ILS MARKET UPDATE

Catastrophe Bond Issuance Is Down: The New Future or Just a Head Fake?

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Q3 2015 Market Outlook

"2015 ILS activity begs a similar question: the new future or just a head fake?"

When is change permanent rather than just a fad? Sometimes it is easy to tell. Tie widths go from skinny to wide and hem lines go up and down. On the other hand, the horse and buggy seems to have permanently disappeared along with the gas street lamp. Sometimes it is tougher to tell. Will supersonic jets come back? Some think so.

2015 ILS activity begs a similar question: is this the new future or just a head fake? Through three quarters of 2015, Rule 144A cat bond issuance is down 19% year-over-year (albeit up 1% when adjusted for the 2014 & 2015 Everglades Re deals). The Rule 144A issuance declines are against a backdrop of modest net AUM growth. Taken together the relative market shares have shifted among ILS products. Does this represent a permanent shift away from Rule 144A deals towards cat bond light, collateralized re, and similar ILS products or is it just a temporary wobble?

"One could argue that a more permanent shift away from the most liquid ILS products has occurred…"

One could argue that a more permanent shift away from the most liquid ILS products has occurred. First, the market has matured. As a result, those end investors (mostly pension funds) who have supported ILS funds for some time have become increasingly comfortable with reinsurance risk. This increased comfort has made them more willing to accept some of the purported illiquidity of collateralized re within the ILS funds they back. Second, some ceding companies are reducing their number of trading partners and claim to see little benefit in having a diverse panel of reinsurers let alone investors. They would prefer to have a narrower set of partners who will work with them across their program (cross subsidies) and across time through payback (arguably off balance sheet debt financing). Third, investors claim they can obtain better portfolio diversification and relative value by accessing more opportunities than available solely in the Rule 144A market.

"… but the arguments for a temporary shift seem persuasive too"

Then again, the arguments for a temporary shift seem persuasive too. First, ceding company M&A activity has put reinsurance needs in flux. On top of this reinsurance structures are consolidating the number of separate towers in line with perceived best practice. Multi-year Rule 144A deals have less flexibility than traditional reinsurance to accommodate this change. This factor, however, would reverse as the rapid change slows down. Further, the Rule 144A deals themselves are becoming more flexible to address these changes. Second, either large intervening cat events or competitive pressure will force ceding companies to access the widest practical set of trading partners to achieve efficient reinsurance. More rather than fewer relationships is good for the ceding company. Third, the investor base is not static. New pensions, endowments, high net worth investors, and others are coming into the ILS space and are necessary to grow the pie. In addition, some long time end investors who have historically participated through funds (or funds of funds) are talking more and more about investing directly in whole or in part as the asset class continues to grow. With these shifts, transparency (are you getting what you think you are getting as an investor) and liquidity will become more important. In particular, many high net worth investors (and at some point retail investors) need meaningful liquidity.

Q3 2015 Market Outlook (Continued)

"Competitive tension continues to provide ceding companies and investors with ample product choice"

Finally, a broader set of opportunities and increased diversification is of value to the ILS fund itself but probably of less value to the end investor. After all, an ILS portfolio 100% exposed to first event US hurricane risk is still diversifying within a broader pension portfolio.

In the end, we think the latter arguments are more persuasive and the shift is temporary. Still, it may not necessarily matter so much as competitive tension continues to provide ceding companies and investors with ample product choice both to cede risk and invest. Together they will continue to promote further AUM growth and risk transfer whether or not a particular ILS product is more like a horse and buggy than a skinny tie.

Q3 2015 Cat Bond Market Issuance Overview

"Q3 2015 saw the issuance of $650 million through three transactions"

While down from Q2 as expected, Q3 issuance picked up considerably over 2014. Last year the traditionally quiet third quarter had the lowest volume since 2010 when just one transaction came to market, State Fund's Golden State Re II.

This year the third quarter saw the issuance of $650 million through three transactions: Ursa Re, Bosphorus and Acorn Re while a fourth one, PennUnion Re, was marketed. Among the cedants, one of them is a first time corporate sponsor: Kaiser Permanente, through its subsidiary Oak Tree Assurance.

($ in millions)

Q3 2015 Cat Bond Issuance(a)

Sponsor	Issuer / Tranche	Issue	Maturity	Amount	EL	Spread	Basis	Risk	Trigger
CEA	Ursa Re Ltd. 2015-1	Sep-15	Sep-18	$250	2.62%	5.00%	Ann. Agg.	U.S. Quake (CA Only)	Indemnity
TCIP	Bosphorus Ltd. 2015-1	Aug-15	Aug-18	$100	1.47%	3.25%	OCC.	Turkey Quake	Parametric Index
Kaiser Permanente	Acorn Re Ltd. 2015-1	Jul-15	Jul-18	$300	0.74%	3.40%	OCC.	U.S. Quake	Parametric Index
			Q3'15 Total:	**$650**					

"Acorn Re: a $300 million U.S. Quake bond which utilizes a double trust structure"

The first transaction of the quarter came to market in July when a subsidiary of the health insurer Kaiser Permanente, Oak Tree Assurance, sponsored Acorn Re 2015-1, a $300 million U.S. earthquake bond. Acorn Re utilizes a double trust structure where Hannover Re is fronting between Oak Tree (a Vermont captive) and Acorn Re. The trust structure ensures that Oak Tree Assurance will benefit directly from the cat bond collateral. The bond will provide protection against U.S. West Coast earthquakes on a per occurrence basis over a three-year period. The trigger is based on a parametric 'cat-in-a-box' structure utilizing up to 430 predetermined box locations. The deal priced at the mid-point of the initial guidance, offering a 3.40% risk spread and a multiple of almost 4.3 times the expected loss. The deal was oversubscribed and the size increased from $200 million to $300 million.

Source: WCMA Transaction Database as of 09/30/2015.
(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.
Note: Data excludes private ILS deals with a size smaller than $100 million.

Q3 2015 Cat Bond Market Issuance Overview (Continued)

"TCIP and CEA again in the market"

In August, TCIP directly sponsored its second cat bond, Bosphorus 2015-1 Re. The transaction offers three-year protection on a per occurrence basis. This deal covers major Istanbul disasters. As with the 2013 predecessor which matures in 2016, the bond has a parametric trigger but with a higher annualized expected loss: 1.47% vs. 0.99%. The transaction priced at a spread of 3.25%, dropping below the low-end of the initial guidance range of 3.50% to 4.00%. The transaction settled at just $100 million in size, the lower end of the TCIP's target.

Following last year's $400 million placement, the California Earthquake Authority (CEA) sponsored a new indemnity bond, Ursa Re Ltd. 2015-1. The transaction provides protection on an annual aggregate basis through a three-year term against California Earthquake. The deal has an expected loss of 2.62% and priced at the upper end of the guidance with a spread of 5.00%. The transaction upsized by 67% to $250 million.

Other Activity in the ILS Market in 2015

"2015 has seen some other interesting ILS transactions"

In addition to the Rule 144A property catastrophe bonds detailed above and in previous quarters as well as numerous sidecars, 2015 has seen some other interesting ILS transactions.

For the first time since 2013, an extreme mortality bond, Benu Capital, came to market. Moreover the US health insurer Aetna sponsored a new Vitality Re deal: Vitality Re VI Ltd. 2015-1. On the P&C side, China Re sponsored its first ILS transaction in a cat bond light format while AIG sponsored Bellemeade Re, an ILS deal reinsuring mortgage insurance risks.

Below we give a brief overview of these selected transactions.

(in millions)

Selected ILS Transactions in 2015

Sponsor	Issuer / Tranche	Issue	Maturity	Amount	EL	Spread	Basis	Risk	Trigger
AIG	Bellemeade Re Ltd. M-2	Jul-15	Jul-25	$144	N/A	4.30%	Agg.	Mortgage Insurance risk	Indemnity
AIG	Bellemeade Re Ltd. M-1	Jul-15	Jul-25	$140	N/A	2.50%	Agg.	Mortgage Insurance risk	Indemnity
AIG	Bellemeade Re Ltd. B-1	Jul-15	Jul-25	$14	N/A	6.30%	Agg.	Mortgage Insurance risk	Indemnity
China Re	Panda Re Ltd.	Jul-15	Jul-18	$50	2.12%	4.10%	OCC.	China Quake	Indemnity
AXA	Benu Capital Ltd. Class A	Apr-15	Jan-20	€135	0.64%	2.55%	Agg.	Extreme Mortality	Index
AXA	Benu Capital Ltd. Class B	Apr-15	Jan-20	€150	1.33%	3.35%	Agg.	Extreme Mortality	Index
Aetna	Vitality Re VI Ltd. Class A	Jan-15	Jan-18	$140	0.01%	1.75%	Agg.	Health	Indemnity
Aetna	Vitality Re VI Ltd. Class B	Jan-15	Jan-18	$60	0.24%	2.10%	Agg.	Health	Indemnity

Source: WCMA Transaction Database as of 09/30/2015.

Other Activity in the ILS Market in 2015 (Continued)

"Benu Capital provides AXA €285 million of extreme mortality protection"

Benu Capital Limited provides AXA Global Life mortality protection over a five-year period from January 2015 to the end of 2019. The notes provide cover for France, Japan and the U.S. and the key risks covered are pandemic and disease events. Events such as war, earthquakes and terrorism are also modelled. The transaction trigger depends on mortality data available from the main national statistical reporting agencies, weighted by age and gender within each country. The notes are linked to a mortality index trigger based on a single year, which differs from previous deals which used rolling two-year mortality experience.

Benu Capital offers investors two different tranches: Class A has principal-at-risk of €135 million while Class B has principal-at-risk of €150 million. Class A is less risky with an expected loss of 0.64% and priced at a spread of 2.55%. Instead Class B has an expected loss of 1.33% and priced at a spread of 3.35%. Both classes of notes priced within guidance but investors' interest gravitated toward Class B, which was upsized to €150 million from an initial guidance of €100 million.

"Vitality Re VI 2015-1 is the sixth Vitality Re deal from Aetna"

Vitality Re VI 2015-1 is the sixth Vitality Re deal from Aetna. As usual, it is structured in two tranches but they have slightly higher attachment points than the two tranches from Vitality Re V. Triggered by Aetna's medical benefit ratio, Vitality Re VI replaces coverage that has matured from Vitality Re III. It was the first issue of the year and was well received by the market that showed strong interest for the peril. Investors consider Vitality Re VI a diversifier and no longer see it as a "new risk" or unknown model. The $140m Class A tranche's coupon is 1.75%, the same as the 2014 senior tranche. The $60m Class B tranche's coupon is 2.10%, 40 bps lower than the 2014 junior tranche. Vitality Re VI represents the lowest risk spread that ILS can bring to sponsors at this time for principal-at-risk notes.

"Panda Re is the first cat bond in Asia ex-Japan since the 2003"

Through Panda Re, China Re, one of the largest Chinese reinsurers secured $50 million of fully collateralized protection against earthquakes in China with a three-year term. Panda Re is the first cat bond in Asia ex-Japan since the 2003 Formosa Re earthquake deal. China Re is the first Chinese (re)insurer to sponsor a cat bond. The structure features an indemnity trigger on a per occurrence basis. To overcome the issues around a retro-indemnity cover in ILS form, China Re opted for a cat bond light format which allowed them more flexibility in disclosure with selected investors. The deal has an expected loss of 2.12% and priced at a spread of 4.10% featuring a multiple of less than 2 times stated expected loss. The transaction settled at just $50m in size, the lower end of China Re's target.

"AIG secured $298.9 million of indemnity cover for a portfolio of mortgage insurance policies"

AIG secured $298.9m of indemnity cover for a portfolio of mortgage insurance policies issued from 2009 to 2013 through Bellemeade Re, a special purpose insurer domiciled in Bermuda. The transaction is structured as ILS: Bellemeade Re is funding its obligations through the issuance of three classes of fully collateralized notes. The bond was placed as a standard Rule 144A offering to a targeted group of asset managers and mortgage specialists who used standard mortgage market metrics to evaluate the deal. There are three classes of notes: a $14.4m Class B-1 tranche, a $140.2m Class M-1 tranche and a $144.3m Class M-2 tranche. The Class B-1 notes are the most risky and pay 6.30% above 1 month LIBOR, Class M-2 pay 4.30% while Class M-1 are the less risky and pay a 2.50% spread. All three tranches of notes have a 10 year term, with a 5 year call option with final maturity in July 2025.

Evolution of Catastrophe Bond Terms

"Bermuda has emerged as the preferred domicile for ILS vehicles during the last few years"

"Ireland is the only European jurisdiction but the UK Treasury wants to make London a primary center for the issuance of ILS"

One structural change we have not mentioned in previous quarters, is the movement to domiciling a greater percentage of ILS deals in Bermuda.

While selecting a jurisdiction, a potential sponsor must first consider the experience of the insurance managers in the jurisdiction. Next the efficiency of the local regulator as well as the views if any of the sponsor's home regulator need consideration. The perceived reputational risk associated with each jurisdiction is a key factor for some ceding companies. The deal team can pick the domicile of clearing, listing, and custody operations independently of the location of the SPV. Finally, costs can be a consideration.

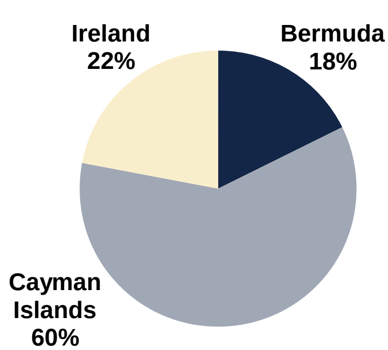
Since the start of the market the Cayman Islands has been the leading domicile for cat bonds. Roughly 90 percent of all cat bonds issued since the mid-1990s to 2012 were domiciled in the Cayman Islands. However, despite Cayman's new Insurance Law in 2013, Bermuda has emerged as the preferred domicile for new ILS vehicles during the last few years and in 2015 more than two-thirds of the global cat bond capacity has been issued from Bermuda. Cayman and Bermuda offer comparable prices and services to cat bond sponsors but the greater familiarity with and connectivity to Bermuda in the (re)insurance world has gradually won out.

For European transactions, the SPV needs to be located within the European Union to qualify as eligible risk transfer under Solvency II. Thus far Ireland is the only European jurisdiction used in a widely distributed cat bond transaction. Gibraltar and Malta have recently approved ILS regulations which could prove more flexible to sponsors. For example they will allow the creation of PCC structures which are currently not approved in Ireland.

Further, the UK Treasury has stated the intention to make London a primary center for the issuance of catastrophe bond and other ILS products. The Treasury is considering tax and regulatory changes to stimulate a UK market for ILS as London is falling behind more innovative re(insurance) centers such as Bermuda.

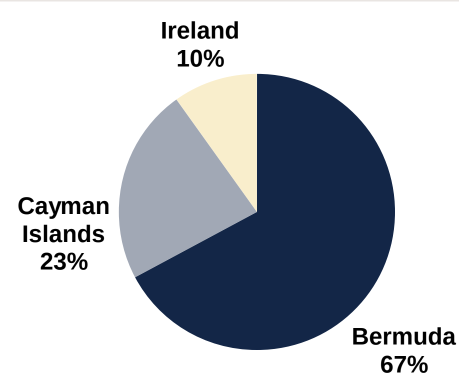
Figure 1: Initial Issuance by Domicile

Q3 2011 LTM



Total: $4.3 billion

Q3 2015 YTD

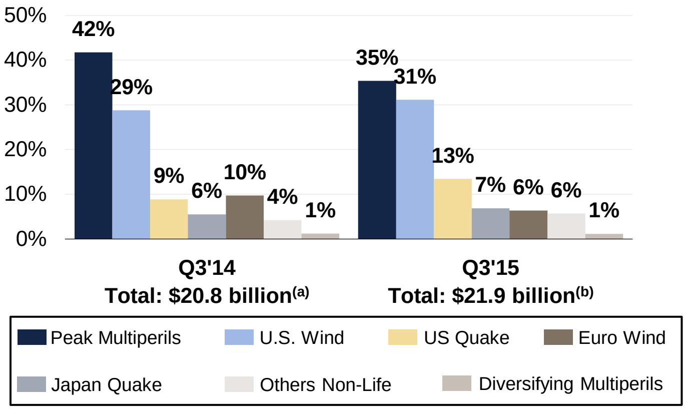


Total: $4.8 billion

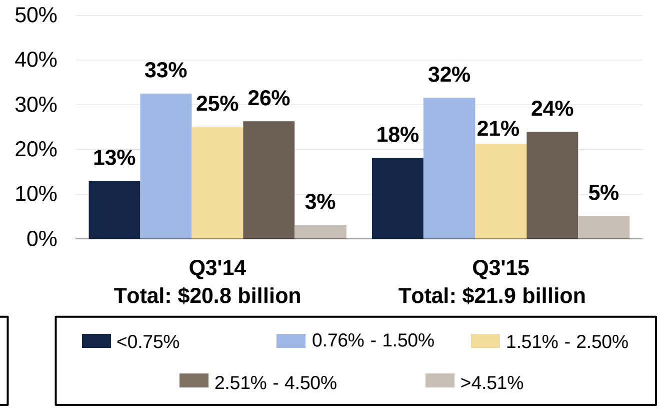
Source: WCMA Transaction Database as of 09/30/2015.
Note: Data excludes private ILS deals.

Q3 2015 Cat Bond Market Statistics

Par Outstanding by Risk Peril

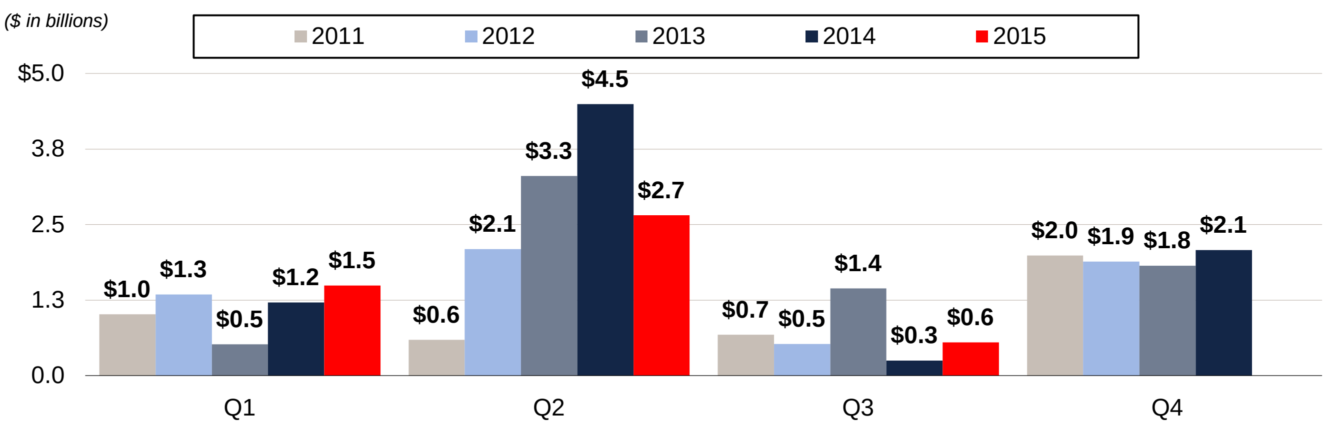


Par Outstanding by Expected Loss at Issuance

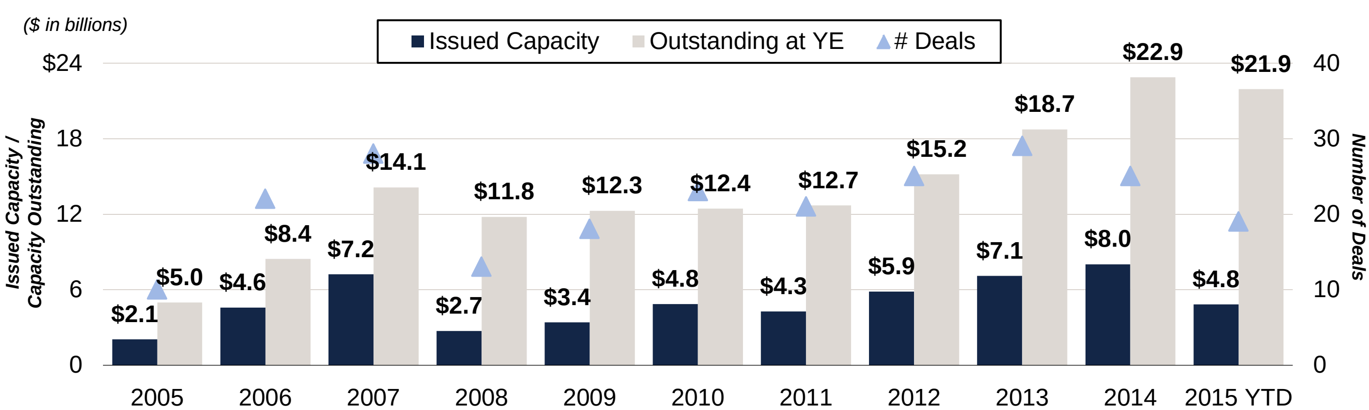


Source: WCMA Transaction Database as of 9/30/2015.
(a) In aggregate, 70% of all capacity outstanding exposed to U.S. Wind.
(b) In aggregate, 67% of all capacity outstanding exposed to U.S. Wind.

Non-Life Cat Bond Issuance by Quarter (2011 – Q3 2015) (c)



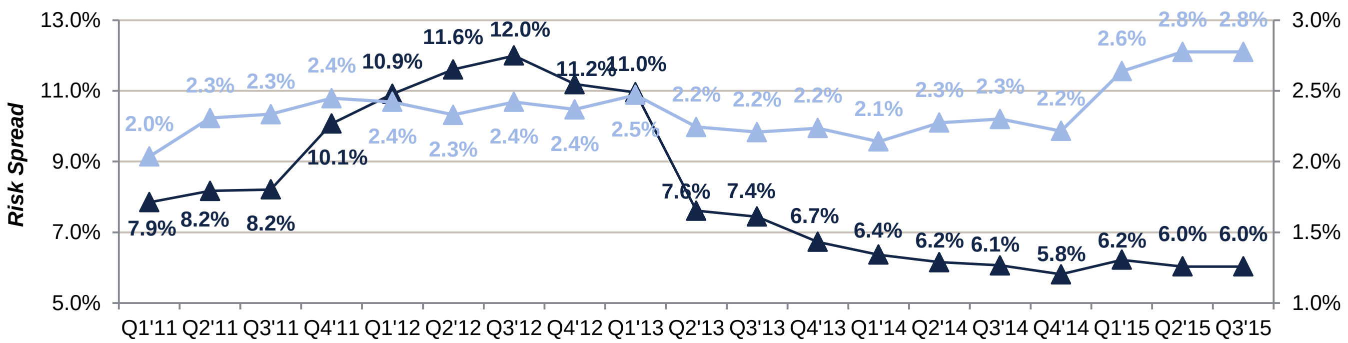
Capacity Issued and Outstanding by Year (c)



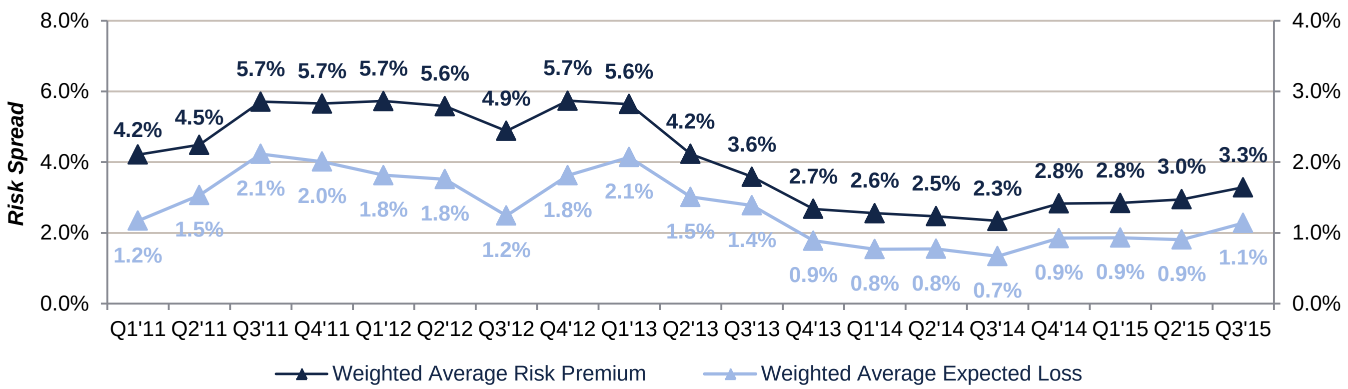
(c) All issuance amounts reported in or converted to USD on date of issuance.
Source: WCMA Transaction Database as of 09/30/2015.
Note: Data excludes private ILS deals.

Q3 2015 Cat Bond Market Statistics (Continued)

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: WCMA Transaction Database as of 09/30/2015.
LTM = Last twelve months. Data is for primary issuance and does not reflect secondary trading.
Note: Data excludes private ILS deals which, in some cases, have the potential for some of the liquidity present in more traditional Rule 144A cat bonds.

Secondary Market Trading Overview

"Still a sellers market after an uneventful hurricane season"

Despite a brief scare around the path of Hurricane Joaquin, it has so far been an uneventful hurricane season for the U.S. eastern seaboard. Seasonality factors propelled prices higher in the secondary market albeit on very little volume. With little primary issuance in the market, investors maintained their buy and hold stance. In some limited activity, buyers outnumbered sellers with the early redemption of the Pylon cat bond in September injecting previously unanticipated capital into the market.

The diversification benefit of the sector rang true in the quarter as the volatility experienced in the global capital markets had no knock on effect to ILS. However, the recent 8.3 magnitude earthquake just off the coast of Chile was a gentle reminder that ILS products are risky and subject to potential losses at any moment.

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