ILS MARKET UPDATE

Stimulating ILS Liquidity

WILLIS CAPITAL MARKETS & ADVISORY

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The Insurance Industry Experts

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Q3 2016 Market Outlook

"In the absence of a market changing event, increasing the proportion of liquid ILS will require both increased investment from end investors who value liquidity as well as product innovation in liquid ILS"

2016 has seen further growth in the proportion of investment in illiquid nonlife ILS. We estimate that total nonlife ILS capital is growing at more than a 5% annual rate; however, outstanding liquid nonlife ILS (i.e., "cat bonds") has stayed roughly flat. In the absence of a market changing event disrupting this trend, increasing the proportion of liquid ILS will require both (a) increased investment from end investors who value liquidity as well as (b) product innovation in liquid ILS.

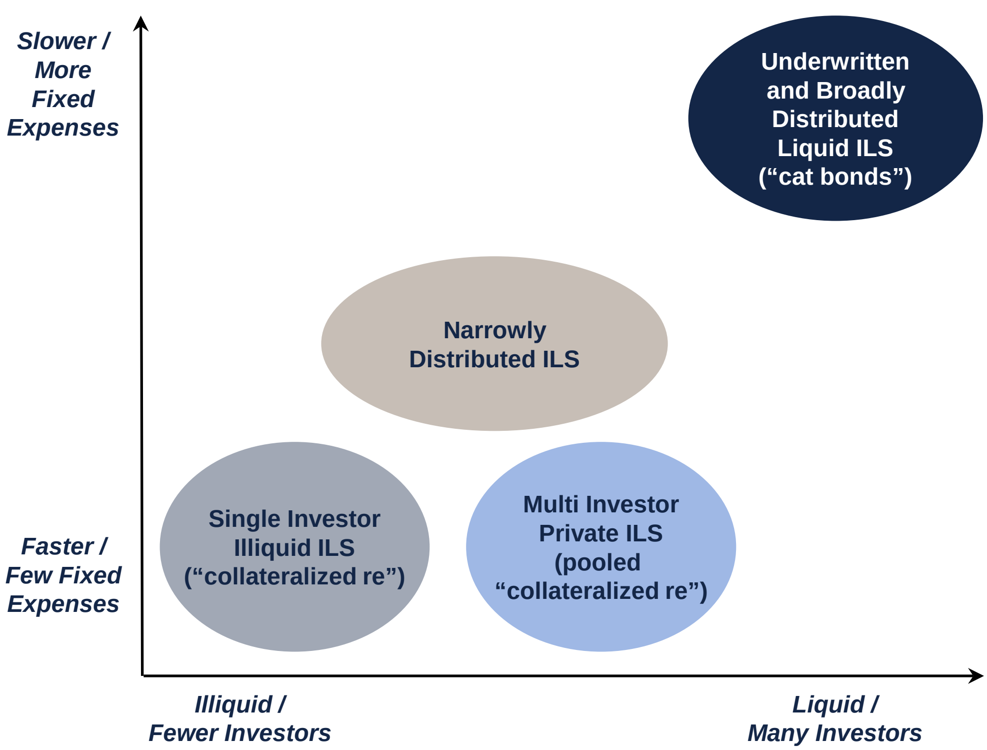
Market Changing Event

A market changing event could arrest this trend. Yes, ILS capital may dampen market cycles; however, it will do so partially on its terms. A significant amount of the ILS capital that will flood in post-event will strongly favor liquid ILS over illiquid ILS in its various forms. Protection buyers who avoid liquid ILS post-event, will likely pay dearly for this privilege as they will narrow the pool of money from which they can draw capacity.

The Role of Innovation

Why does product innovation matter? Market events on their own are unlikely to shift the trend away from illiquid ILS on more than a temporary basis so both innovation and bringing in new investors (as discussed below) are key. Note that the growth of illiquid ILS is itself a result of innovation. By developing efficient structures to transform reinsurance to ILS with cell companies as well as to access leverage, ILS market participants have used illiquid ILS to vastly increase the amount of investible (re)insurance risk.

Range of Options



Q3 2016 Market Outlook (Continued)

"Innovation can reduce some of the relative advantage of illiquid ILS in the areas other than the risk spreads"

Many insurers and reinsurers who access collateralized re backed by ILS of all forms value the diversification in counterparty risk achieved by AAA collateral and also value the diversification of capacity providers. Moving beyond the choice simply to use ILS to the choice of the form of ILS, liquid vs. illiquid, there are trade-offs in risk spreads (more liquidity = lower risk spreads), non-spread costs, ease of process, and post-closing flexibility.

Innovation can reduce some of the relative advantage of illiquid ILS in the areas other than the risk spreads. The growth of multi-investor private ILS structures (pooled "collateralized re") (liquid ILS has lower risk spreads) such as the Resilience Re private ILS platform has already started to reduce this advantage by creating a simpler process, with reduced costs and some limited post-closing flexibility while retaining the ability to execute Rule 144A resales. The next step in innovation is to close this gap further for the more liquid ILS while at the same time maintaining transparency and liquidity.

Increased End Investor Demand for Liquid ILS

"Liquid ILS gives the investor greater certainty in valuation as well as the ability to exit positions more readily"

Liquid ILS accesses the broadest most diverse group of ILS investors. Some investors that do not invest indirectly through ILS funds need to hold liquid ILS. Further some ILS funds have liquid strategies addressing the needs of end investors who prefer to invest in funds with liquid ILS investments.

Liquid ILS gives the investor greater certainty in valuation as well as the ability to exit positions more readily. One can think of a market with a demand for liquid ILS and a supply of liquid ILS. The supply/demand relationship at any point in time will determine the amount of liquid ILS. Innovation as discussed above impacts supply. Increased interest from investors who value liquid ILS impacts demand.

Increased demand from such investors might happen naturally as the market continues to expand beyond nat cat risk. Covering new perils in the ILS space (e.g., casualty, cyber) may require longer-dated securities. In general, liquidity becomes more important the longer the term of the security. Illiquid ILS makes more sense for one year than ten.

"Innovation and more demand from investors can shift the balance of products towards liquid ILS"

We have seen continued interest from high net worth investors as end investors both in Europe and the US. Both regulators and these investors demand more liquidity for their investments than for investments by institutions such as pensions.

* * * * *

Liquid and illiquid ILS will continue to coexist as the overall ILS market grows. Innovation and more demand for liquid ILS from investors can shift the balance of products towards liquid ILS. Of course innovation in illiquid ILS will continue too so it is by no means assured that innovation in liquid ILS will on its own shift the balance. Whatever the outcome, the clear winners are cedants and policyholders as innovation and broad growing interest from investors in ILS will benefit them by increasing capacity to share risks.

Q3 2016 Cat Bond Market Issuance Overview

"The first issuance of the quarter was Blue Halo Re"

During the summer ILS activity is usually light and Q3 2016 was no different. The third quarter of 2016 saw $0.9 billion of non-life catastrophe bond capacity issued through 2 transactions (Q3 2015 saw $0.7 billion issued through 3 deals).

Sponsored by ART, the first issuance of the quarter was Blue Halo Re 2016-2 C. This is the second series of notes from the Bermudian SPI and follows the $185 million issued in June 2016. As for the previous transaction, Blue Halo Re 2016-1, the bond provides coverage over a 3-year period for U.S. named storms and quake. The structure of the trigger is the main difference between the two series. It is still an industry loss (PCS based trigger) but while Blue Halo Re 2016-1 was a term aggregate cover, the new series aggregates the losses on an annual basis. Moreover, Blue Halo Re 2016-2 C is less risky as it effectively sits above the layer targeted for the previous issuance. Class C with an expected loss of 4.49% priced at a spread of 8.25%, within guidance, and upsized to $225 million in size.

($ in millions)

Non-Life Q3 2016 Cat Bond Issuance[(a)]

Sponsor	Issuer / Tranche	Issue	Maturity	Amount	EL	Spread	Basis	Risk	Trigger
Zenkyoren	Nakama Re 2016-1 1	Sep-16	Jan-21	$550	0.49%	2.20%	AGG	Japan Quake	Indemnity
Zenkyoren	Nakama Re 2016-1 2	Sep-16	Jan-21	$150	1.47%	3.25%	AGG	Japan Quake	Indemnity
ART	Blue Halo Re Ltd. 2016-2 C	Jul-16	Jul-19	$225	4.49%	8.25%	Ann. AGG	US Named Storm & Quake	PCS
		Q2'16 Total:		**$925**					

"Zenkyoren came back to the market with a new Nakama Re transaction"

Following its latest issue in December 2015, Zenkyoren came back to the market with a new Nakama Re transaction: Nakama Re 2016-1. The two tranches, which cover Japanese quake, amount to $700 million of cover. Both tranches feature an indemnity trigger and provide aggregate cover for three overlapping three-year risk periods for a total term of five years. The transaction was well received by investors which are eagerly looking for new paper. Class 1 priced at the lower end of the initial guidance settling at 2.20% while upsizing from $200 million to $550 million in size. Class 2 also priced at the bottom of the initial guidance settling at 3.25% and tripled in size to $150 million.

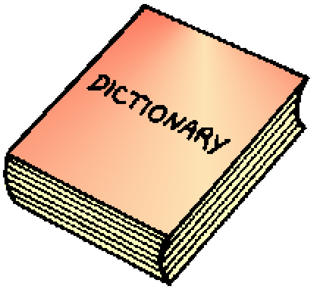
"During Q3 2016 there were also several private ILS deals"

During Q3 2016 there were also several private deals. Among them, ART completed a $30 million transaction which covers risks from extreme warm winters in Europe. The Notes feature a parametric index trigger. The risk is measured from 5 individual weather stations spread across Europe and then aggregated for each risk period within the three-year term.

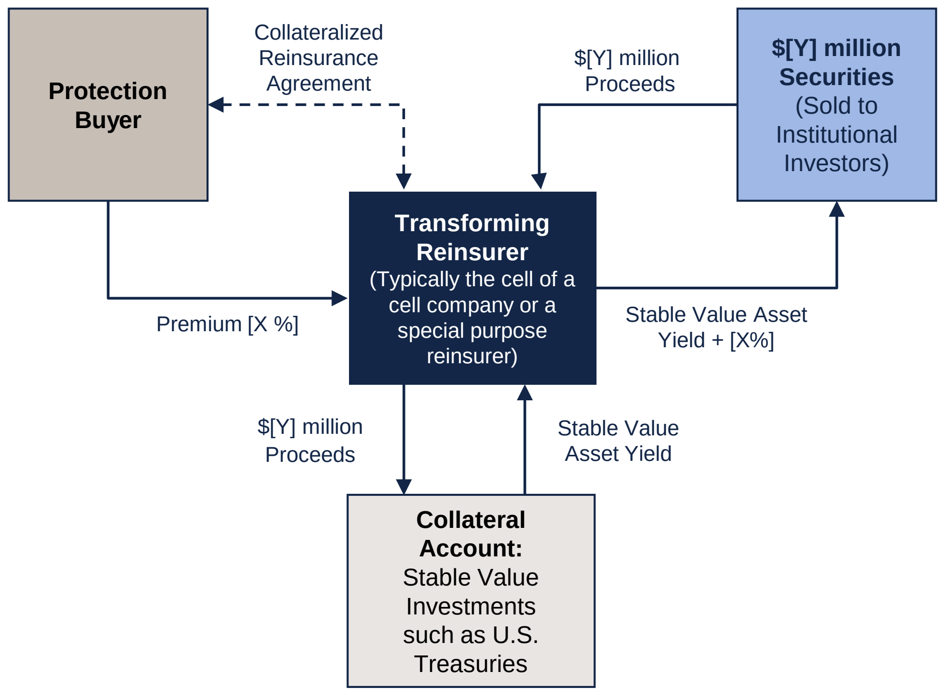
Also of note is the $75 million Market Re 2016-3, which covers New Jersey named storms. This is believed to be the renewal of 2013's Sullivan Re on behalf of New Jersey-based NJM Insurance group. It pays a coupon of 3.00% and has a 3-year term.

Source: WCMA Transaction Database as of 09/30/2016. Aggregate data excludes private ILS deals with a size smaller than $100 million.
(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.

Cutting Through the Misnomers to More Precise ILS Terms



The words “collateralized re” and “cat bonds” are used in sometimes illogical and confusing ways. It makes a lot more sense to simply call all investments “ILS” with ILS falling on a continuum of liquidity from illiquid to liquid (and other dimensions such as proportional and non-proportional).



Myth: “Collateralized re” and ILS are fundamentally different

Reality: They are the two legs of the basic transformation structure

Common to all structures:

- Collateralized reinsurance contract
- Insurance-linked security for funding

“Collateralized re and ILS are the two legs of the basic transformation structure”

Nearly all nonlife ILS risk transfer involves collateralized reinsurance as the risk transfer step. People often use “collateralized re” when they are referring to two transactions, a collateralized reinsurance contract with a transforming reinsurer coupled with an illiquid ILS investment. The illiquid ILS funds the reinsurance collateral.

“The illiquid ILS funds the reinsurance collateral”

The illiquid ILS may take the form of preference shares or other investment owned by funds of a single investment advisor. In contrast, “cat bonds” are just transactions where relatively liquid broadly distributed ILS funds the reinsurance collateral. In both “cat bonds” and “collateralized re” ILS investments provide the reinsurance collateral and reinsurers (whether controlled by the investor or a third party) provide the reinsurance.

WCMA Interview: Matthew Feig (Cadwalader, Wickersham & Taft LLP)

Following the Standard & Poor's report "Catastrophe Bonds Have a Short but Strong Track Record on Claims", we would like to further explore claims payment processes, a key topic for ILS market participants.

Matthew Feig
(Special Counsel)

We interviewed Matthew Feig, a Special Counsel at the legal firm Cadwalader, Wickersham & Taft. He concentrates his practice on risk-linked securities and structured and corporate finance, and has particular experience in the ILS space. Not only has Matthew worked on a large number of catastrophe bond transactions but he has also written several articles and published a book on Insurance-Linked Securities issues.

"Claims payment processes are a key topic for ILS market participants"

Below you can find his opinion on cat bond claims payment and his broader view about efficiency and transparency in the ILS market.

Q: According to the latest S&P report on ILS, catastrophe bonds have a short, but strong track record on claims payments. In contrast, ILS critics argue that the lack of a relationship between the protection buyer and the bond investors could encourage the bondholders to contest legitimate claims following an event. Who do you think has the better argument?

The S&P report speaks for itself - catastrophe bonds pay claims when triggered. I take issue with the proposition that bondholders don't have a relationship and that it is in their interest to contest legitimate claims. More than a relationship, they depend on a functioning, transparent, and liquid market for risk which means they will occasionally take losses. Legitimate claims are good for investors. It's like suggesting a professional baseball player with great long-term career prospects would prefer to shoot the umpire than strike out once. Striking out occasionally is an essential part of the game, you win some and you lose some. Shooting the umpire puts you out of a job.

"The ILS market has the advantage of a highly sophisticated investor base, but it is also a highly sophisticated product"

Q: What does dispute activity in the broader institutional securitization markets tell us about the potential for disputes in the ILS market? Does limiting investors to institutions make a big difference?

The ILS market has the advantage of a highly sophisticated investor base, but it is also a highly sophisticated product. On some levels the institutional investor base is a simple reflection of that complexity and the specialized expertise needed to understand it, rather than just an arbitrary limitation. This has been a double edged sword in terms of expanding the market for issuance, new sponsors as well as new perils, but the high bar for entry has limited opportunities for other kinds of investors who might be more used to disputing payments.

Note: The views expressed herein by Mr Feig are his personal views and do not reflect the views of Cadwalader, Wickersham & Taft LLP or Willis Capital Markets & Advisory or their respective affiliates.

WCMA Interview: Matthew Feig (Cadwalader, Wickersham & Taft LLP) (Continued)

"ILS transactions are drafted in a much more lengthy, rigorous and expensive process than conventional reinsurance"

Q: From a protection buyer perspective, which are the main risks that can lead to contest a payment? Some suggest weak links could come from any of the trigger, the issuer organizational documents, the collateral arrangements, and service provider failure. Do you think these points are addressed well in the typical ILS? Are there other key structural points that when addressed properly can mitigate dispute risk?

To put this in context, remember that disputes do occur in conventional reinsurance, often over drafting, and some of the dispute risk of ILS is built into the underlying risk transfer (like retrocessional cover). ILS transactions are drafted in a much more lengthy, rigorous and expensive process than conventional reinsurance and the silver lining of the high frictional cost is a more robust set of documents. To be sure we can't anticipate everything, but we do attempt to address possible disputes ahead of time by spelling things out in detail which might otherwise be discretionary and making sure investors are on board. For example, we draft highly specified trigger or loss determination procedures performed by a third party on a rigorous schedule. We pay present costs and documentational complexity versus the conventional markets to reduce the future opportunity for dispute. It is important to have trigger and loss mechanisms which are clear, appropriate for the peril, and accurately track the way the service providers actually perform these functions. A potential cause of a contested loss payment is the occurrence of something not anticipated in the documentation, like a service provider mistake. I think that thorough documentation with a clear purpose is the best tool to give the parties the means to find the right solution even in those circumstances. This approach has been validated by our loss payment experience so far.

"Product innovation will be a source of unanticipated structural risk, but we have every reason to be confident that the market will develop solutions"

Q: Do you think any major changes are needed to improve the structural integrity of the transactions or the market?

I would say the highly incremental and conservative development of the ILS market has resulted in robust structures which work for existing ILS programs. Product innovation will be a source of unanticipated structural risk, but we have every reason to be confident that the market will develop solutions. Moreover, precisely the fact that the market works well makes it ripe for innovation, and worthwhile investing in developing new products and incorporating new technology (block-chain, for example) which can drive growth but also increase efficiency and transparency. I don't see major change as a test or a problem, but rather an opportunity to do what we do better.

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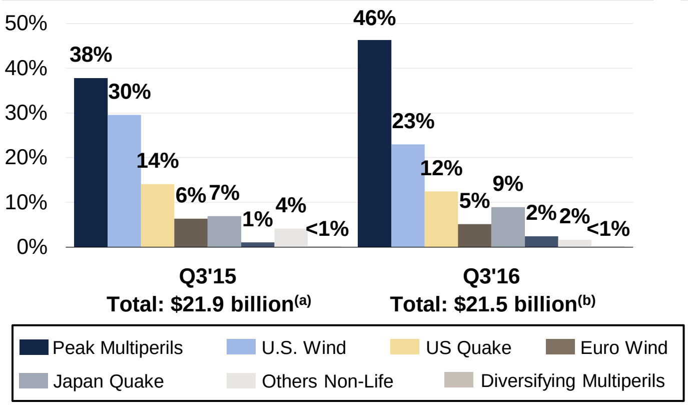
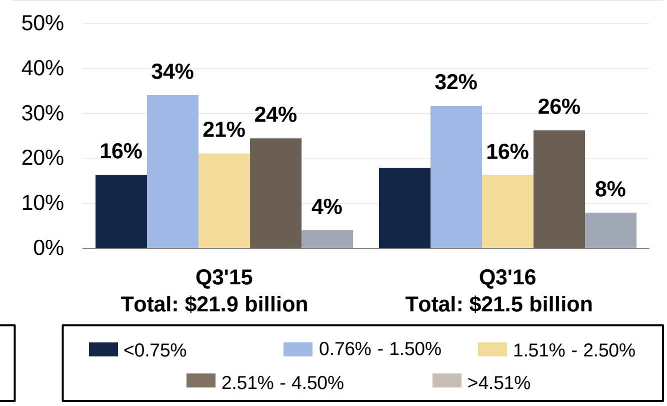
ILS MARKET UPDATE

Q3 2016 Cat Bond Market Statistics

Par Outstanding by Risk Peril

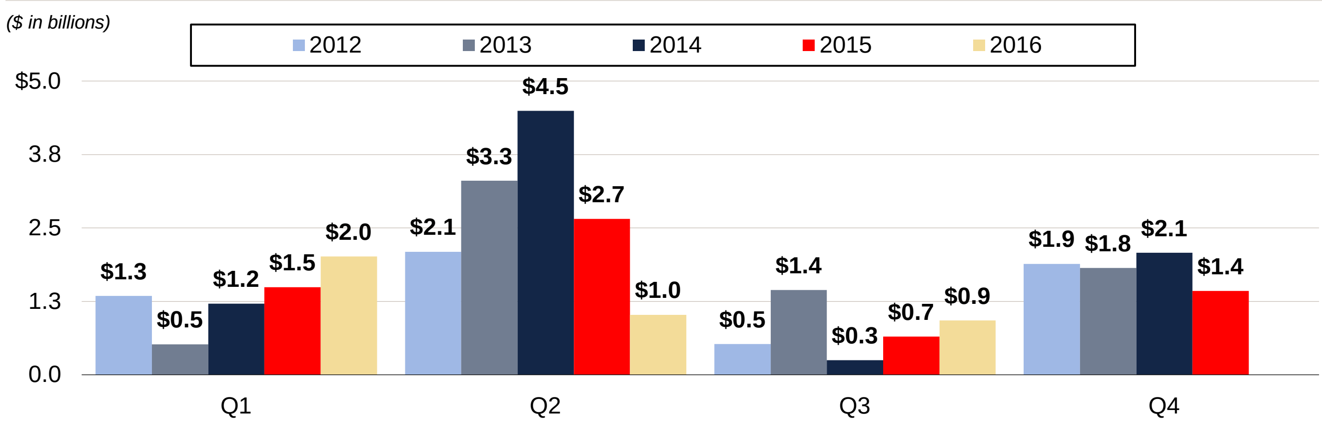


Par Outstanding by Expected Loss at Issuance

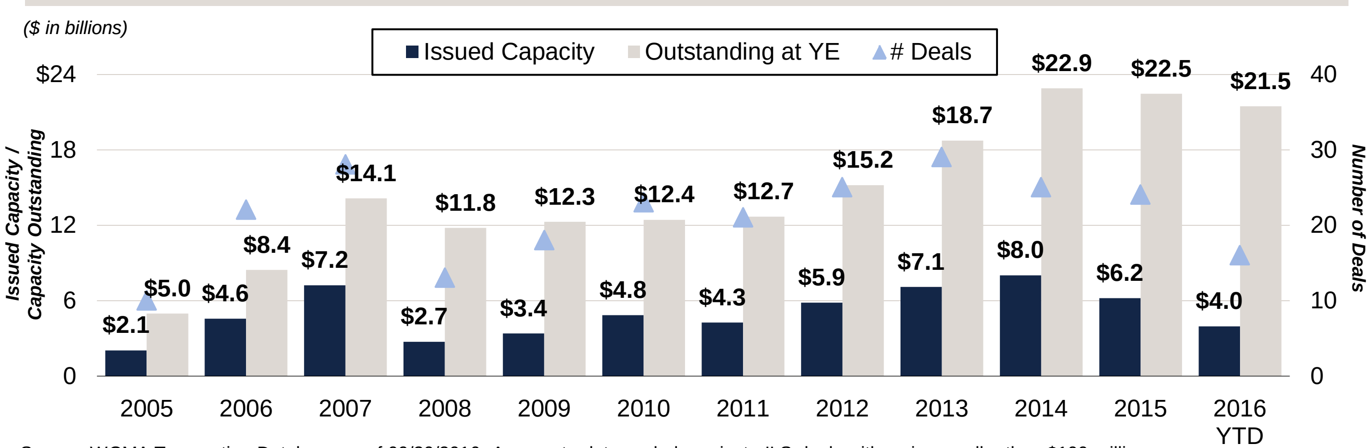


Source: WCMA Transaction Database as of 09/30/2016.
(a) In aggregate, 67% of all capacity outstanding exposed to U.S. Wind.
(b) In aggregate, 69% of all capacity outstanding exposed to U.S. Wind.

Non-Life Cat Bond Issuance by Quarter (2011 – Q3 2016) [c]



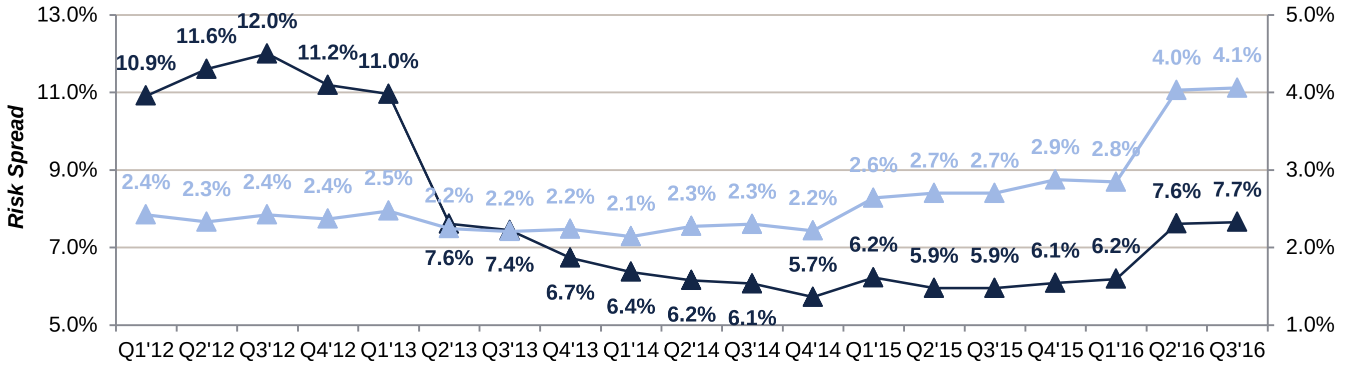
Non-Life Capacity Issued and Outstanding by Year [c]



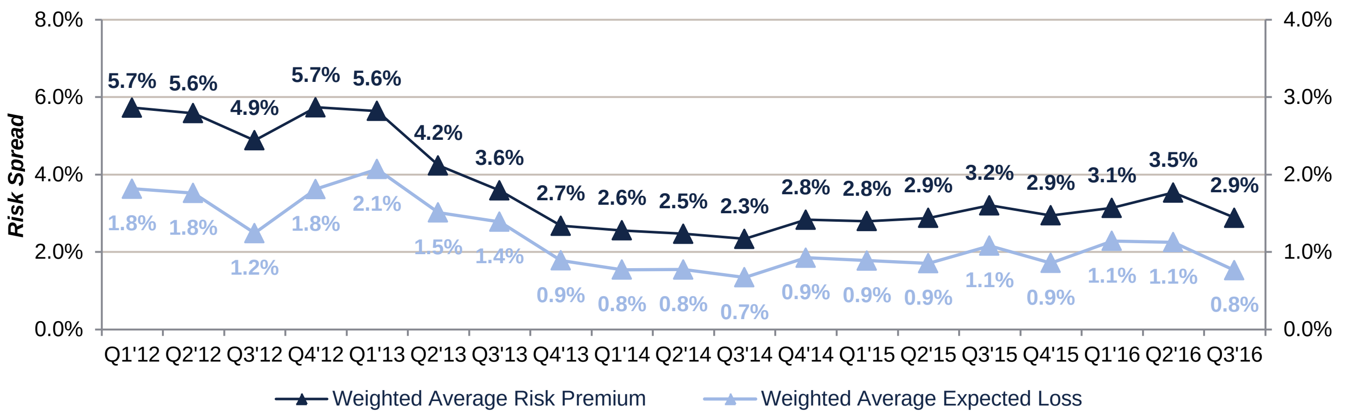
Source: WCMA Transaction Database as of 09/30/2016. Aggregate data excludes private ILS deals with a size smaller than $100 million.
(c) All issuance amounts reported in or converted to USD on date of issuance.

Q3 2016 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 09/30/2016. Aggregate data excludes private ILS deals which, in some cases, have the potential for some of the liquidity present in more traditional underwritten Rule 144A cat bonds.
LTM = Last twelve months. Aggregate data is for primary issuance and does not reflect secondary trading.

Secondary Market Trading Overview

"Investors were reluctant to sell bonds during the wind season"

We had very limited 3rd quarter primary issuance which was matched with minimal secondary trading. Investors were reluctant to sell bonds during the wind season and saw wind exposed bonds drift up due to seasonality adjustments. Throughout the quarter, the market had a strong bid tone, which beckons cedants to consider issuance to capture the benefits of this pent up demand.

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