Interview Transcript[[1]](#footnote-1)

Subject 2: Modeller in insurance industry

I: [Explaining the project]. Why don’t you tell me a bit about your job and kind of where that fits in with uncertainty.

S: Okay. Well there’s a lot about uncertainty in my job. So I’m involved with model research at [company] so that basically involves looking at the [catastrophe] models so we’re only looking at that for the time being, but that involves looking at third class vendor models and trying to understand what assumptions and what components of the models the vendors have put together, what they’ve done and how they’ve done it and whether that seems reasonable then try and understand the results that are coming out of those models so we look at, for example, the scientific component of the model, the vulnerability component of the model, how the two interact and then how does that translate into the losses that are coming out of the model and does that make sense. Sort of really trying to question each component and work out what’s going on where we can. It’s not always that easy or that transparent, but that’s sort of basically what we do and then our job is to do that work and then communicate to the business the findings of the research that we do into those models and help the business to come up or try to come up with its sort of view of risk for a particular parent regions of the model that’s being used so if we are using a particular vendor model for a particular [unintelligible] region, we might find that for example maybe the vulnerability [unintelligible] don’t quite make sense so we’d make some recommendations about how to make adjustment to those to get to what we think is a fairer view of risk or there might be something else. That’s one particular example. But we might look at the frequency of hurricanes in the US and come to a view that we have internally and whether that matches with the view of the vendor model that we’re using and then sort of adjusting that accordingly. So that sort of explains what we do.

I: So when you’re communicating that information, how do you communicate it? Is it in a figure? In a graph? Do you just say “we think there’s more vulnerability than this model is saying”? How does that work?

S: I guess there are several things we do and it depends on the audience as well as how much detail we give but firstly what we do is a very detailed review of the model and write lots of details, documentation on all of the components that we look at and then from there we’ll start to come up with exhibits from a higher level so we’ll look at the loss calibration and we’ll look at if we’ve got industry exposures we can run the model against, we’ll look at that and how do the losses compare to what we’d expect to see and does that make sense? So I guess it depends what recommendations we’re making as to what sort of exhibits we’ll show, but generally, we’ll try to give a feel for what sort of level of loss is coming out of the model and what’s driving that level of loss. And it’s always difficult to try and balance the level of detail with the types of audience that you’re presenting to because the company doesn’t necessarily want a really detailed report about vulnerability hazards in (location) for example. Does the \_\_\_\_\_ model look reasonable? And if it doesn’t, then what adjustments are we making to make it a more reasonable model? [5:56] And then, I mean Europe’s quite a good example of where there is a lot of uncertainty in, even in the underlying hazard data that goes into the model because it’s so limited in terms of what’s available. So trying to explain that in a reasonably simple way is a difficult thing, but it’s something we try to do and try to come up with simple explanations for things where we can without getting too bogged down in the science, if that makes sense [6:40]

I: Yeah, absolutely. So I’m guessing you’re using loss curves then?

S: Yeah.

I: Do you use maps as well? Or mostly just the loss curves?

S: No, we’ll use maps as well. We find that where we can use maps, particularly if we’re looking at sort of frequencies and things or if we’re looking at sort of the spread of things like loss/cost. So what the average loss at an individual point is, we can visualize that quite nicely on a map and that, people tend to respond quite well to because it does sort of highlight areas in a model that might look odd.

[7:31]

I: Okay. Do you communicate uncertainty in any way, shape, or form and if so, what does it look like?

S: We do. We’ll first of all, try to write down where we think the uncertainties, what the major uncertainties in the model are and the different types of uncertainties we might be dealing with and then in the loss curves themselves, we might do a series of sensitivity tests to show that if you change this assumption, your loss curve will change in this way or if you sort of tweak the model in that way, your loss curve will change in that way and either way could be argued right or wrong so it sort of shows that there is this change in loss as a result of what assumptions you make about what goes into the model, the [unintelligible] that you need to be aware of. So we try to illustrate it in that way by showing how your loss changes if you just change one or two assumptions.

[8:41]

I: Okay. And do you do that on the same loss curve, so you show many curves on the same graph or is it through kind of a digital interface or how do you do that?

S: Yeah so it’ll usually be, we’ll do something in like a powerpoint presentation and try to keep the number of slides to a minimum and also to sort of try and show relativity tabs to try and keep to as few graphs as possible so we’ll often put one graph, you know sort of five or six curves on it to show the range of values associated with different assumptions.

[9:23]

I: How do you think that information first of all is understood and how it’s used in the future?

S: I think it’s reasonably well understood, I mean, I think a challenge is that ultimately people want to know sort of what is the loss curve that we’re using? It’s fine to say that there’s lots of uncertainty, people ultimately need to know what are we matching our business to. And having an answer that says, well, sort of, I think we should manage to a range of possible outcomes is not an easy concept to grasp. So we’ll make recommendations about what we think, based on the uncertainty, the best view is so we might ultimately come up with a single view and just highlight to people that we can make decisions off the back of that, but there is uncertainty around that. It’s not an absolute number. It’s a relative measure for where we think our losses could be.

[10:42]

I: Okay. Is there a chance you could share an example of this with me? A typical loss curve or maybe the multiple curves on the same graph or one of the maps?

S: I’ve certainly got exhibits, I guess I’d need to check with our legal team before we send anything out, but I’ve certainly got exhibits that I could share with you that sort of show the types of things that we have produced in the past. Definitely.

I: The reason I ask is we’re planning this online game if you will that we’re going to send out to loads of people. We’re going to basically ask a pretty simple decision task like “insure or not insure” basically so a binary decision and give different people different information. So as we’re developing this game, we were curious what’s used now because we want it to be somewhat realistic, although very controlled. But kind of get ideas of what we could show and that sort of thing if that makes sense.

[11:52]

S: Very interesting what sort of response you’ll get.

I: Yeah. Well I guess that’s my next and final question is would you mind if we did send that game to you?

S: Yeah I’d be happy to take part in it yeah.

I: Okay. Well excellent. You’ve been extremely helpful and that’s all the questions I have, do you have any questions for me or anything I can help out with?

S: No, I don’t think so at the moment.

[other chat about another project]

S: Okay, I’ll just double check with our legal team and make sure that’s okay and I’ll send you an email with [unintelligible]

I: Great. Well thank you so much for agreeing to participate and we’ll keep in touch with you.

S: Okay. That sounds good. Good luck with the project. I hope it goes well.

I: Great. Thank you, speak to you soon.

S: Thanks very much.

1. The interviewer is denoted by “I” and the subject as “S” [↑](#footnote-ref-1)