

This copy is for your personal, non-commercial use only. To order presentation-ready copies for distribution to your colleagues, clients or customers visit <http://www.djreprints.com>.

<http://www.wsj.com/articles/the-insurance-industry-has-been-turned-upside-down-by-catastrophe-bonds-1470598470>

MARKETS | MARKETS MAIN

The Insurance Industry Has Been Turned Upside Down by Catastrophe Bonds

Investors are flocking to securities that shield the risks of hurricanes, pandemics and hackers; reinsurers are suffering



Piles of rubble in a trailer park after Hurricane Andrew in 1992. Andrew left roughly \$25 billion in damage in today's dollars and led to creation of the catastrophe-bond business. *PHOTO: STEVEN D STARR/CORBIS/GETTY IMAGES*

By **LESLIE SCISM** and **ANUPREETA DAS**

Updated Aug. 8, 2016 4:46 p.m. ET

Catastrophe bonds were invented in the early 1990s to help insurance companies mitigate the risk of disasters such as hurricanes and earthquakes. Today, like the very storms they protect against, catastrophe bonds are upending the insurance business.

The oddball securities have exploded in popularity, driven by pension plans, sovereign-wealth funds and wealthy families seeking better returns. Investment banks and insurers' own securities-brokerage operations churn out billions of dollars a year in catastrophe bonds.

There are "cat bonds" that pay off if too many people die in a pandemic. Others cover the opposite problem of people living beyond their expected lifetimes. An American International Group Inc. unit sold cat bonds this spring to insure itself against a potential rash of foreclosures. A Credit Suisse Group AG bond sale in May insured the Swiss bank against the risk of rogue traders, cyber hacking and accounting fraud.




PAID PROGRAM

See Cybersecurity and Privacy Differently

Visit PwC's Broader Perspectives hub to learn how cybersecurity and privacy can both protect and enable your business.

[READ MORE](#)



Traditionally, insurers raise capital and use it to back policies that are priced by the companies' actuaries. To unload some of their risk, insurers pay premiums to companies known as reinsurers, a low-profile corner of the industry that serves as insurance for insurers.

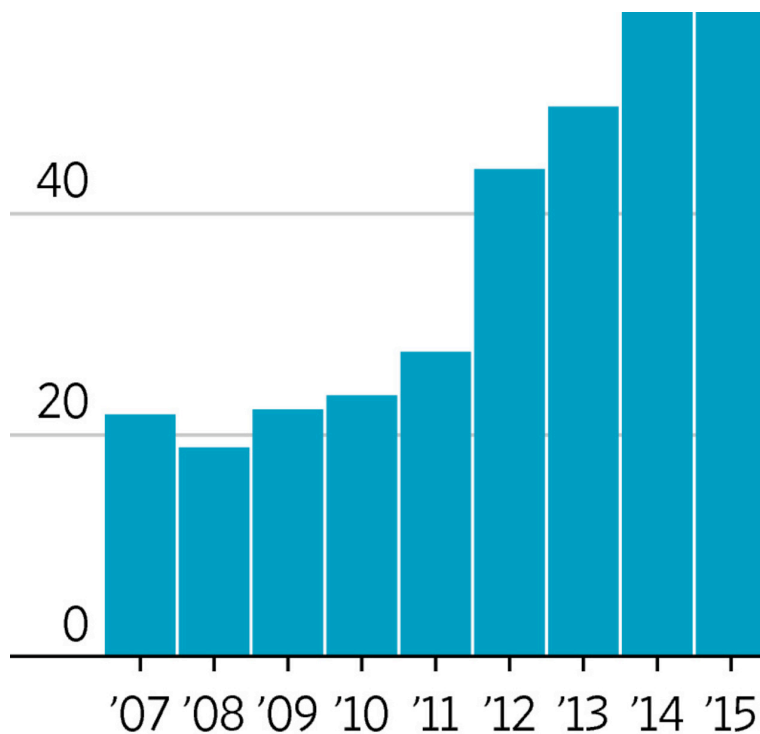
Bond Boom

Outstanding catastrophe bonds and related investments, by year

\$80 billion



Catastrophe bonds have disrupted this way of doing business. The bonds are sold by insurers or the entity itself seeking insurance, like a local government or transit agency. An independent risk-modeling firm calculates the odds of a particular disaster occurring. Investors are paid relatively high interest rates but lose their principal



Source: Aon Securities

THE WALL STREET JOURNAL.

if disaster hits.

As a result, the price of reinsurance is falling, as are profits. These bonds have also injected a new source of volatility into the otherwise staid insurance world, since money flows are driven by broader forces in the bond market.

In all, there are \$72 billion of cat bonds and similar investments outstanding. The total is equivalent to 12% of the \$565 billion in capital in the reinsurance business. The volume of cat bonds and related investments is widely

expected to double in the next several years, a sign that the transfer of risk from the insurance industry to capital markets has opened up access to a seemingly limitless source of funding.

That means the fixed-income market “is acting like one giant insurance company,” says John Seo, a biophysics Ph.D. and former insurance-risk trader who co-founded Fermat Capital Management LLC in 2001 to invest in cat bonds and other securities.

The surge is partly an unintended consequence of economic-stimulus efforts by central banks. Low interest rates are pushing investors such as pension funds to seek out higher returns.

Ordinary bonds pay buyers interest to cover the risk of default by the issuer. With cat bonds, the payments compensate buyers for taking on the risk of extreme events, typically for several years.

United Services Automobile Association sponsored \$250 million of cat bonds in May to help cover potential losses from U.S. storms, wildfires, meteorite strikes and a solar flare. Companies usually sell the bonds through a specially formed entity.

If any of those disasters occurs in a four-year period and causes losses at USAA of between \$910 million and \$1.2 billion, buyers of the deal’s riskiest slice will lose some or all of their money,

according to a person familiar with the deal. An independent risk-modeling firm calculates the probability of a \$1.2 billion loss at 7.6%.

In return, those investors will earn 11.5% a year, plus interest on their principal held in escrow, which is invested in Treasuries. Investors buying the least risky slice, which kicks in only if claims exceed \$1.9 billion, will collect annual interest of 3.25%.

Premiums for reinsurance covering catastrophic property damage, reinsurers' largest business line, is down by half since 2011, according to Bryon Ehrhart, a senior executive at insurance broker Aon PLC, in part because of this new flood of money. A multiyear streak of no severe U.S. hurricanes is compounding the pressure.

Citizens Property Insurance Corp., run by the state of Florida, used a mix of cat bonds and conventional reinsurance to buy \$3.9 billion in coverage last year, up 20% from 2014. Citizens also paid less: about \$282 million in 2015, compared with \$304 million a year earlier.

Such savings are a boon for Florida residents such as Greg Truax of Tampa. When he opened this year's policy-renewal package from Homeowners Choice Property & Casualty Insurance Co., he saw that his premium had fallen 5.7% from a year earlier, saving him \$233.

Dulce Suarez-Resnick, an agent at NCF Insurance Associates in Miami, says lower rates have been a "lifesaver" for clients rebuilding their finances following the financial crisis and recession.

Sawgrass Mutual Insurance Co. has cut the annual premium on Ms. Suarez-Resnick's own house by \$484, or 15%, since 2013. "Thank God the rates started to go down to make it more affordable," she says.

Warren Buffett, whose Berkshire Hathaway Inc. owns some of the biggest reinsurers, had a different reaction. Mr. Buffett used to brag about the scale and profitability of the business.

At last year's Berkshire annual meeting, Mr. Buffett complained to shareholders that reinsurance has become "a fashionable asset class." Faced with lower prices and poor returns, Berkshire is doing fewer deals.

Mr. Ehrhart, the Aon executive, says he used to call the profit squeeze "the battle of six and 16." Reinsurers historically aimed for returns of 16% a year. The pension funds snapping up cat bonds are happy with just 6%.

By last year, though, the overall return of reinsurers tracked by Fitch Ratings had fallen to 9.9%.





An Amtrak conductor in New Carrollton, Md., in September 2015. The passenger railroad's catastrophe bonds will pay out if certain storm surges, winds or earthquakes hit the Northeast. *PHOTO: ALEX WONG/GETTY IMAGES*

Over the past decade, yields on cat bonds have outpaced junk-rated bonds by half a percentage point and high-quality securities by more than three points.

Catastrophe bonds were born after Hurricane Andrew cut across southern Florida in 1992 and left roughly \$25 billion in damage in today's dollars. At the time, Andrew was the costliest hurricane ever.

German insurance executive Eberhard Müller had a brainstorm while riding the London subway in 1993. He wondered if some of the financial risk from hurricanes and earthquakes could be shifted to bond investors.

Mr. Müller and a colleague at Hannover Re, Dirk Lohmann, were working on ways to build up the reinsurer's capital base so that the German company could take advantage of rising rates. Some of their bosses worried about opening up the lucrative business to Wall Street and asked: "Are we opening Pandora's box?"

Mr. Lohmann replied: "If we don't do this, somebody else will."

With help from the bank now known as Citigroup Inc., Hannover pitched to investors a bond called "Kover," a mashup of the German word "katastrophe" and "coverage." Mr. Lohmann toted an extensive presentation and pitchbook. Details such as mathematical formulas demanded by lawyers were spelled out in two thick binders that the deal's team called "the Bible."

Mr. Müller, who retired from Hannover in December and now runs his own consulting firm, expected investors to sign up for the cat-bond deal immediately. It took months, and the \$100 million deal was downsized to \$85 million.

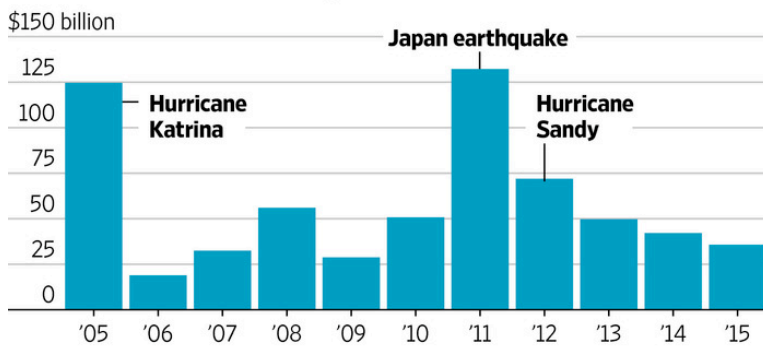
Mr. Lohmann called it “the roadshow from hell.” He now leads Secquaero Advisors Ltd., which advises asset manager Schroders PLC on cat bonds.

Sales of cat bonds proceeded haltingly until the financial crisis. The bonds as a class had a return of 2.65% in 2008, according to Lane Financial LLC. The U.S. stock market slid nearly 40%, and U.S. corporate bonds posted negative returns.

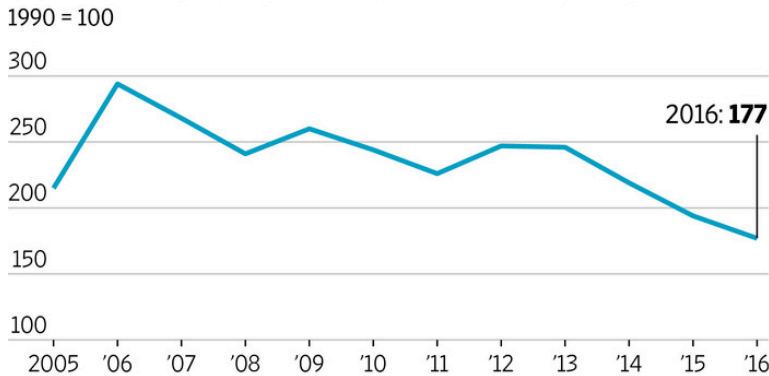
Lower Losses and Declining Rates

Reinsurance prices have fallen, largely because of unusually low losses and the rise of catastrophe bonds.

World-wide insured catastrophic losses



Index of global property catastrophe reinsurance pricing



Note: Insured losses reflect hurricanes and other tropical cyclones, flooding, earthquakes, winter weather, droughts and other disasters
Sources: Aon Benfield (losses); Guy Carpenter (pricing) THE WALL STREET JOURNAL.

The crisis also ushered in the ultralow interest rates that sent big investors scrambling for higher yields.

When executives with Florida’s Citizens Property Insurance began marketing a \$400 million cat bond in 2014, they realized during their 11-day roadshow they could blast past that target.

“We kind of joked around: ‘How big do you think it will get?’ ” recalls Jennifer Montero, Citizens’ finance chief. “We thought it would be cool if we could do \$1 billion.” Orders totaled a whopping \$1.74 billion. Citizens’ board of governors decided \$1.5 billion was large enough to

meet Florida’s needs.

Cat bonds aren’t the only option for investors. Some favor “sidecars” and “collateralized reinsurance,” arrangements that allow reinsurers to directly share some of the risk on their books with investors. Also popular are smaller “cat bonds lite,” or deals with less documentation.

Demand has been so high that some executives, analysts and investors worry that returns are starting to suffer from the flood of issuance. Cat bonds returned 4.2% in 2015, according to Lane

Financial. That is less than half the 8.8% annualized return by the Swiss Re Cat Bond Global Total Return Index since 2006.

Another risk is several major hurricanes hitting just as interest rates rise. The resulting losses could deplete reinsurers' capital and drive many cat-bond buyers out of the market at the same time.

"You have a double whammy," says Thomas Leonardi, a senior adviser at investment bank Evercore Partners Inc. and former Connecticut insurance commissioner. "How will the market react?"

Still, he believes cat bonds are here to stay. Brokers say hundreds of pension funds around the world own cat bonds or want to buy them. Pension funds typically allocate \$50 million to \$200 million to such investments, or as much as 2% of their total assets.

At an insurance conference in June, Rod Fox, chief executive of strategic reinsurance and capital adviser TigerRisk Partners LLC, pointed to a slide of a waterfall. "How do you stop that waterfall?" he said. "It will continue to come."

Some companies are starting to obtain insurance by issuing notes directly to bond investors. Last year, Amtrak sponsored \$275 million of cat bonds that will pay out if specified storm surges, winds or earthquakes hit the Northeast during a three-year period.

Phil Balderston, Amtrak's director of risk management, said at a recent conference that it was hard for the passenger railroad to get enough traditional insurance coverage.

Amtrak's cat bonds were oversubscribed because investors had ample Florida hurricane risk in their portfolios and wanted to diversify their exposure.

Some reinsurers have responded by creating their own direct investment opportunities. Axis Capital Holdings Ltd. is using money from such investors to help insure corn, soybeans, wheat and cocoa against bad weather, says Albert Benchimol, the specialty insurer and reinsurer's chief executive.

"The halcyon days of easy underwriting profits and steady investment returns are in the rearview mirror," he adds.

Write to Leslie Scism at leslie.scism@wsj.com and Anupreeta Das at anupreeta.das@wsj.com

Corrections & Amplifications

Lane Financial LLC is an reinsurance consulting firm. An earlier version of this article incorrectly said Lane is part of investment-management firm Conning Inc. In addition, a chart mislabeled outstanding catastrophe bonds and related investments as issuance. (Aug. 8, 2016)

Appeared in the Aug. 08, 2016, print edition as "Cat Bonds' Rattle Insurance Industry."

Copyright © 2017 Dow Jones & Company, Inc. All Rights Reserved

This copy is for your personal, non-commercial use only. To order presentation-ready copies for distribution to your colleagues, clients or customers visit <http://www.djreprints.com>.