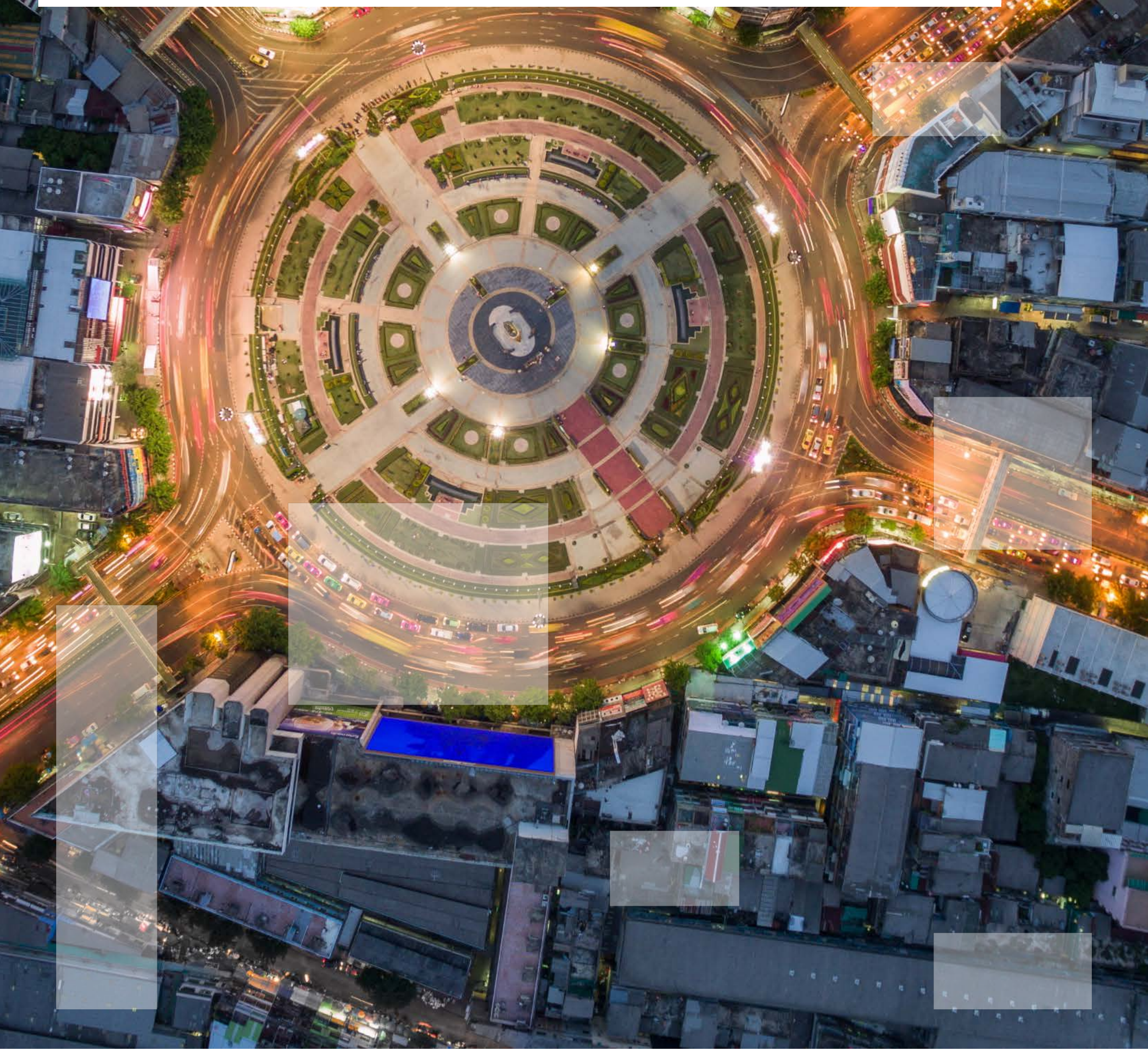
April 2017

ILS Market Update

ILS market growth continues as investor risk-return appetites diversify



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ILS Market Update

Q1 2017 Market Outlook: A Tale of Two Segments

"The ILS market is firing on all cylinders in early 2017"

The ILS market is firing on all cylinders in early 2017. There is a robust pipeline with nearly a record level of deals completed. ILS funds are raising capital and putting it to work. Sponsors are responding to the attractive spread environment by seeking new protection backed by liquid ILS (cat bonds) as well as continuing to ramp up protection in other forms. A record year seems possible.

While spread levels have exited free fall, they continue to decline as investors put more money to work and grab market share. The breadth of the ILS market continues to expand not only by products and perils but also in the diversity of ILS investor risk-return appetites. This flurry of activity, though, is only part of the story.

Market Disruption: Past, Present, and Future

While on the surface it looks like the incumbent ILS players, their customers, investors, and value chain are all winning, that is only partially true. Just like the fictional Madame Defarge plotting her revenge in Charles Dickens' *A Tale of Two Cities*, many of the short term losers in 2017's "Tale of Two Segments" are plotting their return to market leadership. No one is safe as the battle for position and profit escalates.

"No one is safe as the battle for position and profit escalates"

InsurTech

InsurTech has a role to play here. It has moved from an outcast to the center of Silicon Valley's focus. Many of the initial ideas combine elements of "big data" to improve underwriting and claims handling coupled with other steps to remove unnecessary legacy costs from the value chain.

Rather than looking at InsurTech in isolation, some in the ILS asset management space are looking at incorporating InsurTech themes as they knit their plans to disrupt these value chains. Likewise, legacy carriers, service providers and InsurTech investors and companies are looking at ILS asset management and related services as a fertile ground for investment and application of InsurTech ideas. While some of these new ideas seem divorced from reality, others very well may explode onto the scene.

"Some in the ILS asset management space are looking at incorporating InsurTech themes as they knit their plans to disrupt legacy value chains"

Why Is This Time Different?

Why now? One way to think about this is that with one thing at a time changing, there are fewer moving parts. And with fewer moving parts, there are fewer opportunity gaps. In contrast, at the moment ILS and (re)insurance more broadly have many things percolating at the same time between InsurTech, pent up demand to deploy ILS assets, and the changing regulatory, trade and tax environments around the world. This creates both lots of threats and lots of opportunities, depending on your perspective. Hundred year relationships still matter but unlike in the past, they cannot sustain a (re)insurance business on their own.

ILS Market Update

Q1 2017 Market Outlook: A Tale of Two Segments (Cont'd)

"Many players are willing to wager a loss leading war of attrition to position themselves with the best view of the future"

"We are seeing a lot more diving in and expect that trend to continue for at least the remainder of 2017"

What Are People Doing on the Ground?

Many legacy organizations as well as savvy entrepreneurs are attacking the threats and opportunities with new thinking and new investment. There is an arms race for talent, collaboration partners, ideas, and first mover advantages, resulting in semi-permanent barriers to entry and, ultimately, synergistic profit. Just like giving away a free toaster to open a new bank savings account, many players are willing to wager a loss leading war of attrition to position themselves with the best view of the future. While "succeed, succeed" is better than "fail, fail, succeed" both are better than a slow, painful death.

We have also seen reinsurers and other players both invest in, and sometimes retrench, their commitments to the ILS space over time. Some have done quite well building up multi-faceted ILS businesses. Others have tried to run out the clock on ILS at both a personal and corporate level by avoiding the property cat space or counting the days to retirement. That trick will only work for so long. ILS continues its relentless expansion.

Finally, ceding companies of all forms are looking at the cornucopia and (a) diving in with new ILS risk transfer and financing initiatives to gain an advantage, (b) engaging in analysis paralysis, or (c) biding their time hoping that waiting will make things easier and not instead result in them being left in the dust. From our perspective, we are seeing a lot more diving in and expect that trend to continue for at least the remainder of 2017.

* * * * *

The writing (or knitting in this case) is on the wall and you and your company's name may be encoded within. There is a choice to be made. Waiting to make the choice seems like less of an option than in the past.

ILS Market Update

Q1 2017 Cat Bond Market Issuance Overview

“Following a strong Q4 2016, the market kept its momentum ”

Following a strong Q4 2016, the market kept its momentum into the new year as the first quarter of 2017 saw $1.7 billion of non-life catastrophe bond capacity issued through five transactions (record Q1 2016 saw $2.0 billion issued through nine deals).

ICAT Syndicate 4242 represented the only new sponsor with Buffalo Re Ltd. 2017-1. Repeat sponsors included XL Bermuda, Heritage and Allstate. Sompo Japan Nipponkoa was the only non-U.S. sponsor.

Non-Life Q1 2017 Cat Bond Issuance[a]

($ in millions)

Sponsor	Issuer / Tranche	Issue	Maturity	Amount	EL	Spread	Basis	Risk	Trigger
Allstate	Sanders Re Ltd. 2017-1	Mar-17	Dec-21	$375	0.97%	2.88% [b]	OCC	Named Storms, US EQ, Severe T-Storms, Volcano, Meterorite	Indemnity
SJNK	Aozora Re Ltd. 2017-1 A	Mar-17	Apr-20	$480	1.14%	2.00%	OCC	Japan Wind	Indemnity
Heritage	Citrus Re Ltd. 2017-1 A	Mar-17	Mar-20	$125	3.65%	6.00%	OCC	Named Storms	Indemnity
ICAT	Buffalo Re Ltd. 2017-1 A	Mar-17	Apr-20	$105	1.31%	3.25%	OCC	Named Storms, US EQ	Indemnity
ICAT	Buffalo Re Ltd. 2017-1 B	Mar-17	Apr-20	$60	4.46%	6.75%	OCC	Named Storms, US EQ	Indemnity
XL Bermuda Ltd.	Galilei Re Ltd. 2017-1 A-2	Jan-17	Jan-21	$50	9.55%	13.25%	AGG	Named Storms, NA EQ, Europe Windstorm, Australia Tropical Cyclone, Australia EQ	Industry Index
XL Bermuda Ltd.	Galilei Re Ltd. 2017-1 B-2	Jan-17	Jan-21	$50	4.98%	8.00%	AGG	Named Storms, NA EQ, Europe Windstorm, Australia Tropical Cyclone, Australia EQ	Industry Index
XL Bermuda Ltd.	Galilei Re Ltd. 2017-1 C-2	Jan-17	Jan-21	$150	3.02%	6.25%	AGG	Named Storms, NA EQ, Europe Windstorm, Australia Tropical Cyclone, Australia EQ	Industry Index
XL Bermuda Ltd.	Galilei Re Ltd. 2017-1 D-2	Jan-17	Jan-21	$150	2.03%	5.25%	AGG	Named Storms, NA EQ, Europe Windstorm, Australia Tropical Cyclone, Australia EQ	Industry Index
XL Bermuda Ltd.	Galilei Re Ltd. 2017-1 E-2	Jan-17	Jan-21	$125	1.45%	4.50%	AGG	Named Storms, NA EQ, Europe Windstorm, Australia Tropical Cyclone, Australia EQ	Industry Index
		Q4'16 Total:		**$1,670**					

Source: WTW Securities Transaction Database as of 3/31/2017. Aggregate data excludes private ILS deals.

(a) All issuance amounts reported in or converted to USD on date of issuance. EL for hurricane deals is based on WSST conditioned catalog for AIR and medium-term catalog for RMS. Galilei Re 2017-1 priced in 2016 but closed in 2017.

(b) The stated annual risk spread is 3.00% adjusted to 2.88% to take into account the mismatch between the bond term (4 years and 8 months) and the number of wind seasons (five seasons).

“The first transaction of the quarter was Galilei Re Ltd. Series 2017-1 sponsored by XL Bermuda”

The first transaction of the quarter was Galilei Re Ltd. Series 2017-1 sponsored by XL Bermuda. As with Galilei Re Ltd. Series 2016-1, which was issued in December 2016, the 2017 deal provides cover on an industry loss and annual aggregate basis against U.S. named storms and earthquakes, European windstorms, Australian tropical cyclones and earthquakes. The duration of the two Series is different: while the 2016-1 tranches provide three year coverage, the 2017-1 tranches provide four year coverage. During marketing, Galilei Re 2017-1 upsized by 5% to $525 million, while pricing moved towards the upper end of the guidance for most of the tranches. Class A-2 and Class B-2 each secured $50 million capacity, Class C-2 and Class D-2 each $150 million and Class E-2 $125 million.

ILS Market Update

Q1 2017 Cat Bond Market Issuance Overview (Cont'd)

"Buffalo Re 2017-1 is the first cat bond directly sponsored by a Lloyd's syndicate since 2002"

Through Buffalo Re 2017-1, ICAT Syndicate 4242 secured $164.5 million of fully collateralized protection against named storms and U.S. earthquakes over a three years period. Buffalo Re 2017-1 is the first cat bond directly sponsored by a Lloyd's syndicate since Hiscox's St. Agatha Re in 2002. The structure features an indemnity trigger on a per occurrence basis. The issuance comprised two classes of notes. The Class A notes with an expected loss of 1.31% priced at 3.25% and secured $105 million of capacity. The Class B notes with an expected loss of 4.46% priced at 6.75% and secured $59.5 million of capacity. Both classes priced at the bottom end of the revised guidance.

"Citrus Re 2017-1 recovers ALAE on an indemnity basis rather than via a gross-up"

Heritage returned to market with Citrus Re 2017-1, a three-year bond with an indemnity trigger on a per occurrence basis. It protects Heritage against named storms in Florida, Georgia, South and North Carolina, this time excluding Hawaii. Notably, Series 2017-1 recovers ALAE on an indemnity basis rather than via a gross-up. The transaction has a 3.65% expected loss and priced at a spread of 6.00%, at the bottom end of the revised guidance range. The transaction settled at $125 million in size and fully covers the targeted layer.

Aozora Re 2017-1 is the third issuance from Sompo Japan Nipponkoa (excluding bonds sponsored by predecessor companies). As for the previous transactions, this deal features an indemnity trigger on a per occurrence basis and provides coverage against typhoon loss events. The notes are slightly riskier than the Aozora Re 2016 bond with an expected loss of 1.14% vs. 0.90% in the previous transaction while the term of the cover is three instead of four years. Aozora Re 2017-1 settled at the bottom of the revised spread guidance of 2.00% to 2.15% and upsized to $480 million from an initial size of $270 million. One year ago, Aozora Re 2016-1 priced at 2.20% and secured $220 million of cover.

"Sanders Re 2017-1 was the last transaction closed in Q1 but more than $1.0 billion of new capacity was announced in March"

After a hiatus, Allstate came back to market with Sanders Re 2017-1. The bond will cover the sponsor against named storms, earthquakes, severe thunderstorms, volcanic eruption and meteorite impacts in all U.S. states except for Florida and New Jersey. The structure features an indemnity, per-occurrence trigger and has a risk period of four and a half years, effectively covering five U.S. hurricane seasons. The bond was upsized by 25% from an initial size of $300 million to $375 million and priced at a spread of 3.00%, below the initial guidance of 3.25% - 3.75%.

Sanders Re 2017-1 was the last transaction closed in Q1, but more than $1.0 billion of new capacity was announced in March. State Farm, Louisiana Citizens, Everest Re and Security First Insurance Company are returning to the market while American Integrity Insurance Company will sponsor its first cat bond, with Hannover Re acting as a fronter. We will track these and other upcoming transactions in the next issue.

ILS Market Update

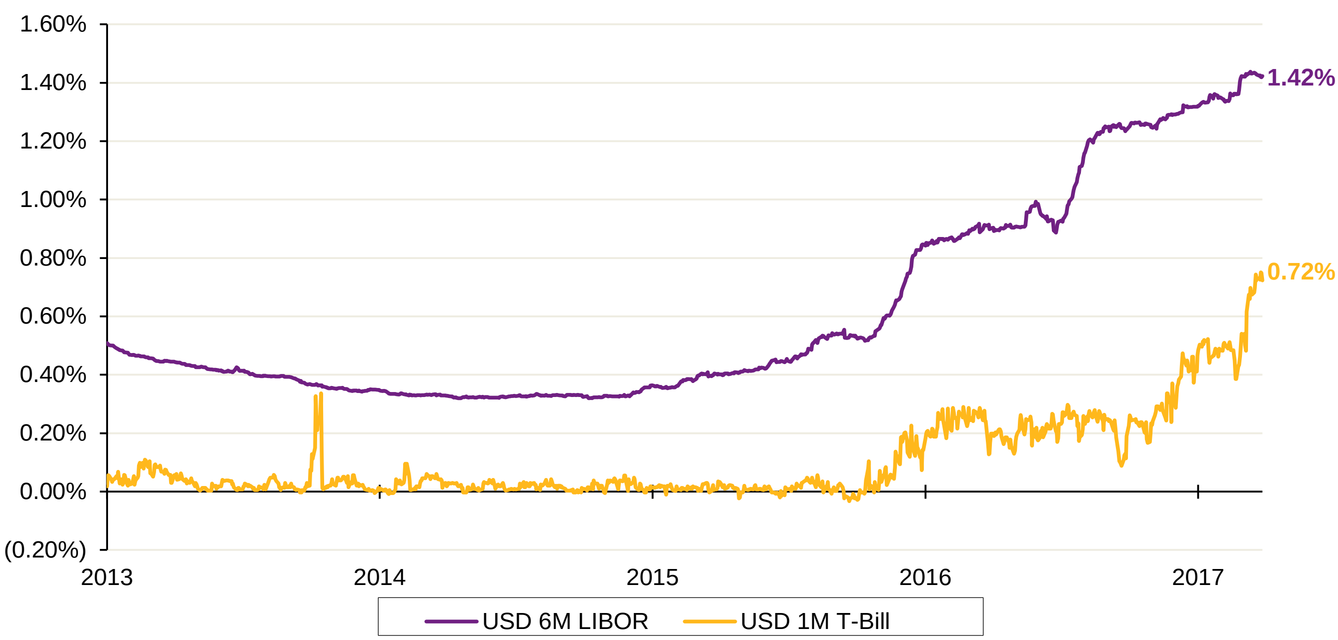
Cat Bond Collateral Evolution

"Puttable Notes provide LIBOR / EURIBOR returns currently enhancing the yield to investors over TMMF"

Puttable Notes are debt issued by development banks, such as the International Bank for Reconstruction and Development ("IBRD") and the European Bank for Reconstruction and Development ("EBRD"). These issuing entities have a high degree of creditworthiness: both the IBRD and the EBRD are rated "AAA" by each of Fitch and S&P and "Aaa" by Moody's.

Puttable Notes provide LIBOR / EURIBOR returns, currently enhancing the yield to investors over Treasury Money Market Funds ("TMMF").

USD-denominated Collateral Yield



Source: Factset as of 3/31/2017.

"U.S. issuers are increasingly choosing Puttable Notes as cat bond collateral"

Following an uptick in U.S. LIBOR yields, the difference in yield between LIBOR and U.S. Treasurys has become much greater recently. As a consequence, U.S. issuers are increasingly choosing Puttable Notes as cat bond collateral over Treasury Money Market Funds, which historically were the most commonly used collateral solution.

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Cat Bond Collateral Evolution (Cont'd)

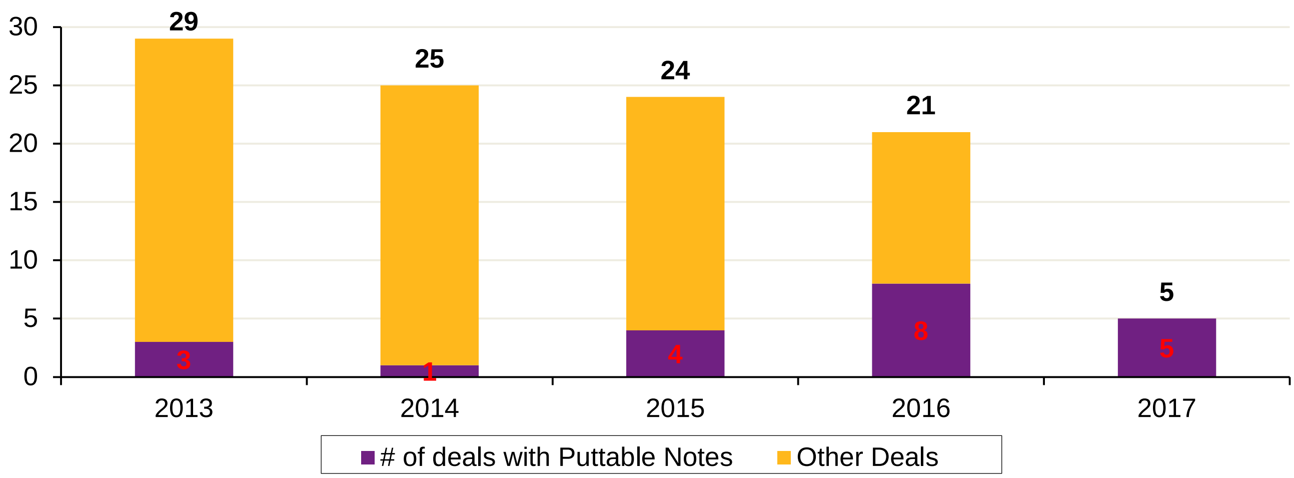
"Puttable Notes vs. TMMF spread differential is believed by some to be primarily related to liquidity rather than credit risk"

The spread differential is believed by some to be primarily related to liquidity rather than perceived credit risk. TMMF have daily liquidity while Puttable Notes can be put back to the respective issuers at par matching liquidity requirements under the cat bond, but they need to be carefully structured.

First, they need to remain outstanding for the period up to the Scheduled Redemption Date and any potential Extension Period. Then, in case of the bond triggering, they need to be puttable at par at each coupon payment date, which will occur one Business Day prior to each Payment Date.

As shown in the below chart, the percentage of deals using Puttable Notes has increased dramatically in Q1 2017.

P&C Cat Bonds using Puttable Notes as Collateral



Source: WTW Securities Transaction Database as of 3/31/2017. Aggregate data excludes private ILS deals with a size smaller than $100 million.

"Eight consecutive deals using Puttable Notes"

In 2014 only one deal used Puttable Notes and in 2015 there were four. In 2016 a total of eight deals used Puttable Notes. At the end of 2016, American Strategic Insurance Group was the first U.S. sponsor in recent history to use IBRD Notes for a P&C cat bond without the help of a reinsurance fronter. This was the first of eight consecutive deals using Puttable Notes.

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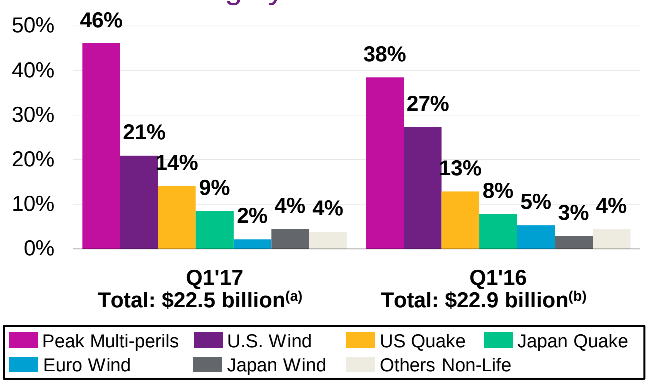
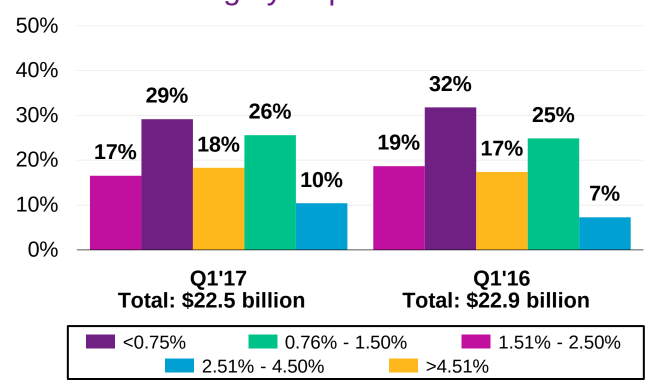
Q1 2017 Cat Bond Market Statistics

Par Outstanding by Risk Peril

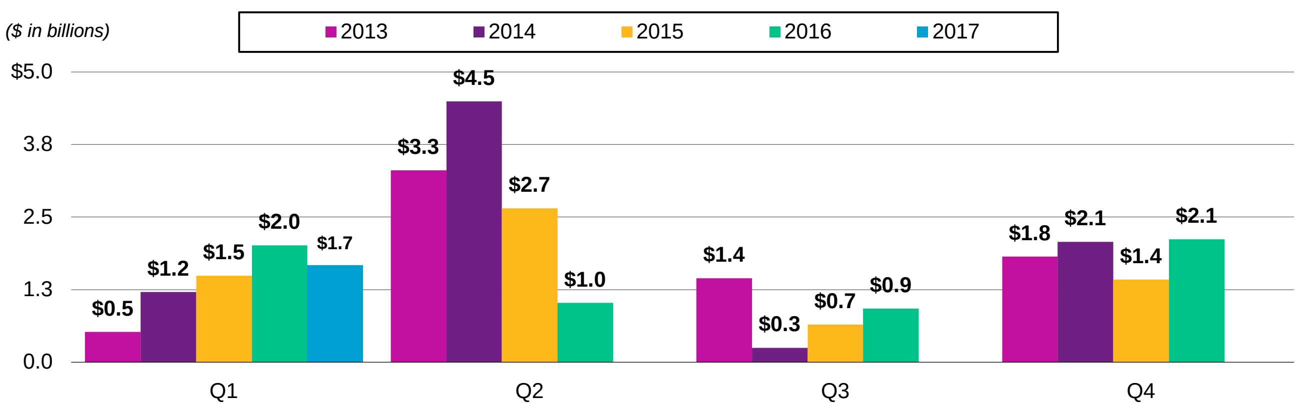


Par Outstanding by Expected Loss at Issuance

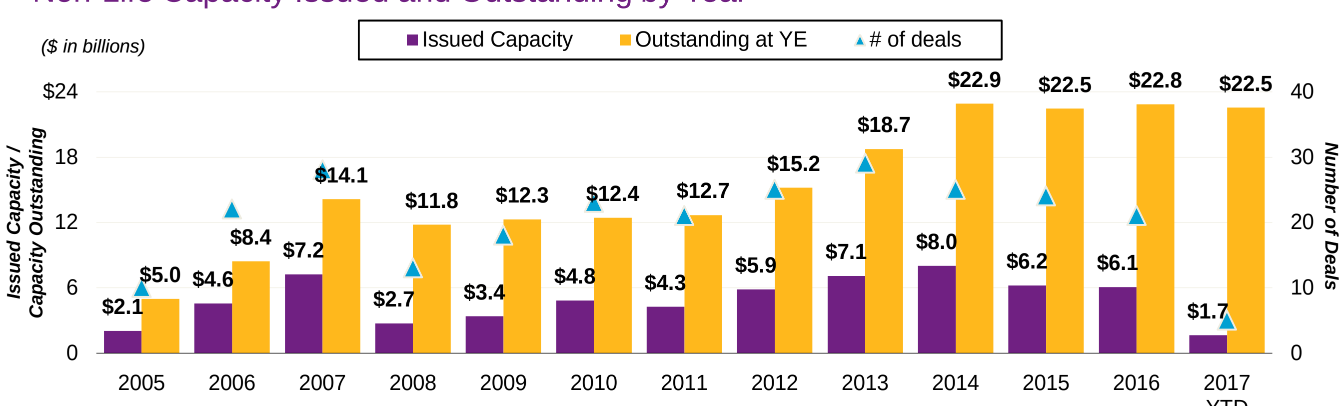


Source: WTW Securities Transaction Database as of 3/31/2017.
(a) In aggregate, 67% of all capacity outstanding exposed to U.S. Wind.
(b) In aggregate, 66% of all capacity outstanding exposed to U.S. Wind.

Non-Life Cat Bond Issuance by Quarter (2013 – 2017)(c)



Non-Life Capacity Issued and Outstanding by Year(c)



Source: WTW Securities Transaction Database as of 3/31/2017. Aggregate data excludes private ILS deals.
(c) All issuance amounts reported in or converted to USD on date of issuance.

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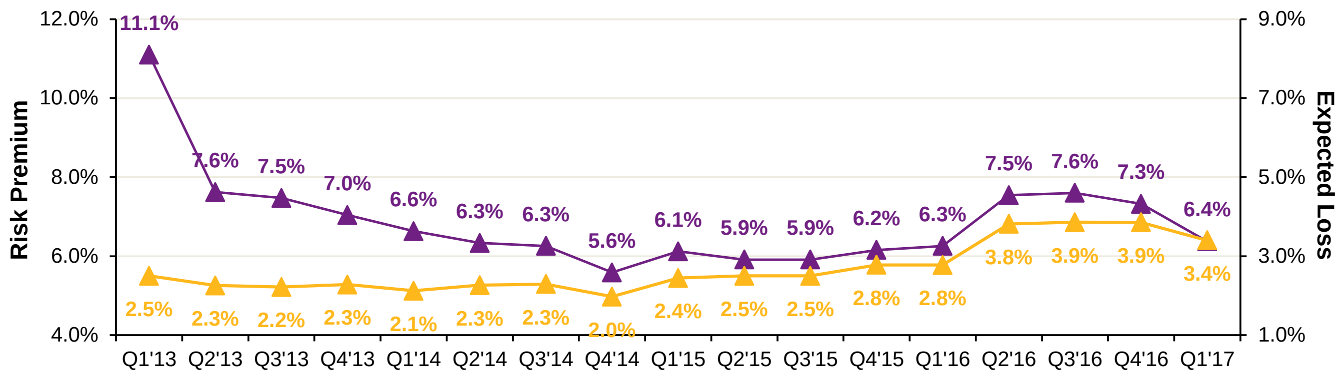
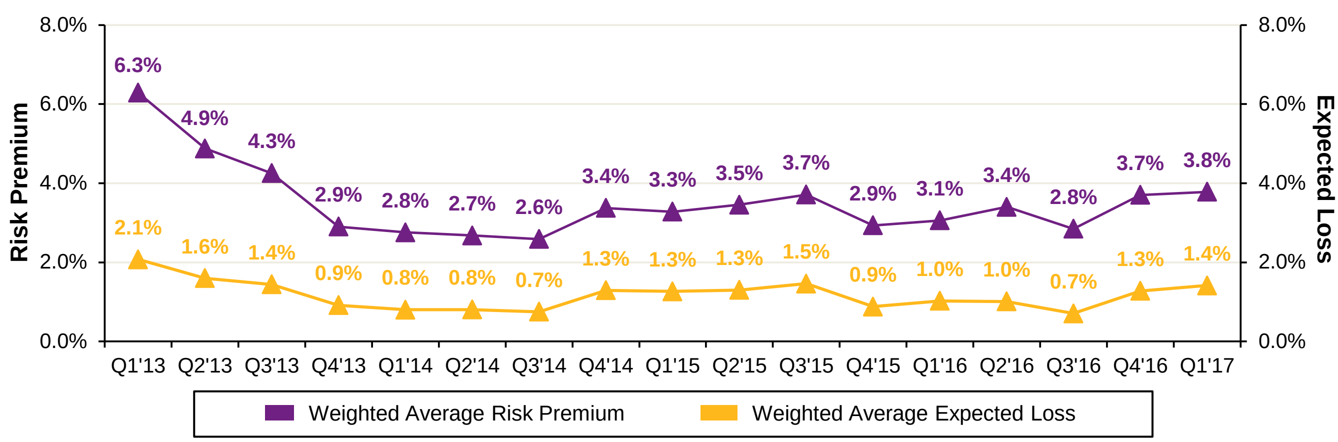
Q1 2017 Cat Bond Market Statistics (Cont'd)

Quarterly LTM U.S. Wind Exposed Weighted Average Risk Premium & Expected Loss



Quarterly LTM Non-U.S. Wind Exposed Weighted Average Risk Premium & Expected Loss



Source: WTW Securities Transaction Database as of 3/31/2017. Aggregate data excludes private ILS deals.
LTM = Last twelve months. Aggregate data is for primary issuance and does not reflect secondary trading.

Secondary Market Trading Overview

Most investors spent the quarter on the lookout for paper – the longer duration the better. With so little new issuance in January, it yielded slim pickings and pricing drifted higher on little volume. The Galilei issue caused investors pause as they evaluated pricing relative to issuance size for an index trigger.

Some sat out the secondary market in the hope of wider prices, and others regarded the Galilei levels as a one off due to issuance size. As it turns out, spreads stayed tight and we can attribute the wider pricing to an issuance size premium.

Towards the end of the quarter, the good 'ol days were back. Investors had multiple primary choices and some took the opportunity to rebalance portfolios in anticipation of further issuance. With a busy calendar on the horizon, we expect that to continue right up until wind season.

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