

**Date:** 15 Jan 2017

**Interviewer:** Andrew Doughman

**Guest:** Sharanjit Paddam

**Duration:** 18:52 min

## TRANSCRIPT

**Andrew: Hello and welcome to your Actuaries Institute dialogue podcast, I'm Andrew Doughman.**

**Now this podcast aims to give a high-level overview of the Actuaries Thought Leadership series. The dialogue, leading the conversation. The dialogue paper covers a wide range of topical issues. From genetics and life insurance to private health insurance affordability.**

**Now today, we're looking at the paper, climate risk disclosure, Financial institutions feel the heat. Co-authored in November last year by actuaries, Sharanjit Paddam and Stephanie Wong, who are both on the Institute's climate change working group.**

**Now the report says many Australian financial institutions are ill-prepared for the impact of rising temperatures and extreme weather events and the effects these will have on their balance sheets. But just how ill-prepared are they? And what are the potential consequences?**

**To help us answer these questions, today we have Sharanjit Paddam in the studio. Thanks for joining us Sharanjit.**

**Sharanjit:** Thanks Andrew, good to be here

**Andrew: Let's perhaps start by crystallizing the potential risks with an example. Now what does a typical risk event associated with climate change look like? And what level of frequency, and severity are we talking about?**

**Sharanjit:** That's a great question, Andrew. I think, it really helps with climate change, which can be very ethereal for people to actually think about, you know, crystallizing an event. One of the best events I think to think about this, is the East coast low we had in Sydney back in May 2016. And where we saw a number of backyards of properties at the, at Collaroy disappear into the sea. You know where there's some iconic photographs of someone's swimming pool sitting on the beach.

Now, on one level, I think what that shows are that climate change events are no different to other natural disaster events. They are just the usual storms, cyclones, floods that we have, and expect to carry on having in Australia. But what the science is telling us is that, generally, higher ocean, and atmospheric temperatures are going to lead to higher sea levels. Higher amount of rain falling when we get an event.

And, because there is more increased energy in the system, much bigger wind speeds than we've seen in the past. So, all of these combine in the storm to actually give us more damage. As we saw in the East coast low. And over time we're expecting climate change to not to just increase the frequency, and severity of losses, and weather-related events.

But we're also expecting to see the location of such events change. As the seas warm up, things like cyclones will come further south. Perhaps where we've not had them before in the past. And that's also going to be a change linked to climate events. I think, you know, the important thing to say about the Collaroy event is that it illustrates other aspects of climate risk.

We're not just talking about, more claims, or more frequent claims, or more expensive claims. In a way the industry's set up to deal with that by increasing premiums. But what we saw in Collaroy is that even though the event wasn't necessarily covered by insurance policies. Because actions of the sea are usually excluded. Most insurers paid up, on an ex gratia basis for these losses.

So, when climate change comes, it also triggers issues about affordability, if we keep pushing premiums up. When are people going to no longer afford to pay for the premiums? It increases issues about insurability. Are these risks actually insurable anymore? And it increases reputational losses for insurers. And it could also lead to regulatory intervention.

We already know that parts of Australia, where people are very concerned about the level of premiums that they are having to pay for their home insurance, and their Strata insurance. We've seen the government starting to poke its nose around in that area. So, these are all the types of risks that can come out of a climate change event. If we think about it solely in terms of more losses, we're missing the bigger picture.

**Andrew: Okay, thank you for that. Just one minor comment coming from the reinsurance industry, I can you assure you that ex gratia is a sensitive topic.**

**Sharanjit:** And I think it's increasingly going to become a topic. As we stress-test the things that are happening in insurance.

**Andrew: Sure, let's move away from insurance for a minute. Let's pick on the banking industry. Now say we have a big four banks with loans, and accounts spread across Australia. Now how does that bank practically incorporate climate change risk into their risk management strategy?**

**Sharanjit:** Again, a great question. And I think just a, you know, carrying on with that Collaroy example for a moment, because the insurers actually paid out then. But what if they hadn't? Those homes sitting on the coast in Collaroy would have, you know, would have had home loans on them.

And those property owners would be under a lot of financial stress as a result of those losses. And may not have been able to carry on paying their home loans. So, that explains how banks are actually exposed to this risk. It's a credit risk for the bank. I think in the past banks have made an assumption that there's always going to be insurance around, and it will cover for the physical losses.

As we move forward in time, I think that assumption is going to be really tested. That insurance may not be affordable. And it may mean that the home owners faced with a choice between carrying on paying their home insurance premiums, or paying their home loan. So, climate risk gets transferred, or changed into credit risk for banks.

I think the first practical step is for banks to actually identify their exposure and begin to understand how material that risk is to their financial position. This is an important first step, because I think in the past banks, the risk hasn't flown through to the banks and now it's a time for them to identify, and understand how big it is. And also start to think about how they can stress test, or scenario test their exposures. This is essentially a big requirement of the prudential regulatory standards on risk management.

Companies are required to think about stress testing their exposures to risks.

**Andrew: What about risk controls? Well, what kind of risk control could the banks set up against exposures like these?**

**Sharanjit:** So, I think, you know, at the moment. I'm going through a, getting a home loan myself. And no-one is asking the question about the property that I'm buying, about whether, you know, is it still going to be above the ground, above the water level in five to 10 years time.

Right, you know, someone's about to lend me money with this property as security. And no-one is checking in that process, whether this property is still going to be above water. And I think as a basic control going forward, you know, we're used to doing credit checks on the individuals who are taking out home loans. I think banks should be doing, physical risks tests on the buildings that they're taking a security, going forward.

**Andrew: And what level of mitigation are banks now expected to have set up for such a risk event? And how does that compare to what they have set up?**

**Sharanjit:** So, I think actually, the mitigation brings about a whole bunch of opportunities for banks. Particularly working with insurers. And it's about helping their customers. So, for example, if my home is at the risk of coastal inundation. But it could be saved if there were a seawall in place. So, like the example, we go back to Collaroy. There was an agreement from the council to build a seawall. But everyone was arguing about who was going to pay for it. Now if a bank had stepped in, and said, "All right, we'll lend the money to pay this, we'll lend it to the owners of those 10 houses and we'll spread it over 10 years." We're only talking about 100th of the cost being paying each year.

And what it does, is the customer, the person who owns the house is, you know, they're having their greatest asset insured. And covered by the bank. The bank is making money by lending additional funds to people. And also the bank is reducing its risk of having a credit loss going forward.

That bank could then also partner with an insurer. Who then, because they've done a risk assessment, they've worked out exactly what the seawall would need to be at, to protect the house. That house suddenly becomes insurable. So, an insurer could then offer insurance against events that are unexpected. And so, I think we need to think creatively about mitigation. Because it's a big opportunity for the finance industry to make a real difference for consumers and for their shareholders.

**Andrew: Now, one of the areas I work in is directors' and officers' insurance and recently**

**there's been a lot of talk about the potential impact of climate change on class actions. Now, my question to you, Sharanjit, is, has there been any experience with this in Australia, or globally to date?**

**Sharanjit:** So, in Australia we've seen the shareholders of the Commonwealth Bank sue the board for not disclosing climate risk in their 2016 annual returns. That came on the back of legal opinion from the New South Wales bar that states that directors should disclose, and manage climate risk because it's a foreseeable material risk for a company. Or in the case, it's a foreseeable risk. So, that action was the first internationally against a bank that I'm aware of. But it was actually withdrawn, later that year. Because CBA promised to provide the disclosure in their future statements. So, the action was withdrawn, but internationally we're seeing quite a lot of action on this.

Most recently, we've seen the City of New York, are now suing Exxonmobil, BP, Shell, Chevron, ConocoPhillips for, and they've also divested five billion dollars from those companies. What the City of New York alleges is that these companies knew that their oil, and gas products would actually cause climate change and that, that climate change is leading to losses for the City. So, we look at Hurricane Sandy and the amount of investment in adaptation that's going on in New York and you get to see the size of how concerned they are.

And so, we're seeing that kind of action. We're seeing similar types of actions around the world in different places. There is a quite a famous one of a bunch of teenagers, suing in the US court, against their rights under the Constitution being limited by climate change.

So, I don't know yet, of any successful D and O claim and I think that's always the issue we sit on, when it comes to these types of issues. Because the risk is that, these actions will increase, and eventually one will win. And when one wins, it will open the floodgates. And set a precedent for others. It will also set a precedent for, shareholders to group together in class actions.

In order to seek these things out, Interestingly enough that, you know, shareholders can sue their company, but also other companies for not disclosing the risk. But we can also see shareholders being affected because companies they've invested in, are being sued.

But this is a particular issue as we move forward.

**Andrew: Now definitely, I'd love to see how the lawyers proved that climate change actually led to those losses, following on from that, what should a director be doing today to ensure that such a risk is managed appropriately?**

**Sharanjit:** : I think boards of directors should be ensuring that the company has a climate change action plan. You know, this section should set out how the company identifies, and manages the risk.

They also need to engage with regulators, and investors to get buy in from them around what they're doing around that plan and then they need to execute that plan. Now, that's a very kind of obvious answer, you know, you need to have a plan to deal with it and then

execute the plan. But I think this is one of things that we need to say about climate change, it's just another risk faced by companies, right and companies deal with risks every day.

And they have a plan to deal with those. And they need to talk to their stakeholders, and regulators, and investors. And assure them that they know what they're doing to manage those risks. Climate change doesn't change any of that. That's exactly what directors have been doing and need to carry on doing.

And they need to recognize that climate change is one of those risks that they face. And deal with them in the way that they've dealt with all the risks that they've faced.

**Andrew: Okay, let's talk a bit about your paper. Now, you cover some quite interesting innovations in that paper, where you build on the opportunities side of climate change. In particular, you mention resilience financing features within a catastrophe bond. Now can you explain a little bit about how this works and what purpose it serves?**

**Sharanjit:** Yeah, this is a sort of resilience feature within a climate bond. So, let's start talking about what a catastrophe bond is. So, a catastrophe bond is where investors put up some capital, and if there is an insurance loss, for however that's caused, they lose the capital. It's that kind of bonds. They, increasingly the market is seeing entry of that type of product. And it's a way for, particularly for large institutional investors, to directly invest in insurance risk.

Now what you can do is say, given that capital that we've got here, we could spend some of that, on adaptation. So, to reduce the insurance loss, if it happens. And if we do this in the right way. The money we spend out of that capital can actually reduce the risk, so that it balances what's lost in the capital. So, the investors are in the same position. But what's happened is, that that money has been used, not just to pay out in the event of a loss. But actually to reduce that loss occurring in the first place. So, that's the idea with cat bonds.

It's actually very similar to what we've seen happen in buildings, around the world. Where companies have come in, and financed replacing all the old types of light bulbs, with LED lights. Which are more efficient, right. And they know that they can do that financing because the future bills are reducing. The future energy bills are reducing because the LED lights are more efficient. And that's exactly the same thing here. We're going in, and we're spending money reducing future losses, and that reduced future losses, that saving can be used to fund in mitigation upfront.

**Andrew: Interesting analogy there with the light bulbs. Now let's talk about your eight step plan. Now that's quite comprehensive. And you probably think a little bit overwhelming in some ways. Now it recommends reviewing risk, and opportunities across lending, underwriting, investments, and business strategy. Developing capability to measure the financial impact of climate risk, documenting controls, and scenario testing. And disclosing the measures to stakeholders. Now how would a management team go about mobilizing resources to attack such a plan? And who would they get within the organization to look at each component?**

**Sharanjit:** Yeah, so, you're right. There is, it is quite an overwhelming amount of work. And I think that's true when a company's looking at any type of risk it faces. Again, it's not, there's

nothing different about what we've said to deal with this risk, to how we would say to deal with any risk that a company faces.

I think some of the challenges that arise are that, climate change as a risk is, has a very holistic impact on organizations. It affects lots of people. So, if you take an insurer. It's going to affect the risk management team, obviously.

It's going to affect the underwriters. It's going to affect the investment team. It's going to affect the strategy team, like. What products will we be selling in five years? Who will be our customers? Where will be selling these products? What will people need? It affects the sustainability teams. It affects the finance teams, because reporting of these risks, needs to be done in the annual report. It's not in a separate sustainability report.

It's actually within the mainstream reports under the new disclosure standards. So, what the challenge for management is actually executing across the organizations and identifying who are all the stakeholders involved and getting them together to solve this problem together.

And we know, as in all organizations all around the world. People tend to operate in their little silos. And it's a real challenge sometimes to get people to work across an organization to look at a holistic problem, like this. So, I think that's generally the big problem. That management teams need to think about, and going about mobilizing the resources. And yeah, but I also think it's a real opportunity here, because if you come to this problem with a very much of a customer focus, and a business focus. I think there's an opportunity to renew your business in a really good way. And to build a capability that talks about, how do we manage risks across the organizations, and how do we think about opportunities?

And the way to demonstrate to your investors, and your regulators, that you as a management team, understand their concerns, and are actually running this company in a way that's gonna ensure its sustainability. And its financial future.

**Andrew: Well thank you very much. Some interesting comments there and it will be interesting to see what happens over the next 12 months. That's about all we have time for in this episode and I hope you enjoyed the discussion. A big thank you to you, Sharanjit, for joining us. Listen out for other episodes, and papers in the Dialogue Thought Leadership series and head to the public policy and media section of our website, for more latest research from the actuaries. Now don't forget there's the Climate Risk Fluency series part two, an event focused on extreme heat that kicks off on Wednesday, 4th April at the Actuaries Institute in cooperation with Earth Systems and Climate Change hub.**

**You're listening to your dialogue podcast for the Actuaries Institute, Australia.**

**I'm Andrew Doughman, bye for now.**