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SHORE BETS

Catastrophe Modeling Cos. Tangled Up In Coastal Insurance Wars

By Laura Schreier

GEOFFREY A. GORDON REMEMBERS THE LOW-tech days when he'd figure out a home's insurance risk using a chart and a calculator.

That was before 1992's Hurricane Andrew stomped Florida, put 11 insurance companies out of business and ushered in the era of the catastrophe modeling company.

Now Gordon's Norwell-based agency – and most others – uses catastrophe models produced by these firms. In moments, they can punch up extremely detailed, real-time risk analysis of homes.

It's "scary accurate," says Gordon, who works for Andrew G. Gordon Insurance in Norwell. But, unnervingly, other calculations can bring up very different risk assessments, depending on the data.

What is certain is this, he said: The companies that put out these models wield enormous influence. It's these models that often paint a grim picture of risk along Massachusetts' coast and islands. Many insurance companies react by pulling away from coastal properties, helping trigger the ongoing rate wars between consumers and insurers there.

In two decades, companies like these have gone from a novelty to pillars of the industry. But industry analysts and modelers themselves – including the founder of Boston's own catastrophe modeler, AIR Worldwide – point to the gaps in what such companies can provide.

"Because [these analyses] are becoming more detailed and sophisticated, companies are starting to use them as these magic boxes that just spit out the answers, all the way down to an individual location level," said Karen Clark, AIR's founder and now CEO of Boston consulting company Karen Clark & Co. "Because it's more detailed, companies are thinking it's more accurate."

Not necessarily, Clark said. She founded a new company last year, not to create better models, but to help insurers make better use of the ones already out there. As both Clark and AIR officials say, catastrophe models are useless if insurers don't enter good information.

And bad information can be costly.

AIR Conditioning

AIR Worldwide was the first of the new breed of risk-modeling companies, founded more than 20 years ago to simulate catastrophes on different types of insured properties. A car insurer can look at the mountains of available accident and theft data to determine risk, but only 11 hurricanes have hit the Northeast in the past century. If na-

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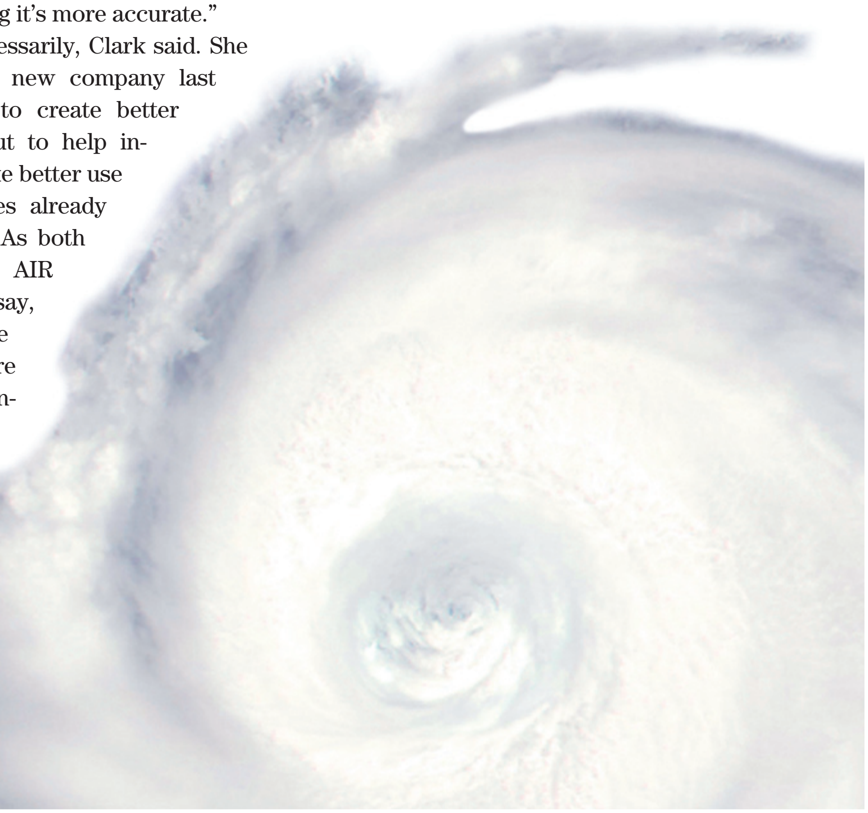

ture wouldn't provide the disasters, the labs would, said Peter Dailey, AIR's director of atmospheric science.

AIR and its two peers – California-based RMS and EQECat – are the only three stand-alone companies that do this type of work: "It's like Coke and Pepsi, and no one else," Dailey says.

The companies have assembled meteorologists, engineers and statisticians under their respective roofs, where they create software that insurance companies can use to calculate their risks.

Dailey stresses that AIR stays out of the business of setting insurance rates. It merely creates the software; insurance companies then make their pricing decisions based on what they find.

That hasn't kept them above the insurance pricing fray.

Part of the homeowners' insurance bill currently in Massachusetts' Senate calls for a governor-appointed committee to oversee modeling methodology.

Some consumer groups have complained that these models are not accurate for New England. Paula Aschettino of Citizens for Homeowners Insurance Reform claims that the models lean too heavily on the probability of a Category 4 or 5 hurricane – tops on the Saffir-Simpson Hurricane Scale – making landfall in the Northeast.

No hurricane of that strength has ever made it this far north, she said, but the possibility has insurers buying expensive reinsurance and either raising their rates prohibitively or fleeing the coasts altogether.

AIR's Dailey, as well as a spokeswoman from RMS, said they don't mind a committee review of their methods. And while RMS conceded the "extremely rare" possibility of a Category 5 hurricane in the Northeast, AIR doesn't consider it a factor in its Northeastern-specific models.

Katrina Costs

While only three independent companies do this work, most reinsurers have their own teams of catastrophe modelers, said Dean Evans, an analyst with financial services firm Keefe, Bruyette & Woods. Even without their own in-house teams, Evans said, most companies use products from more than one modeling company.

It wasn't always so: When Clark founded AIR, most risk assessment came from company underwriters. In the years after Hurricane Andrew, companies came to put an inordinate amount of faith in those models, Evans said.

The hurricane seasons of 2004 and 2005 brought more rude awakenings, he said: for example, insurance companies thought they had worked out all the costs for a hurricane in New Orleans.

But they didn't count on Katrina, where the cost of lumber tripled in the storm's aftermath. None of the calculations had accounted for rebuilding a house under those conditions.

Catastrophe modelers learned a lot from those storms. With a wealth of real-life data to bolster their lab simulations, they got a better picture of just how much risk hurricanes posed to coastal properties, Gordon said.

That improved data didn't paint a pretty picture, and it prompted many insurance companies to cease offering policies in coastal communities or raise their rates substantially, developments that are creating insurance pricing and availability issues in Massachusetts.

Clark said at this point the process that needs to be refined is better use of the models. When models change, it affects company business decisions – insurers have to learn how to best apply the information, so as not to be tripped up when the real thing comes.

"It's not because the models are bad, it's just because we don't have a lot of scientific information and knowledge to reduce that uncertainty." ■

Editor's note: Next week, part two of Banker & Tradesman's in-depth look at coastal property insurance will examine the rapid growth of the state's FAIR Plan as private insurers increasingly shy away from doing business in coastal areas. Part three of the series, examining worst-case scenarios and solutions to the many dilemmas associated with coastal property insurance, will run on Aug. 4.

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