



GC in the News

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Dual Catastrophe Analysis Applies to Life Insurer

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Terrorism on Sept. 11, 2001, showed the insurance industry that catastrophic losses across multiple lines of business can happen in a flash. With that awareness, property/casualty insurers soon began turning to catastrophe modeling technology to manage the new emerging risk. But now, says Boston-based AIR Worldwide Corp., it has applied this same kind of loss analysis for the first time to the portfolio of a major life insurance company.

AIR Worldwide has worked with John P. Woods Co., a reinsurance intermediary, to prepare what the modeling company called the first terrorism and earthquake catastrophe loss analysis to the portfolio of UnumProvident Corp. At least one competitor said it, too, has all the data in place to perform similar risk analyses on the life side.

"The challenge was really not in combining earthquake and terrorism models because AIR has already performed those kinds of studies," said Uday Virkud, senior vice president of AIR. "The new breakthrough is in applying the models to life and other lines like accident, health and disability."

Catastrophe modeling of natural hazards came into its own after the devastation of Hurricane Andrew in 1992 convinced insurers that they needed detailed analyses of their property exposures. After the man-made hazard of Sept. 11, however, insurers were forced to look at their aggregations of risk and loss potentials more critically than before, Virkud said. Suddenly, reinsurance was no longer readily available, or even available at a reasonable rate. Reinsurers were demanding better data from life and workers' comp insurers as they considered providing reinsurance coverage, Virkud said.

That was the backdrop for Unum's request to have AIR and J.P. Woods Co. take a look at its portfolio. "We had never completed an analysis for life before because there was not really a driving need – previously reinsurance was readily available at reasonable rates so it didn't justify a full analysis, but that changed very quickly after 9-11," he said.

AIR developed its first U.S. earthquake model in the late 1980s. The company launched its terrorism model during 2002, Virkud said. Using the same exposure base, the earthquake and terrorism probabilistic models were run to arrive at the combined loss potential for Unum's portfolio.

Virkud said a big challenge in undertaking this project was the lack of detailed risk specific information. In property lines, especially after Andrew, companies began collecting product specific lists and specific information such as exact addresses, construction type and age.

"The life companies are not yet at that stage and everybody has recognized the need to collect data where their greatest risks are located," he said. "For example, for group life, the policy covers death over 24 hours a day, seven days a week, unlike workers' comp which is only during working hours.

You need to know where that person is located during the working hours and as well as nonworking hours. So the companies need to collect policy information – and that will happen – but at this stage many companies don't have all those details in many cases."

UnumProvident, however, had a good handle on information at least at ZIP code level. "Then, leveraging AIR's industry data bases about where people live and work, we were able to make much more informed assumptions on how their book policies or risks are distributed," Virkud said.

"I think the trend is there," he said. "Just like we saw after 9-11, it was workers' comp companies that stepped forward and wanted to do all these analyses. Now it looks like life companies, having significant life portfolios, are stepping forward."

Robert Healy, senior vice president of sales and marketing for Eqecat Inc., a part of ABS Consulting, Houston, said his company has been undertaking joint earthquake and terrorism modeling for property companies for six months now, and is poised to apply the same approach to the portfolios of life companies. " We combined workers' comp and property exposures," Healy said. "We haven't had anybody ask for a life exposure, but all the data is there because in order to do workers' comp, you have to be able to generate distributions of injury classes. Of course, one of the classes of injury is death and we have the death estimates."

The only thing that would be required to do a life study would be to look at a distribution of the policy values and the number of participants in any given geographic region, which is not an issue, Healy said. "We're finding that most multilines companies are looking for an overall corporate roll-up and so it's necessary to be able to combine all of these exposures together at a corporate level," he said.

In this highly competitive field, vendors have been taking slightly different approaches to terrorism models and methodologies, Healy noted. One vendor is taking a scenario approach, another has developed a market-share version. Eqecat's software, a market-share version of a detailed model, appeared in late November, 2002. By the end of February, however, the company expects to deliver a full detailed model that is site-policy specific, covering 10 million stochastic events. "It covers all manner of blast, conventional and nuclear, all of the chemical, biological and radiological exposures, and breaks out all the loss distributions by line of business, which is extremely important for rate filing purposes," Healy said. "It also provides a full loss exceedence curve as well as expected annual losses, so we think that we are offering a far superior solution at the moment. I'm sure the others will catch up."

For about 20 years, the company's risk management practice has been working with its counterterrorism practice to advise companies and government entities on their terrorism exposure and to mitigate their risk. The recipients have been large corporations with offices in unsafe places around the world as well as government embassies and other government facilities, Healy said.

Before Sept. 11, there wasn't much interest from an insurance perspective on terrorism but "obviously that's changed dramatically," he said. "It's a new area, it's a significant potential source of loss, and it's going to be a process that we're all going to be going through together to sort out exactly what it should cost and what kind of coverage should be offered. But while all this is working through that process, the interest level is extremely high."

The activity level has increased as well. Two years ago, for example, Eqecat was performing earthquake studies for property and workers' comp, but there was no business whatsoever on terrorism for portfolio studies for insurance companies, Healy said.

"Right now, people are trying to figure out where this market is going, so there is a great deal of activity and tire-kicking," he said. "We have sold some models – they are being used by Guy Carpenter, a major broker, to assist its clients, and we've done about half a dozen studies for an assortment of primary companies and multilines companies." Reinsurers, too, have become more interested in these studies and Eqecat is working with several now, Healy said.

But no one is sure how the rates will settle, he added. "As an industry, we're in an awkward phase right now," Healy said. "I suspect that by the second and third quarters of this year, people will have made their decisions, settled in on strategies, made their offerings, and begun the process of underwriting and managing their accumulation of this kind of exposure. And by the end of the second quarter, terrorism models will be in routine use."

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