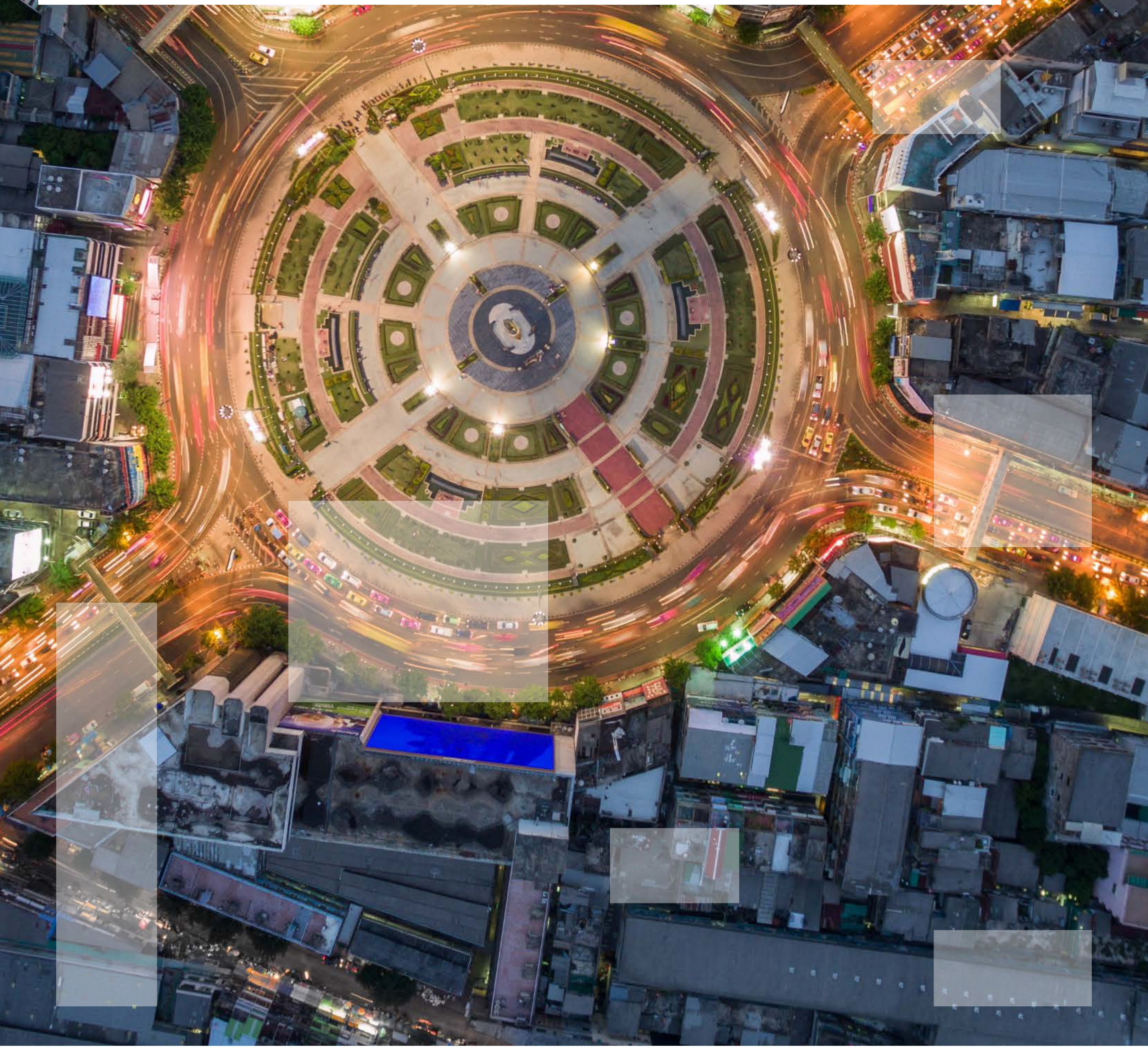
ILS Market Update

Wake-Up Call

October 2017



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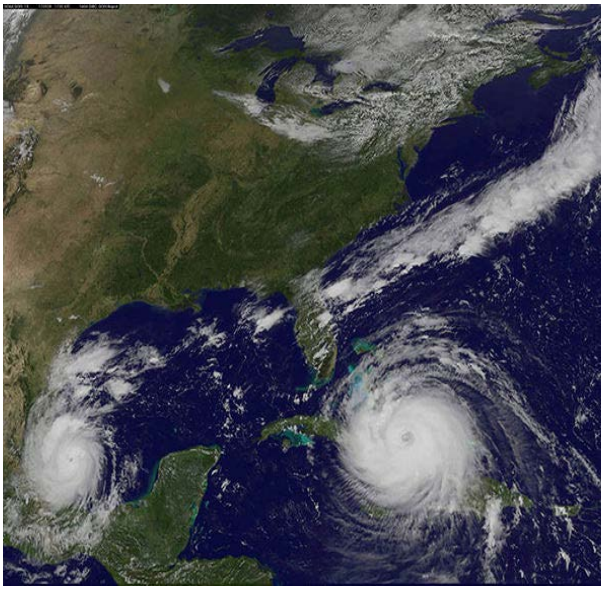
ILS Market Update

Q3 2017 market outlook: Now what?



Q3 brought us typically slow ILS activity coupled with atypical disaster activity ranging from earthquakes in Mexico to Hurricanes Harvey, Irma and Maria. What does this activity mean for the market? Will the market respond as expected? How will ILS influence the broader market?

Note that the ILS world's first response was the same as everyone else's: horror and shock at the devastation along with empathy for the people who were affected. This was coupled with appreciation for the efforts of both first responders and medical personnel, and for the efforts of insurers to help policyholders put their lives back together. In addition, ILS investors of all kinds (existing, new and dormant) have been out raising money and preparing to put it to work. Fund-raising discussions by existing investors have gone well as has the emergence (or reemergence in many cases) of additional investors who have been on the sidelines.

Thankfully, we will apparently not learn how well the ILS and reinsurance markets can handle a $100 billion-plus event. While some of the estimates of insured losses are in this range in the aggregate, no single event rises to this level. The multiple events have effectively spread the loss among public and private primary insurers, reinsurers, and ILS investors rather than concentrating the loss more tightly on only one segment as might sometimes be true with a single event.

"Even though this is not 'that year,' the loss activity will provide some inconclusive clues as to what might happen when a $100 billion-plus event occurs."

As such, we neither expect large-scale impairments of reinsurers nor do we expect many ILS investors to suffer massive catastrophe bond losses or asset under management (AUM) declines more broadly. As with Rita, Ike, Tohoku and Sandy, the events of 2017 serve as healthy reminders of the potential for $100 billion-plus events.

Even though this is not "that year," the loss activity will provide some clues as to what might happen when a $100 billion-plus event occurs. First, to what extent have reinsurers used modeling and retrocession (ILS or otherwise) to better manage their tail risks? Shareholders will reward companies that avoid downgrades or capital injections. If some reinsurers do not pass this test, the value of ILS collateral over a rated "promise to pay" model will rise.

At the same time, the market will get to see how the different flavors of ILS perform with respect to different market segments. How will trapped capital impact retro market 1/1 renewals? By way of background, trapped capital refers to collateral not returned to the investor immediately while the cedant determines if a loss has occurred. If investors cannot access new money to replace trapped collateral (not anticipated this year), they cannot trade forward as effectively.

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Q3 2017 market outlook: Now what?

Will documentation and the clarity of collection in reinsurance backed by private ILS deals match the high standard of reinsurance backed by underwritten cat bonds? Both have paid out much more in the past than is widely understood, but 2017 may be the largest aggregate ILS payout to date. How the various instruments perform both for ceding companies and for investors will impact the choice of ILS instruments going forward.

"Thus far, as a whole, ILS investors and traditional reinsurers have performed well, supporting insurers as insurers in return do their job to serve policyholders."

One thing that seems likely to get tested is the idea of "payback." This is the idea that a reinsurer can get repaid for losses with higher future premiums, notwithstanding the stated contract or market-clearing post-loss premium levels. If current legal and accounting limits on side agreements and disguised financings put in place after alleged accounting irregularities of the past are not enough to largely drive this practice away, the ready availability of ILS capacity will make it apparent that payback imposes a heavy and unnecessary burden on ceding company shareholders who can readily and efficiently meet capacity needs by not restricting themselves unnecessarily to renewal markets. Just to be clear: Even if payback disappears, loss-affected business will still see rate increases, just not as much as would otherwise be the case with payback in full bloom.

A word of caution remains appropriate as we are still early in loss development and 2017 is not even over, so more catastrophes might still occur. Thus far, as a whole, ILS investors and traditional reinsurers have performed well, supporting insurers as insurers in return do their job to serve policyholders. The anticipated reduction in the length and severity of market hardening because of ILS will benefit policyholders who need stable and affordable protection.

ILS Market Update

Q3 2017 ILS market issuance overview

The third quarter of 2017 saw $460 million of non-life catastrophe bond capacity issued through two cat bonds (Q3 2016 saw $925 million issued through two bonds).

"Fortius Re II 2017-1 features a shared coverage limit between two layers."

Sponsored by AmTrust, the first issuance of the quarter was Fortius Re II 2017-1. This is the second ILS offering and the first fully distributed ILS offering sponsored by AmTrust. It provides $100 million of fully collateralized protection over an approximately four-year risk period. The structure features a shared coverage limit between two layers. The Section A Layer offers indemnity protection for the property portfolio covering U.S. Named Storms and U.S. and Canada Earthquakes on a per-occurrence basis while the Section B Layer offers protection on a modeled-loss basis to a notional insurance portfolio of workers' compensation risks relating to the peril of Earthquake on a per-occurrence basis. Investors welcomed the return of AmTrust to the market as the Notes priced at the lower end of the revised guidance, settling at 3.75%.

Non-life Q3 2017 ILS issuance(a)

($ in millions)

Sponsor	Issuer/Tranche	Issue	Maturity	Amount	EL	Spread	Basis	Risk	Trigger
FONDEN	IBRD CAR 113 A	Aug-17	Dec-20	$150	3.43%	4.50%	OCC	Mexico Quake	Parametric
FONDEN	IBRD CAR 114 B	Aug-17	Dec-19	$100	5.77%	9.30%	OCC	Mexico Wind (Atlantic)	Parametric
FONDEN	IBRD CAR 115 C	Aug-17	Dec-19	$110	3.96%	5.90%	OCC	Mexico Wind (Pacific)	Parametric
AmTrust	Fortius Re II 2017-1	Jul-17	Jul-21	$100	1.19%	3.75%	OCC	Peak Multiperil	Indemnity & Modeled Loss
		Q2'17 Total:		**$460**					

Source: WTW Securities Transaction Database as of 9/30/2017. Aggregate data excludes most private ILS deals.

(a) All issuance amounts reported in or converted to USD on date of issuance. EL for HU deals is based on WSST conditioned catalog for AIR and medium-term catalog for RMS.

"Following an 8.1 earthquake that struck off the Chiapas region, it appears that the Class A Notes will suffer a total loss of principal."

The second transaction of the quarter was sponsored by the government of Mexico, which secured $360 million of parametric cover on an occurrence basis. This is the fourth time the government of Mexico sponsored a cat bond after the 2006, 2009 and 2012 deals. The transaction was facilitated by the World Bank through the issue of three tranches of Catastrophe-Linked Capital at Risk Notes. The CAR Series 113 Class A Notes provide Earthquake protection across a three-year term. They have an expected loss of 3.43% and priced at 4.50% below the initial guidance while upsizing from $120 million to $150 million. The Class B CAR Series 114 Notes provide Atlantic Named Storms protection over a three-wind-season term. They have an expected loss of 5.77% and priced at 9.30% below the initial guidance while upsizing from $85 million to $100 million. The Class C Series 115 Notes provide Pacific Named Storms protection over a three-wind-season term. They have an expected loss of 3.96% and priced at 5.90% below the initial guidance while upsizing from $85 million to $110 million.

Following a magnitude 8.1 earthquake that struck off the Chiapas region, it appears that the Class A Notes will suffer a total loss of principal. This is not the first time a Mexican bond has been triggered as the MultiCat Mexico 2012-1 Class C Notes suffered a 50% loss following Hurricane Patricia.

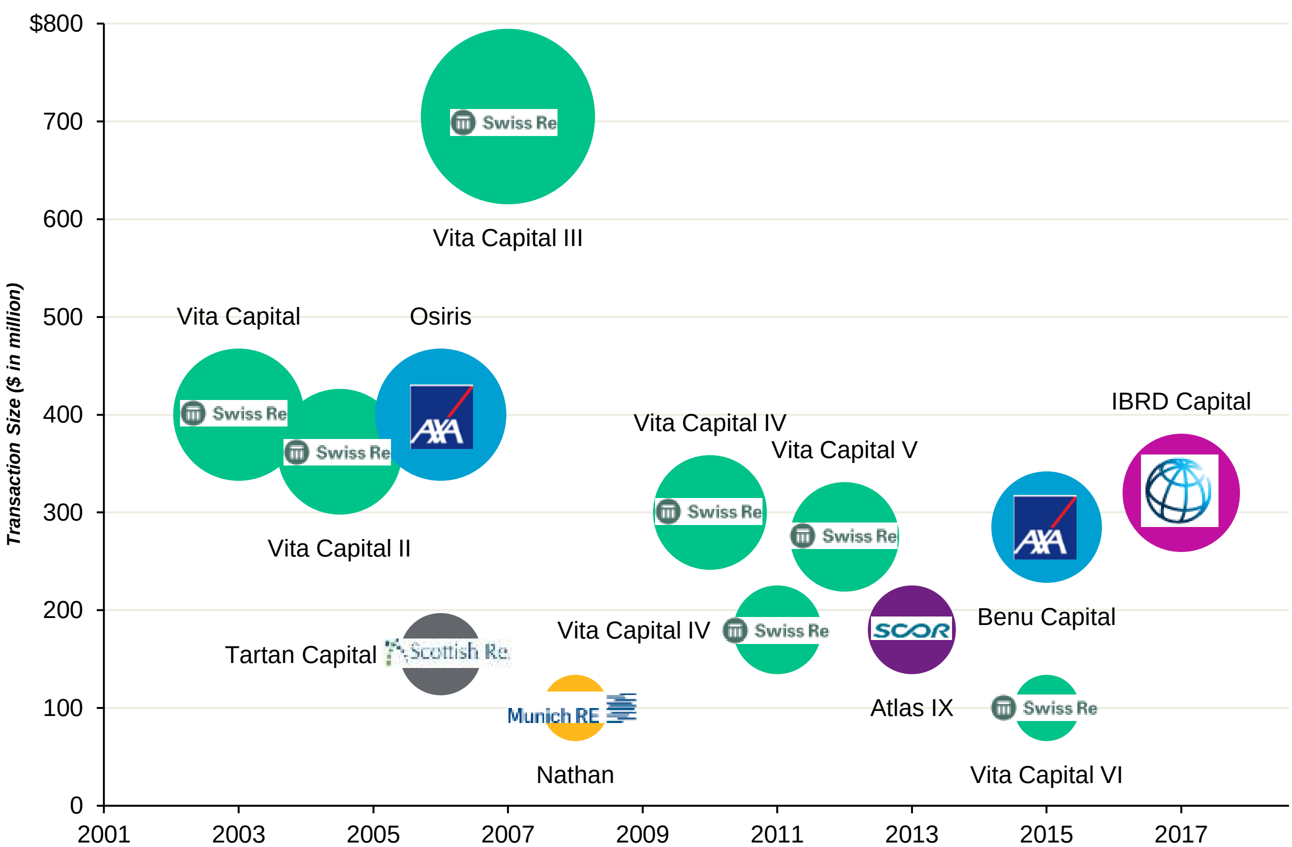
ILS Market Update

Q3 2017 ILS market issuance overview

"The IBRD sponsored its first large-scale Rule 144A Capital at Risk Notes."

In the life space, the International Bank for Reconstruction and Development (IBRD) sponsored its first large-scale Rule 144A Capital at Risk Notes. This is the first life transaction since Swiss Re sponsored Vita Capital VI in December 2015. The Notes provide protection to the International Development Association borrowing countries against pandemic events caused by virus on a parametric, per-occurrence basis. The Class A Notes cover the sponsor against flu and coronavirus while the Class B Notes offer protection against filovirus, coronavirus, Rift Valley fever, Lassa fever and Crimean-Congo hemorrhagic fever. Contrary to existing extreme mortality bond structures, a series of very specific payout conditions need to be met, in order to trigger a write-down of the Notes. These conditions simulate through parametric means the occurrence of a pandemic that could negatively affect borrowing countries. As with the government of Mexico's transaction, this transaction uses the IBRD Capital at Risk Notes. Class A Notes upsized from target $75 million to $225 million and priced at 6.90%, below the initial price guidance. Class B Notes upsized from target $25 million to $95 million and priced at 11.50%, below the initial price guidance.

Historical mortality bond issuance[(a)]



Source: WTW Securities Transaction Database as of 9/30/2017.
(a) All issuance amounts reported in or converted to USD on date of issuance.

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ILS Market Update

Interview: John Seo – Co-founder and Managing Director Fermat Capital

John Seo
(Co-founder and MD
Fermat Capital Management)

There have been five major insurance loss events in Q3 of 2017: Hurricanes Harvey, Irma and Maria, and two Mexican earthquakes. This series of events could create more than $100 billion in aggregate losses to the reinsurance industry and is a meaningful test for the ILS market as these seem to be the most significant events since Hurricane Katrina.

To better understand how ILS investors prepared to face this kind of situation and how this atypical catastrophe activity will shape the ILS market in the near future, we interviewed John Seo, co-founder and managing director at Fermat Capital, one of the largest ILS managers.

John has over 26 years of fixed income, FX options, and interest-rate-derivatives structuring and trading experience. Prior to forming Fermat Capital with his brother Nelson in 2001, John was head insurance-risk trader at Lehman Brothers, an officer of Lehman Re Limited and a state-appointed advisor to the Florida Hurricane Catastrophe Fund.

Q: How did you first get involved with cat bonds?

In the fall of 1997, I got a call from Lehman Brothers. At the time, I was a portfolio manager at the Harvard University endowment. Lehman told me about the Buffett trade with the California Earthquake Authority as well as the first Residential Re catastrophe bond sponsored by USAA. A year later I was the senior trader of a proprietary trading group at Lehman. This proprietary trading group had considerable resources at its disposal: Lehman Re, an A-rated Bermuda reinsurer, up to a billion dollars in risk capital available, and a couple dozen professionals from virtually every line of insurance, both life and non-life, who gave me a crash course in how insurance and reinsurance markets work.

"Investor communication goes a long way when it comes to preparing for a series of events like Hurricanes Harvey, Irma and Maria."

Q: How did your fund prepare to face a series of events like Hurricanes Harvey, Irma and Maria?

Investor communication goes a long way when it comes to preparing for these things. You set expectations from the beginning of an investor engagement, then you communicate immediately before, during and after the event until the dust has settled. By communication, I don't mean just repeating what your investors can read for themselves in the media. I mean giving exposure and return numbers or ranges of numbers that are as sharp as possible.

ILS Market Update

Interview: John Seo – Co-founder and Managing Director Fermat Capital

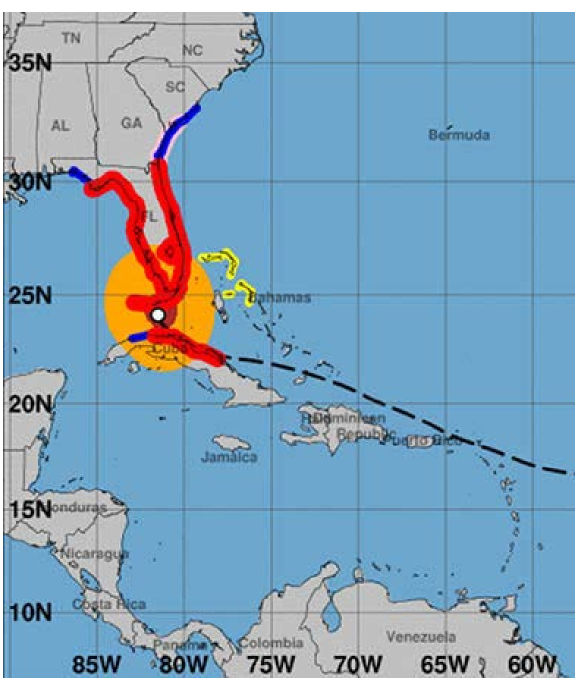
Q: Do you believe the market was sufficiently liquid immediately before or after landfall of the various storms?

Yes, I do, in the sense that the market was orderly through the storms. Sure, if you were a seller, at times you might not have liked the price you were paid, but there was always a bid ready to take on meaningful size.

"Efficient capital at massive scale and sound cat modeling are required to close these disaster gaps."

Q: The uninsured economic loss not only in Mexico and the Caribbean but also in the U.S. from flood was staggering. Do you think there is an opportunity for ILS to be part of the solution to closing the "disaster gap," especially with respect to U.S. Flood and Earthquake?

Definitely. Efficient capital at massive scale and sound cat modeling are required to close these disaster gaps. By tapping the global capital markets, ILS tick the first box. I believe the second box is ticked as well for U.S. Earthquake and Flood. I know that this isn't such a controversial thing to say about U.S. Earthquake, but I don't agree with those who seem to say we can't model U.S. flood risk adequately—at least at the catastrophic level. The foundational input of cat models is claims data from major catastrophes. Katrina and Sandy already gave us copious flood claims data. The claims outcomes from Harvey will enhance our understanding even further.



Q: How do you expect this year's activity to impact ILS investors, access to capital and ability to trade forward effectively? Does it depend on premium movements?

I've said this many times before at conferences, but I'll say it here again: Loss events such as we've just experienced are a siren call for ILS capital. For better or for worse, after a significant loss event, many current and potential ILS investors are conditioned to put additional or first-time capital into ILS. As a result, investor interest in ILS is higher now than ever before. No doubt, this is due, in part, to an expectation that some reinsurers and insurers will firm up premiums for some programs in 2018 and that this might have a spill-over effect on the ILS market, but I expect ILS to continue playing a role in moderating post-event rate increases.

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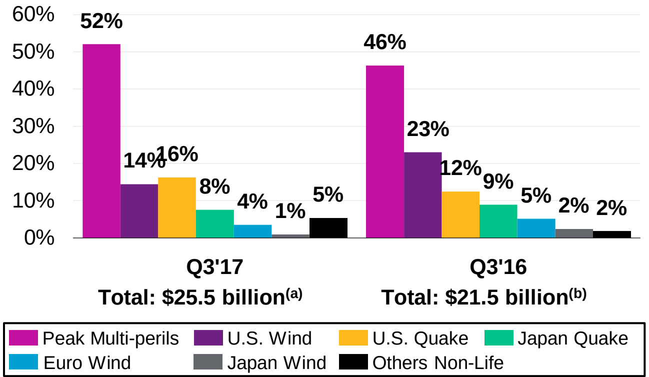
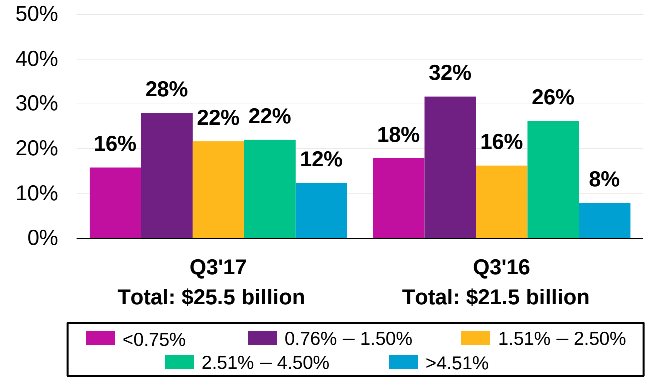
ILS Market Update

Q3 2017 ILS market statistics

Par outstanding by risk peril

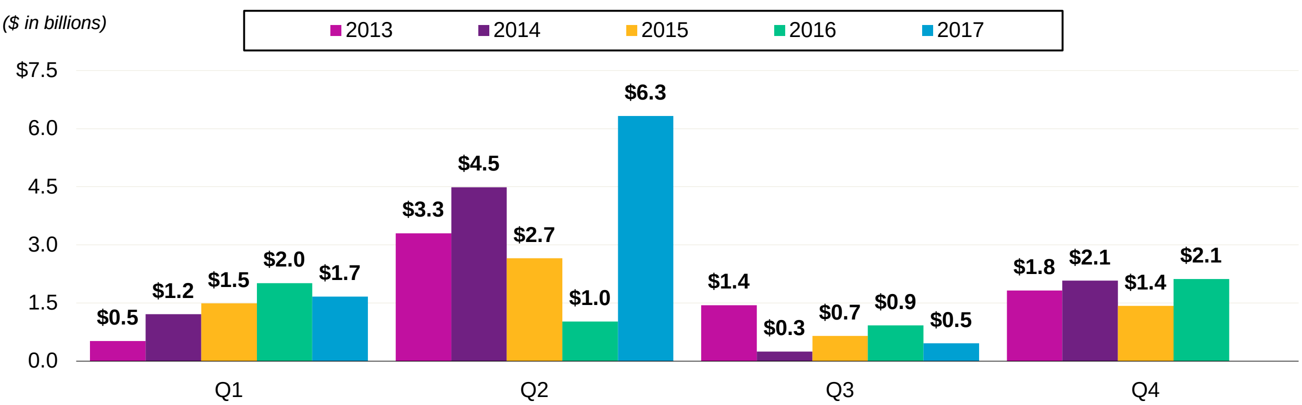


Par outstanding by expected loss at issuance

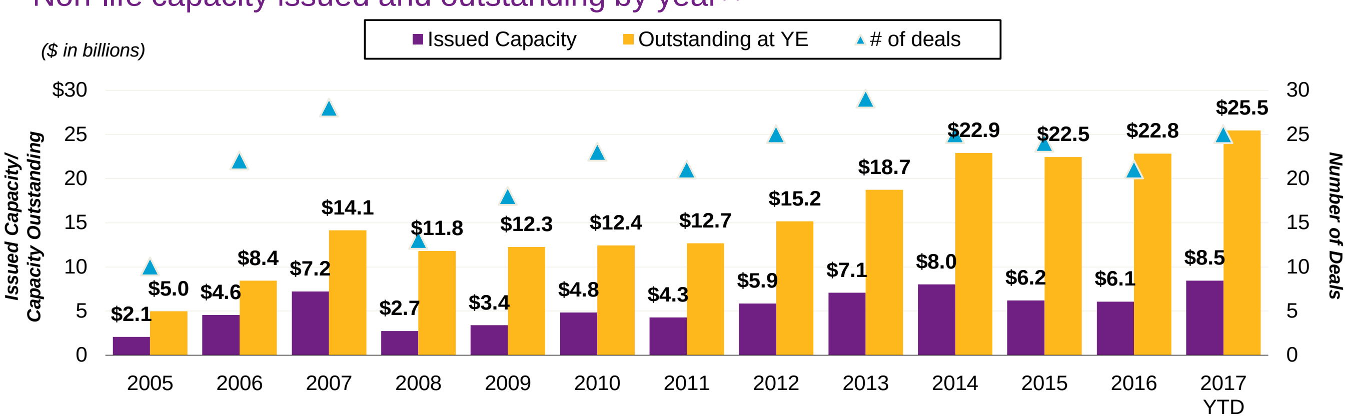


Source: WTW Securities Transaction Database as of 9/30/2017.
(a) In aggregate, 66% of all capacity outstanding exposed to U.S. Wind.
(b) In aggregate, 69% of all capacity outstanding exposed to U.S. Wind.

Non-life ILS issuance by quarter (2013 – 2017)[c]



Non-life capacity issued and outstanding by year[c]



Source: WTW Securities Transaction Database as of 9/30/2017. Aggregate data excludes private ILS deals.
(c) All issuance amounts reported in or converted to USD on date of issuance.

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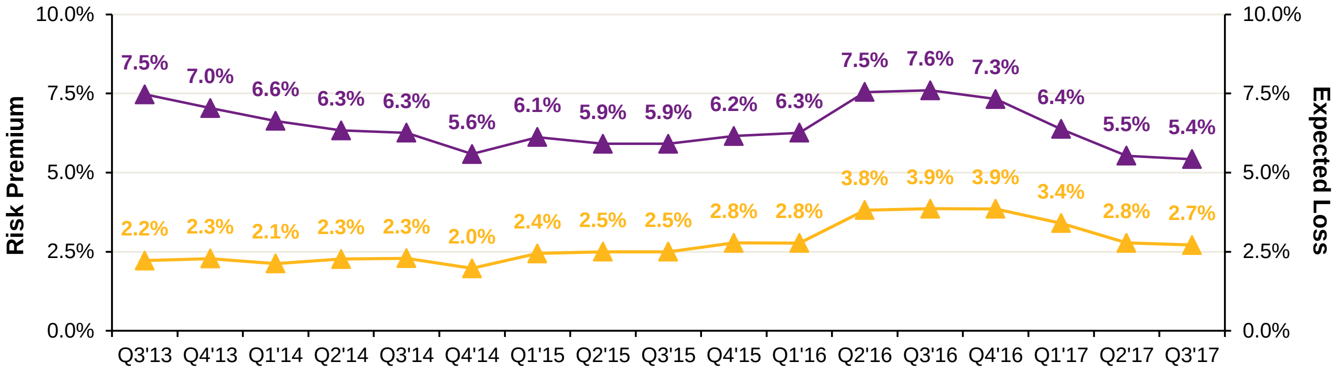
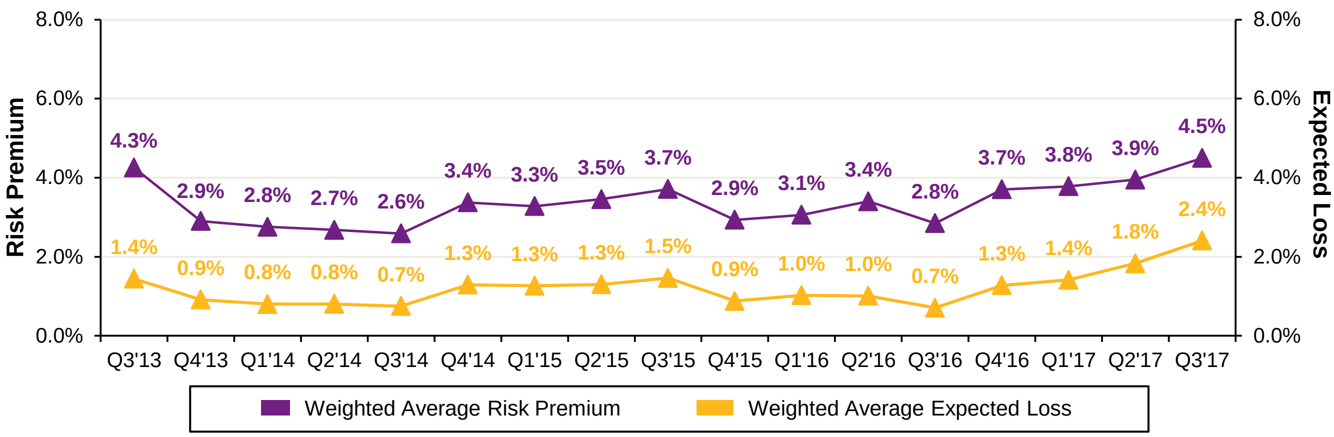
Q3 2017 ILS market statistics

Quarterly LTM U.S. Wind exposed weighted Average risk premium and expected loss



Quarterly LTM non-U.S. Wind exposed weighted average risk premium and expected loss



Source: WTW Securities Transaction Database as of 9/30/2017. Aggregate data excludes private ILS deals.
LTM = Last 12 months. Aggregate data is for primary issuance and does not reflect secondary trading.

Secondary market trading overview

"The end of the quarter finished like no other in the last two decades!"

The end of the quarter finished like no other in the last two decades! Investors processed the events as they came, in an orderly fashion. They were comforted to find liquidity just as they had experienced during the financial crisis of 2007—2008. Most recently, investors have been adding to their non-wind buckets, with some bottom fishing for aggregate bonds that faced markdowns. Interestingly, many investors now participate in traditional placements which tend to back layers lower down than the layers funded by most cat bonds. With respect to the traditional placements, they await loss development to better assess the possibility of trapped capital. They have also been managing the expectations of the new capital waiting on the sidelines, post-event, and preparing to be helpful for new primary issuance.

About Willis Towers Watson

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