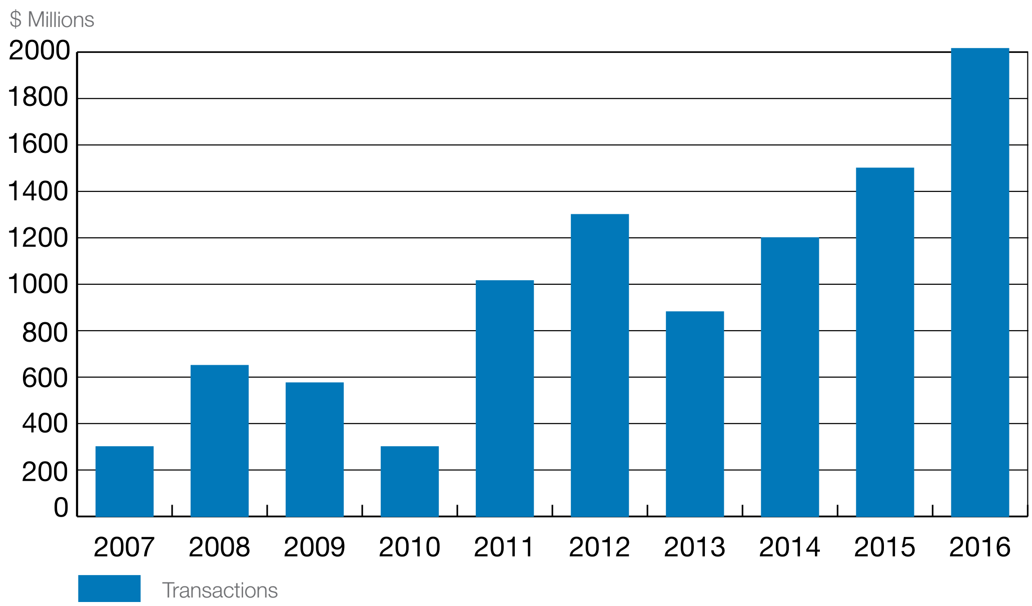
Déjà vu: PCS® Q1 2016 Catastrophe Bond Report

We saw a lot of familiar faces in the catastrophe bond market in the first quarter of 2016. All nine sponsors had prior experience with this market, in a quarter where year-over-year issuance activity climbed 35 percent. The stability in the sponsor base suggests a certain consistency indicating that some sponsors have truly integrated the use of catastrophe bonds into their global risk and capital management strategies.

Of course, there were some new developments. For the first time, indemnity-triggered Caelus Re used data from PCS® for independent catastrophe designation. It was one of four transactions in the quarter involving data from PCS. Two had index triggers, and Espada Re joined Caelus Re in the indemnity trigger approach. Catastrophe bonds with data from PCS accounted for nearly 60 percent of the limit raised last quarter (and two-thirds of the transactions), excluding Akibare Re and Azora Re, which didn't cover any North American risk.

Historical Q1 Issuance Activity



Sources: PCS, Guy Carpenter & Company, LLC

#originalrisk

While the quarter's transactions may have generally covered traditional ground, chatter across the market could signal a much broader mandate for catastrophe bonds—and insurance-linked securities (ILS) in general. There's a clear sense that members of the ILS community want to see the sector grow—geographically and into new lines of business. The appetite isn't new, but the urgency surrounding many of these discussions has certainly increased from years past. It's no longer a question of whether ILS can expand to improve cover for the likes of terror, cyber, and energy—not to mention corporates. Rather, the market is actively looking for ways to make it happen.

Q1 2016 CATASTROPHE BOND ISSUANCE

According to data from the Artemis.bm Deal Directory, insurers and reinsurers issued approximately $2 billion in catastrophe bonds in the first quarter of 2016, up 35 percent from last year's record result. Sponsors completed nine transactions—up from seven in the first quarter of 2015—and average transaction size climbed slightly (5 percent).

Q1 2016 Issuance Activity

	Q1 2016	Q1 2015
PCS trigger use	$950 million	$800 million
PCS trigger use	4 transactions	4 transactions
North American issuance	$1.6 billion	$1.2 billion
North American issuance	7 transactions	6 transactions
Total issuance	$2 billion	$1.5 billion
Total issuance	9 transactions	7 transactions

Sources: PCS, Artemis Deal Directory

Seven of the nine catastrophe bonds completed so far this year had exposure to North America. Atlas IX Capital DAC and Galileo Re Ltd. both included Canada (using the PCS Catastrophe Loss Index), with the latter also covering Europe. Two catastrophe bonds with no North American exposure came to market—both had indemnity triggers and focused on Japan.

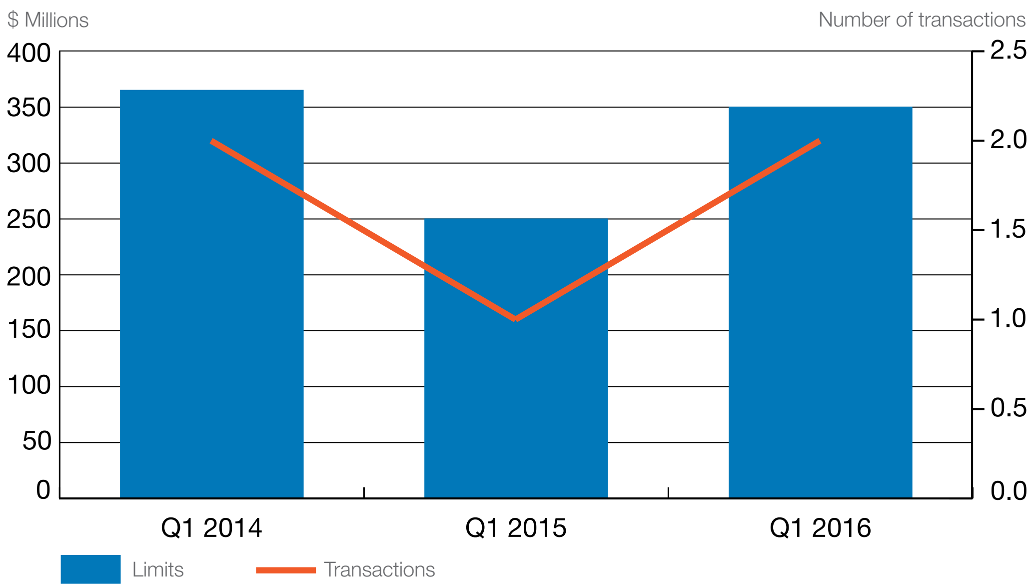
Use of PCS data in first-quarter catastrophe bonds grew nearly 20 percent year over year, following a 72 percent increase from the first quarter of 2014 to the first quarter of 2015. This year, four first-quarter transactions used PCS data, unchanged from 2015. However, limit raised with PCS-triggered transactions reached $950 million, up from $800 million last year. The two index-triggered transactions accounted for $600 million, with the two indemnity-triggered transactions using PCS for independent catastrophe designation accounting for the remaining $350 million.

[1] This does not include cat bond lite transactions, private catastrophe bonds, or transactions not focused on lines outside property.
[2] This includes catastrophe bonds that included the United States and other regions.

CATASTROPHE DESIGNATION IN INDEMNITY-TRIGGERED TRANSACTIONS

Two first-quarter transactions used PCS for independent catastrophe designation in indemnity triggers. Espada Re, a first-time issuance from a veteran catastrophe bond sponsor, brought $50 million in fresh capital; and Caelus Re raised $300 million. While use of this approach is up significantly from the first quarter of 2015—with only one catastrophe bond using PCS for catastrophe designation—the result is roughly consistent with the first quarter of 2015, when two transactions accounted for $365 million in new limit.

First-Quarter PCS Catastrophe Designation Use



Source: PCS, a division of Verisk Analytics

For PCS to designate an event a catastrophe, it must generate an industry insured loss of at least $25 million and affect a significant number of insurers and insureds. The PCS team generally reviews 40 to 50 events in North America every year that have the potential to become catastrophes. Last year, the team designated 37 catastrophe events in the United States and three in Canada.

CATASTROPHE BONDS COVERING CANADA

Sponsors completed two catastrophe bonds with coverage for Canada in the first quarter of 2016—the same two sponsors that did so in the first quarter of 2015. Capital raised by catastrophe bonds that included cover for Canada, though, surged from $350 million last year to $600 million this year. The latest Galileo Re stayed at $300 million, but the new Atlas transaction was twice as large as the one completed in the first quarter of 2015. Both used the PCS Catastrophe Loss Index.

The insurance-linked securities (ILS) market has yet to see a Canada-only catastrophe bond, although industry loss warranties (ILWs) with exposure only to Canada have been completed. Based on recent market discussions, it appears that the cat bond lite structure could be an effective alternative for Canadian insurers and reinsurers in accessing the capital markets, given the size of such transactions and lower frictional costs.

PCS launched its core service in Canada in late 2009, marking our first operation to estimate catastrophe losses outside the United States, Puerto Rico, and the U.S. Virgin Islands.

GLOBAL TERROR ILW TRIGGER UPDATE

In last quarter's PCS ILS market update, we introduced the notion of parametric-style industry loss warranty (ILW) triggers for terror that could be completed with capabilities from our sister organization, Verisk Maplecroft. Verisk Maplecroft has a dedicated in-house terrorism team that has compiled a data set of more than 130,000 incidents.

To summarize, global triggers would likely be structured based on certain key factors, such as:

- event type (examples: bombing, arson/firebombing, damage to property, nuclear/biological/chemical/radiological attack)
- sectors (examples: government, energy, industrials, financials, telecoms)
- weapon type (examples: IED, vehicle bomb, mortar/artillery, rocket-propelled grenade, firearms)
- fatalities and casualties (provide a range)

We're actively seeking feedback across the market on this approach and made these conversations a priority in the first quarter of 2016. Some work remains in ascertaining the viability of global parametric ILWs, and we'll keep you informed as we explore this potential risk-transfer approach.

If you'd like to join the discussion, please contact:
Tom Johansmeyer at **+1 201 469 3140** or **tjohansmeyer@iso.com**.

ADDING MORE THAN A CAT TO YOUR BOX

Despite the abundance of capacity available for risk transfer worldwide, some sectors remain underserved. Conversations with clients and other market stakeholders throughout the first quarter of 2016 shined a light on the offshore energy space, particularly in the Gulf of Mexico. The popular "cat in a box" structure has helped bring capacity to catastrophe risks in the region for a while, but many are realistic about the limitations of that approach, particularly the basis risk. As you prepare for the June 1, 2016, reinsurance renewal, you may want to think about a new refinement to cat in a box that the team at Verisk Insurance Solutions is working on.

The cat in a box structure is fairly straightforward. You plot your grid coordinates and have a storm magnitude identified (for example wind speed, hurricane category). If the storm passes through the grid "box" at the designated magnitude, protection triggers. It's a simple solution to a complex problem and, as a result, has addressed a clear need in the market. However, the basis risk involved has impeded broader adoption of cat in a box. Specifically, the absence of any loss data—aside from the cedent's own to inform the calculation of payout factors—has been the problem.

Working with Wood Mackenzie (**www.woodmac.com?source=1Q2016cbr**), also a Verisk Analytics company, we're developing an enhancement to the traditional cat in a box structure that should reduce basis risk and increase the usefulness of this form of cover, which could drive greater adoption and create new opportunities for the reinsurance and ILS community to deploy capital. Our working plan is to supply historical oil platform physical value data from Wood Mackenzie as a starting point for estimating the industrywide loss from a Gulf of Mexico catastrophe event (and other regions, as warranted by client demand).

Our thinking is tentatively as follows, and we are extremely interested in market feedback:

1. An event of a specific magnitude blows through the "box," indicating a potential loss event.
2. Upon satisfaction of the magnitude/location criteria, Wood Mackenzie would identify affected platforms in the box based on its proprietary database.
3. Using historical physical values and existing equipment replacement costs, the Wood Mackenzie team would construct an industrywide loss estimate.
4. When completed, we'd publish that result to the parties to relevant transactions.

Please note the contact information at the end of this section. If you'd like more information or would prefer to discuss this approach in detail, we'd love to hear from you.

Wood Mackenzie is a global leader in data analytics and commercial intelligence for the energy, chemicals, and metals and mining industries. With more than 40 years of history and a reputation for quality and strong customer relationships, the company provides objective and integrated analysis across the global natural resources value chain, including for assets, companies, and markets.

In 2015, Wood Mackenzie acquired Infield Systems Limited, a provider of business intelligence, analysis, and research to the global offshore oil, gas, renewable energy, and associated marine industries. The acquisition further enhances our upstream and supply chain capabilities.

Wood Mackenzie's clients include international and national energy and metals companies as well as financial institutions and governments. We work with a range of diverse teams, from strategy and policy makers, business developers and market analysts, through to corporate finance, risk teams, and investors.

We are located close to clients and industry contacts, with our global footprint extending to more than 20 locations around the world, including Argentina, Australia, Brazil, China, India, Japan, Peru, Russia, Singapore, the United States, and the United Kingdom.

For more information or to participate in developing the index, please contact:
Tom Johansmeyer at **+1 201 469 3140** or **tjohansmeyer@iso.com**.

TREND TRACKING

The top trends in the catastrophe bond market right now indicate increased flexibility and a strong foundation for future market growth.

1. Familiar faces: Experienced catastrophe bond sponsors once again led issuance activity in the first quarter, cementing a trend we saw forming a year ago. It seems evident that cedents realize they have a range of strategic alternatives and are exploring their options carefully.

2. The index quarter: The first quarter of the year seems to have become the "industry loss index quarter." Last year, four transactions featuring PCS data resulted in $800 million in fresh capital—up 50 percent from the first quarter of 2014. This year, limit raised grew another 19 percent year over year, demonstrating to $950 billion, with two industry-loss-triggered catastrophe bonds accounting for $600 million. So far this year, nearly 75 percent of catastrophe bond capital with exposure to U.S. risk uses data from PCS, with nearly half using industry loss index triggers. However, PCS remains agnostic on trigger type, as sponsors should use the most appropriate approaches for their strategic objectives.

3. Fresh thinking: The ILS market may have started with property catastrophe risk, but it's clear that there is plenty of appetite for other lines of business—as evidenced by our increasing work in both global terror and offshore energy (via the cat in a box refinements). With as much as $900 billion in capital interested in entering the ILS space, transformational innovation is necessary. There's no way an estimated $600 billion global reinsurance market can absorb that much capital organically in the near term. In addition to exploring new regions, our industry needs to look for new ways to bring original risk to market. Devising new approaches to trigger development, for example, will be crucial to future growth. We need to think in new ways to affect meaningful change in a market where capital is abundant and more wants to come in.

4. Growing the pie: Of course, the purpose of fresh thinking is ultimately to "grow the pie." The amount of original risk being brought into the global reinsurance and ILS space needs to increase significantly, given the amount of capital interested in the space. In addition to new lines and regions, we should also look for new sources of original risk in established markets. This has been topic of discussion for a few years now, and corporates are starting to take a harder look at catastrophe bonds, particularly to find capacity for risks where they can't currently get protection. And the disaster gap still looms in markets such as Florida and California. Finding a solution to market penetration at the original insured level would have profound benefits at every link in the global risk and capital supply chain.

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ILS market solutions

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