the list of these emerging or extreme uninsurable risks, so now we need to get one step further and try to measure their qualitative and maybe even quantitative impact. So this is definitely not an easy task. But there are various things that could be done about that. So, for example, you could find something like likelihoods and impacts to each of the risks on your list.

Of course, that will be a very, very rough thing. using, I don't know, scales like from one to say four to measure potential return periods for the likelihood. And yeah, the same scale to

measure impact in terms of intensity, so smaller loss to absolute super crash, and also in terms of geographical spread. So do we expect the impact to be very limited to just a small local area, or do we see a larger or even a global impact? Once you have that, you could combine these parameters for likelihood and impact to come up with a prioritization of these risks.

Another way of looking at the risk could also, for example, be to think about dependencies between those. So, for example, a global trade collapse might cause political instability, riots, maybe even anarchy. I don't know, subprime defaults could result in banking crises or insurance crises.

So if you categorize these interdependencies in a, for example, two-dimensional matrix which then reads risk A is very likely to cause risk B, or risk C is not very likely to cause risk D, this will also help you to get a good overview of the risks that appear to be in the center all the time. And these will probably be the ones that require some attention. So this gives you, I think, a quite good starting point to work from there and really to tell you in that very, very abstract area, where to concentrate on and where to get started.

SINA THIEME: And Stefanie, from your experience, are those lists and prioritizations mainly based on discussions between underwriters and risk managers, or of actual underlying risk models behind this?

STEFANIE SCHRIEK: No, absolutely at the first step it would be discussions with all people who have an idea on these risks. So the experts, underwriters, risk managers, reinsurance people, whoever, because you will not have these kind of things in your risk model. You can only bring them in the model when you get a grip on them and really try to get first quantifications. But this of course, is really, really very hard. So the starting point always is think outside your model and think what else can hit you as an insurance company.

SINA THIEME: Right. André, thank you. You put a quote in your emerging risk presentation that says, "There was a lot of research on big and threatening risks, and Hollywood has covered most of them." Right? So it does sound like a brainstorming session is a good start. Did you have anything else to add to what Steffie said?

ANDRE GERLING: No, I think that summarizes it well. And, I mean, what better sort of research can you do than actually, once it's allowed again, going to the movies and see what sort of catastrophic new events Hollywood has dreamed about, and then review your list of potential threatening risks and see whether you need to add one or two.

SINA THIEME: So now that we have a slightly better understanding of what emerging risks are, let's move to the "What can we do about it?" On the ethics side, there are a few things that you can consider, such as diversification, hedging strategies, for example, derivatives such as longevity, swaps, credit default swaps, or holding negatively correlated assets. But of course hedging could be imprecise, and carrying costs could be high and counterparty default risk could be high. What are some practical risk management considerations for an insurer's liability side?

STEFANIE SCHRIEK: Well, of course it's very difficult to quantify these fairly abstract and to some degree hypothetical things. So we cannot-- when we think in proper quantitative risk modeling, we of course cannot fit claims distributions when there is no historical loss data that we can use to fit the distribution to. And yet, sometimes I think the situation is maybe not too different from the very early days of operational loss modeling, so before large databases with actual claims data have been available.

In these days the approach was very similar, so it was to define a large set of scenarios, then qualitatively find out what consequences would there be if these scenarios would occur. Get ideas on dependencies. Again, collect expert opinions on related frequency severities. And even if they are very rough at the beginning, just get them in and use them as starting point.

And then step by step try to refine your model. This kind of approach can also work when dealing with these emerging risks, but maybe also another very promising way is to think about

what kind of scenarios can be caused by your emerging risks.

So, just to give you an example here, a solar storm can certainly cause a blackout; however, blackouts scenarios is probably something that has already been analyzed in more detail when the company thinks about cyber. So by analyzing threats and consequences, companies might already be in a position to draw from something they already know and they have already analyzed in a different context. Of course this is all quite vague, and it's particularly difficult to say when an analysis here is comprehensive and complete. It probably never is, yeah? But it is key to get started and actually do something.

SINA THIEME: André, anything to add?

ANDRE GERLING: Yeah. I think in terms of accumulation of extreme risks and things that are usable-- and I think that was a very good point Steffie raised. I mean, the one thing that we've basically seen in historical scenarios that have occurred, but also in all the scenarios that we basically analyzed for clients of ours, is basically, it's very likely to have an accumulation of extreme risks once you take a hit on critical infrastructure. So that seems to be kind of the recurring theme, and usually in a situation where you've got a decent hit on critical infrastructure via terror, by cosmic threats, via cyber, whatsoever, then you have a lot of uncertainty and chaos.

And I think that is the point that you really need to think through in detail before it happens. At least that should give you as a company a bit of a head start. And I mean no matter what happens, if there is some form of attack on Europe's critical infrastructure and your CEO gives you a call and says well, what do we do about this now, it's actually quite helpful to have some form of an answer ready for that. So I think that is one of the core areas that we've identified, critical infrastructure, and how it links to whatever could potentially happen to your company.

SINA THIEME: Right. And I guess a number of other risks are also listed in a Thinking Ahead Institute paper on emerging risks, which is pretty useful because it tries to assign a likelihood on uncertainty and impact in terms of intensity and scope and score to each of these risks. And I guess it does help in order to not forget about something that an insurer really shouldn't forget about. So I think, Steffie, you already touched on that slightly. What insights do you think risk management functions can gain during this exercise or this advanced contingency planning, as you may call it?

STEFANIE SCHRIEK: Well, I think everyone will agree that whatever will be done to actually quantify these emerging risks will result in not very accurate numbers. So this is not what it is about, and this can't be what it is about. So it's not either getting the numbers completely right or just do nothing. So it's rather about the process of evaluation of thinking through that, of constantly reviewing and challenging even analysis that has been done before.

So a really great example is the pandemic. I'm fully aware that the pandemic now is used as an example for actually everything, but here it really fits very well. Because of course any insurer in the world had the pandemic listed as an emerging risk. But no insurer in the world had foreseen the consequences that we see, almost nothing on the life side, but really severe losses on the PNC side.

So yeah, it is not about being completely unprepared, and the process of thinking about the various emerging risks that can hit insurers and the process of qualitatively finding out which lines of business will be affected, where there are dependencies, where we might have accumulations. These are the first attempts for a quantification and provide already a very, very helpful set of insights.

So when we now talk about, I don't know, something like operationalization, there are various things that can be done even without a super accurate and entirely correct quantitative model. So based on all these considerations, and that comes back a little bit to what André said at the beginning, companies of course, have to and can agree on, for example, modifications in their underwriting guidelines, strategic decisions such as concentrating no longer on certain business segments, certain geographies, maybe even certain groups of customers. And also

look at the reinsurance programs to avoid gaps in coverage.

So the whole thing really is about being on a journey, and actually also being on a learning curve. Discuss. Challenge, constantly review the company's view on these kinds of risks and threats, helps you to get as broad a picture as possible.

SINA THIEME: Thanks, Steffie. That was a really nice way to summarize the discussion, I think. Steffie, André, thank you so much for your time and for sharing your views.

STEFANIE SCHRIEK: Many thanks, Sina, for having us. It was good fun.

ANDRE GERLING: Thank you. Thanks, Sina. Bye.

SINA THIEME: Thank you for listening to this episode. And if you find this interesting too, then join us on future episodes of Rethinking Insurance.

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