ILS MARKET UPDATE

When the Wind Blows and the Earth Shakes

WILLIS CAPITAL MARKETS & ADVISORY

July 2016

The Insurance Industry Experts

New York | London | Hong Kong | Sydney

Willis
Capital Markets & Advisory

Q2 2016 Market Outlook

For a market so strongly rooted in actuarial techniques and cat modeling, reinsurance is not always as strictly scientific as it is cracked up to be. This is equally true of ILS-backed capacity. Underwriters and investors are humans not robots. Sometimes groupthink sneaks up on us all.

“What happens next if there is a $75 billion insured property loss from a hurricane with a Florida landfall”

One example of this is the unshakable sentiment among many involved in this year’s 6/1 US cat renewals that reinsurers and ILS investors will both take significant cat losses this hurricane season. Of course, rationally speaking a large loss will come someday. Still, subject to the vagaries of short term seasonal forecasting, each year is supposedly an independent draw from the deck or so the cat modelers tell us.

To continue with the sentiment, what will be the market outlook if we do have a large hurricane loss this year? Some would say the market was recently tested with the 2011 international cat losses followed by 2012’s Hurricane Sandy. However, even larger losses are possible and over time likely. For the sake of argument, let us assume a $75 billion insured property loss from a hurricane with a Florida landfall and, hopefully, negligible injuries.

What happens next? It depends on who you ask. At this point, everyone is talking their own book.

Traditional reinsurers expect a hard market and payback. Ceding companies expect to enjoy the benefits of multiyear capacity both from the traditional markets and the capital markets with little price movement as investors quickly replenish any lost capital. Capital markets investors expect to shine with ceding companies as a result of contract certainty and quick claims payments in contrast to coverage disputes with traditional reinsurers. Capital markets investors expect that possible reinsurer downgrades or insolvencies will show the value of collateral. In contrast, reinsurers hope that the value of reinstatements even at the princely rate of 1@100% will prove the value of a leveraged rated balance sheet.

“Superior underwriting is easier to identify when the wind blows”

Large losses will also help identify winners and losers among both reinsurers and ILS funds. Stated risk-return objectives will explain some of the differences but superior underwriting is easier to identify when the wind blows.

There is also the related question of who can reload their capital more rapidly after such an event and whether what happened in 2004 and 2005 remains a good guide for the present. Will there be a class of 2016 in Bermuda and a host of secondary equity deals for existing players or will sidecars and other ILS fill the void?

“Temporary capacity shortage and payback will have a significant reduced impact relative to the past”

At the risk of talking our book, we expect ILS capital to rush in. The pricing cycle will not disappear altogether but temporary capacity shortages and payback will have a significantly reduced impact relative to the past. If we get a similar loss from an unexpected source such as a Texas earthquake the cycle could still return with a vengeance.

What seems indisputable is that regardless of your view on all of these questions, it actually takes a loss to prove or disprove these pet theories. As a market, we spend a lot of time thinking about a continuation of the status quo in the absence of disruptive influences. If you buy into the thoroughly non-scientific and perhaps irrational views expressed over the last few months, disruption will soon deliver some answers to important questions.

Q2 2016 Cat Bond Market Issuance Overview

"Three new sponsors in the market in Q2 2016"

Following a record setting Q1 2016 in which the market saw $2.0 billion of issuance, the second quarter of 2016 saw $1.0 billion of non-life catastrophe bonds issued through 6 transactions (Q2 2015 saw $2.7 billion through 9 deals).

Even after starting with record setting issuance in Q1, the $2.8B in issuance in H1 2016 is the lowest total since 2012. This figure still exceeds first half totals for all years prior to 2012 other than 2007.

Three out of the six catastrophe bond sponsors were new issuers: Security First, United Insurance Holdings' subsidiaries (United P&C Insurance, Family Security Insurance and Interboro Insurance), and Credit Suisse (with Zurich acting as fronter). Repeat sponsors included well-known market participants such as USAA, Munich Re as well as Allianz Risk Transfer.

($ in millions)

Non-Life Q2 2016 Cat Bond Issuance(a)

Sponsor	Issuer / Tranche	Issue	Maturity	Amount	EL	Spread	Basis	Risk	Trigger
ART	Blue Halo Re Ltd. 2016-1 A	Jun-16	Jun-19	$130	8.56%	14.00%	AGG	US Named Storm & Earthquake	PCS
ART	Blue Halo Re Ltd. 2016-1 B	Jun-16	Jun-19	$55	13.19%	19.75%	AGG	US Named Storm & Earthquake	PCS
United Ins. Hldg.	Laetere Re Ltd. 2016-1 A	May-16	Jun-17	$30	2.76%	zero(b)	OCC	US Named Storm & Earthquake	Indemnity
United Ins. Hldg.	Laetere Re Ltd. 2016-1 B	May-16	Jun-17	$40	5.98%	zero(b)	OCC	US Named Storm & Earthquake	Indemnity
United Ins. Hldg.	Laetere Re Ltd. 2016-1 C	May-16	Jun-17	$30	13.18%	zero(b)	OCC	US Named Storm & Earthquake	Indemnity
Security First	First Coast Re Ltd. 2016-1	May-16	Jun-19	$75	1.31%	4.00%	OCC	Named Storms & Severe T-Storms	Indemnity
Credit Suisse	Operational Re Ltd. A-1	May-16	Apr-21	$106	0.15%	4.50%	AGG	Operational Risk	Indemnity
Credit Suisse	Operational Re Ltd. REG	May-16	Apr-21	$5	0.15%	4.50%	AGG	Operational Risk	Indemnity
Credit Suisse	Operational Re Ltd. B	May-16	Apr-21	$111	0.20%	5.50%	AGG	Operational Risk	Indemnity
Credit Suisse	Operational Re Ltd. 144A	May-16	Apr-21	$5	0.15%	4.50%	AGG	Operational Risk	Indemnity
Munich Re	Queen Street XII Re dac 2016-1	May-16	Apr-20	$190	2.90%	5.25%	OCC	US & Euro Wind	PCS / PERILS
USAA	Residential Re 2016-1 CL 10	May-16	Jun-20	$65	8.80%	11.50%	AGG	Tropical Cyclone, EQ, Sev. T / Winter Storm, Wildfire, Volcanic Eruption, Meteorite, Other	Indemnity
USAA	Residential Re 2016-1 CL 11	May-16	Jun-20	$75	2.47%	4.75%	AGG	Tropical Cyclone, EQ, Sev. T / Winter Storm, Wildfire, Volcanic Eruption, Meteorite, Other	Indemnity
USAA	Residential Re 2016-1 CL 13	May-16	Jun-20	$110	0.73%	3.25%	AGG	Tropical Cyclone, EQ, Sev. T / Winter Storm, Wildfire, Volcanic Eruption, Meteorite, Other	Indemnity
		Q2'16 Total:		**$1,027**					

"USAA secured $250 million of indemnity cover through its latest Residential Re"

The first issuance of the quarter was Residential Re 2016-1, sponsored by USAA. This secured $250 million of indemnity cover on an annual aggregate basis. The transaction provides coverage against U.S. tropical cyclones, earthquake, severe thunderstorm, winter storm, wildfire, volcanic eruption, meteorite impact and all other events classified as natural disaster or severe weather. The bond upsized by 67% and all its three tranches priced at the bottom end of guidance, which was revised during the marketing phase below the low end of the initial guidance. Class 13 with an expected loss of 0.73% priced at a spread of 3.25%, Class 11 with an expected loss of 2.47% priced at a spread of 4.75%, and Class C with an expected loss of 8.80% priced at a spread of 11.50%.

Source: WCMA Transaction Database as of 06/30/2016.

(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.

(b) Class A had a price of 94.00; Class B had a price of 90.50; and Class C had a price of 82.50.

Note: Data excludes private ILS deals with a size smaller than $100 million.

Q2 2016 Cat Bond Market Issuance Overview (Continued)

After the December issuance, Munich returned to market in May and secured $190 million of cover on a per occurrence basis. Queen Street XII Re dac 2016-1 has an industry loss index trigger and provides coverage against U.S. hurricane risk and, contrary to previous issuances, European windstorm. The notes priced at a spread of 5.25%.

"Credit Suisse secures CHF 225 million from first ever operational risk ILS"

Credit Suisse secured CHF225 million of cover from Operational Re Ltd. 2016-1, the first ever operational risk ILS. Credit Suisse teamed up with Zurich Insurance to develop a new type of insurance policy to allow banks to hedge operational tail risk, thus reducing their capital requirements under Basel 2 regulation. Credit Suisse had initially targeted a placement of CHF700 million. Zurich fronted the deal allowing investors to benefit from Zurich's claim management expertise post-event. The SPI will issue the and invest the bond proceeds in collateral assets in the form of ZKB notes. The bond will trigger when Credit Suisse suffers over CHF3.5 billion of losses under the operational risk insurance agreement in any annual risk period. Also maximum amount per event losses cannot exceed CHF3.5 billion. The bond is divided in three senior and a junior tranches: Class A-1, 144A and REG have an expected loss of 0.15% and a 4.50% coupon while the Class B has an expected loss of 0.20% and a 5.50% coupon. The five annual coupons are paid based on the original principal amount, regardless of whether an indemnity payment is triggered. Hence, at inception the capital at risk is around 75% of the principal.

"In Q2 2016 saw two new Florida-based Sponsor Security First Insurance and United Insurance Holdings' subsidiaries (United P&C Insurance, Family Security Insurance and Interboro Insurance) "

Through its first issuance First Coast Re, Security First Insurance Company secured $75 million of fully collateralized protection against Florida Named Storm and Severe Thunderstorm across a three-year term. The structure features an indemnity trigger on a per occurrence basis. During the marketing phase both the target size and the guidance was revised downward.

The third new sponsor of Q2 2016 is United Insurance Holdings through its three subsidiaries: United Property & Casualty Insurance Co., Family Security Insurance Co. and Interboro Insurance Co. They secured fully collateralized coverage against U.S. named storm and U.S. earthquake across a one-year term for their joint reinsurance programme. Laetere Re Ltd. features an indemnity trigger on a cascading per occurrence basis. The bond is divided into three tranches for a total of $100 million of capacity and the ceding insurer pays the premium upfront into the trust account to make up the principal as in standard collateralized re deals. Laetere Re issued zero-coupon discounted notes. The $30 million Class A with an expected loss of 2.76% had a price of 94.00, the $40 million Class B with an expected loss of 5.98% had a price of 90.50, and the $30 million Class C with an expected loss of 13.18% had a price of 82.50.

Q2 2016 Cat Bond Market Issuance Overview (Continued)

"ART secured $185 million of industry loss cover through its latest Blue Halo Re"

Blue Halo Re Ltd. 2016-1 was sponsored by ART Bermuda Ltd, a subsidiary of Allianz Insurance Group. ART is a second time sponsor having sponsored Blue Coast Ltd. in 2008. The transaction features an industry loss (PCS) trigger on a 3-year term aggregate basis and at ART's option, the franchise deductible can be updated at reset calculation. Blue Halo Re Ltd. 2016-1 provides coverage for U.S. named storms and quake, with named storms accounting for roughly 87% of the initial term. The notes are divided in two tranches. Class A with an expected loss of 8.56% priced at a spread of 14.00%, the upper end of guidance, and upsized by 30% to $130 million in size. Class B with an expected loss of 13.19% priced at a spread of 19.00%, the mid of guidance, and upsized by 10% to $55 million in size.

WCMA Interview: James Vickers (Willis Re International)

James Vickers is Chairman of Willis Re International. He joined Willis Faber & Dumas in March 1978 and since 2007 he has served as Chairman of Willis Re International, with specific responsibility for strategy, client development and senior client relationships.

***James Vickers** (Chairman of Willis Re International)*

Q: Have you seen the role capital markets in supporting direct reinsurance placements outside of North America evolve over the last few years?

"ILS Managers have started offering products that buyers can effectively view and administer on the same basis as a traditional reinsurance placement"

As the capital markets have developed a wider range of techniques to access insurance risk, primary insurance companies outside North America who have found the process of public and private catastrophe bond placements somewhat daunting have found some of these new techniques much easier to manage. Collateralised reinsurance using traditional reinsurance paper as a fronting mechanism have proved to be the key tool to unlocking interest and demand. Outside North America there has not been an historic imbalance between supply and demand and faced with sufficient capacity from traditional reinsurance markets buyers have not felt the same degree of pressure to change. Now that ILS Managers have started offering products that buyers can effectively view and administer on the same basis as a traditional reinsurance placement the barriers are being broken down. A number of the larger ILS Managers are further helping the process through the creation of their own rated reinsurance paper.

Q: How do negative interest rates and the limited availability of collateral for some non-USD currencies impact the penetration of ILS solutions outside North America?

Negative interest rates and the availability of non-USD currencies are starting to be an obstacle for some ILS transactions. However the move towards the use of fronting reinsurance paper (either third party or owned and managed by ILS funds) is providing an efficient solution which is gaining traction.

Note: The views expressed herein by Mr Vickers are his personal views and do not reflect the views of Willis Re International or Willis Capital Markets & Advisory or their respective affiliates.

WCMA Interview: James Vickers (Willis Re International) (Continued)

Q: While Japanese sponsors have participated in the ILS market for nearly 20 years, we are witnessing more and more cat bonds issued by Japanese sponsors over the past few years – what are the main reasons behind this? Do you see similar trends to appear in Australia and other countries in Asia, Europe and Latin America?

Japanese have been committed sponsors on cat bonds as outside North America Japan represents one of the key cat exposed territories. Due to market concentration a handful of companies have very large catastrophe exposures linked to their underwriting of long term personal lines products. Against this background obtaining secure, sustainable catastrophe reinsurance cover is of paramount importance to Japanese sponsors. The position of large primary companies in most other catastrophe exposed countries is rather different. In most countries there is not the same degree of market concentration in the primary markets as Japan and the frequency/severity of major catastrophe losses is not as severe in Japan. Similar in most other countries primary policies are written on an annual basis which allows changes in terms and conditions in line with experience. The only other market with a considerable degree of market concentration is Australia but local regulatory requirements there are conducive to the major types of ILS transactions as in other markets.

Q: We are witnessing renewed interest from governments, in particular in East Asia, around the use of (re)insurance through pools and other national schemes as a means to help sustain economic development. Do you think the ILS community has a role to play here?

Clearly the rise in demand from public-private schemes and entities is to be welcomed as it provides new opportunities for the global reinsurance market as a whole. ILS markets will be able to play a role but it may be a more secondary role as the initial capacity and coverage requirements currently favour traditional reinsurers but in time as capacity requirements grow and the buyers' sophistication grows ILS markets will definitely be able to play a role.

Q: Do you have any last words on how you would like to see the reinsurance intermediary role evolve as the ILS market continues to develop?

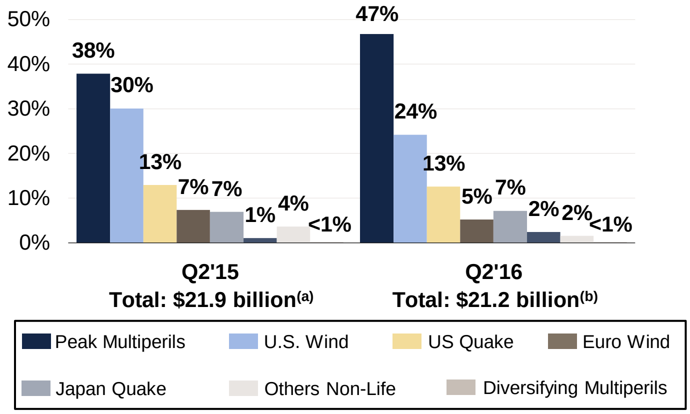
In recent year reinsurance intermediaries' role has evolved towards being a product neutral adviser where they need to be able to clearly and dispassionately assess the value of all available types of transactions and advise their clients accordingly. This is at the heart of the intermediaries' role and as the issues around catastrophe risks being faced by clients outside North America are often not the same as those in North America it has historically been difficult for intermediaries to always be in a position to actively promote ILS markets on a global basis whilst maintaining a product neutral best advice approach. The developments in ILS market techniques and structures is rapidly levelling the playing field and is allowing intermediaries to demonstrate to clients that any administrative or structuring issues are of diminishing importance and the other attributes of ILS markets can be openly assessed. I see intermediaries as playing a continuing role with ILS markets to constantly improve the structures and techniques used to achieve the ultimate goal of parity with traditional reinsurance in terms of ease of use, access and overall efficiency.

Note: The views expressed herein by Mr Vickers are his personal views and do not reflect the views of Willis Re International or Willis Capital Markets & Advisory or their respective affiliates.

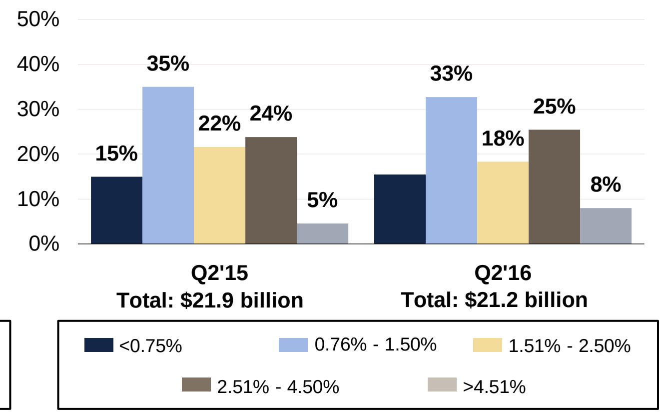
ILS MARKET UPDATE

Q2 2016 Cat Bond Market Statistics

Par Outstanding by Risk Peril

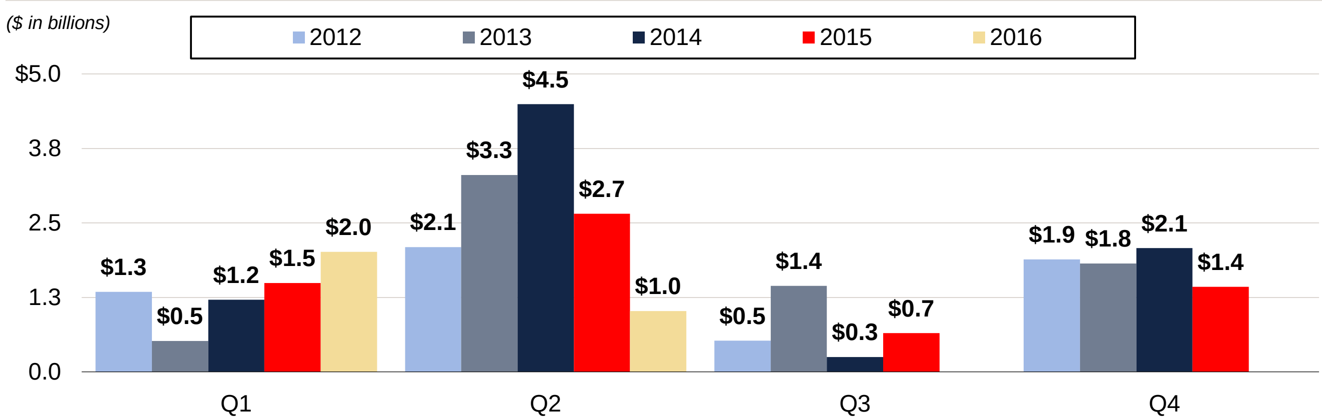


Par Outstanding by Expected Loss at Issuance

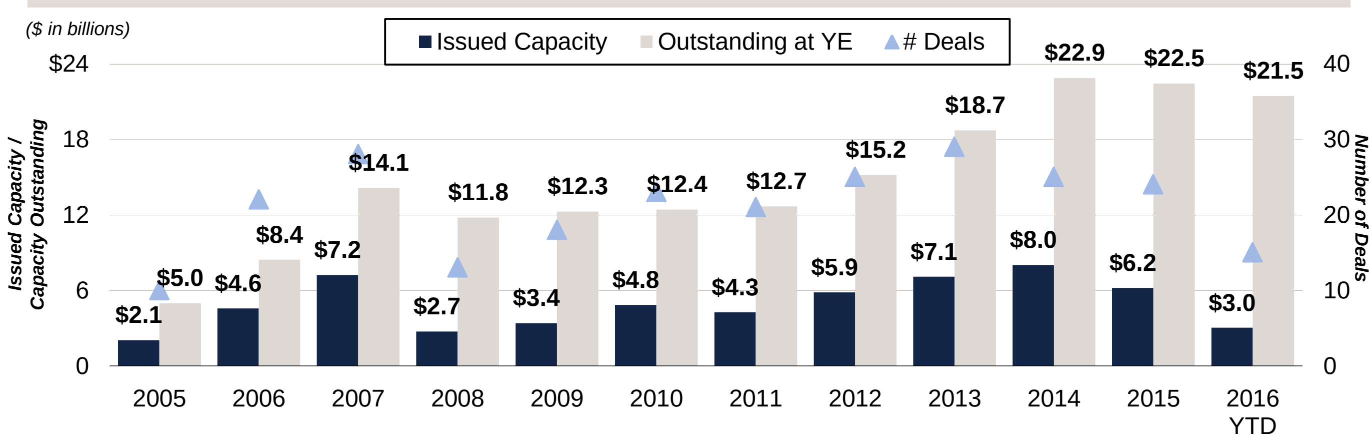


Source: WCMA Transaction Database as of 06/30/2016.
(a) In aggregate, 68% of all capacity outstanding exposed to U.S. Wind.
(b) In aggregate, 71% of all capacity outstanding exposed to U.S. Wind.

Non-Life Cat Bond Issuance by Quarter (2011 – Q2 2016) (c)



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



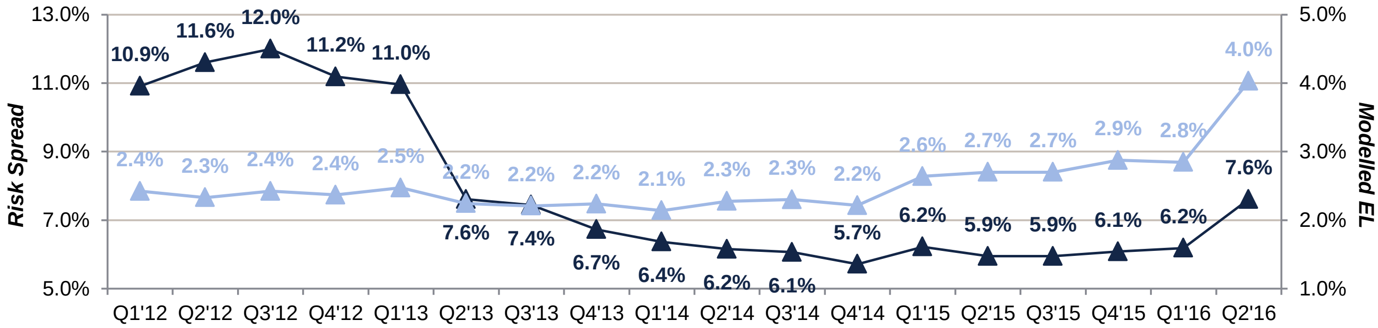
(c) All issuance amounts reported in or converted to USD on date of issuance.
Source: WCMA Transaction Database as of 06/30/2016.
Note: Data excludes private ILS deals with a size smaller than $100 million.

Willis Capital Markets & Advisory

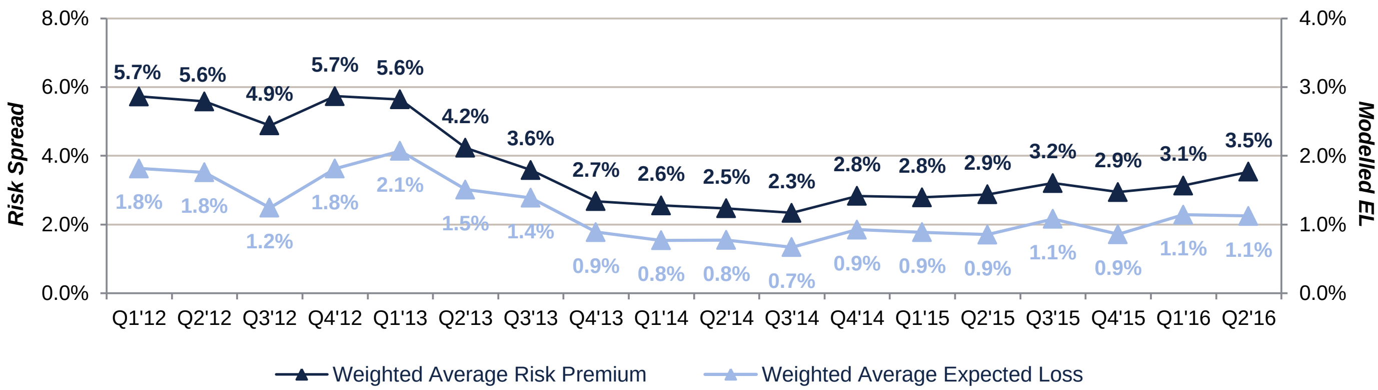
ILS MARKET UPDATE

Q2 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 06/30/2016.
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

"secondary market well bid despite the approaching hurricane season"

Overall investor demand remained high throughout the quarter. Investors were reluctant to sell anything. As a consequence much of the trading occurred around new primary issuance. 2nd quarter trading volume has been relatively light with a good 40 percent of trades focused on diversifiers. This in part reflects the efforts of UCITS fund managers to keep regulators satisfied by continuing to minimize their peak exposures. We continue to see the secondary market well bid despite the approaching hurricane season.

WCMA Contacts

William Dubinsky
Managing Director & Head of ILS

+1 (212) 915-7770

william.dubinsky@willistowerswatson.com

Howard Bruch
Managing Director & Head of S&T

+1 (212) 915-8407

howard.bruch@willistowerswatson.com

Brad Livingston
Vice President

+1 (212) 915-8134

bradley.livingston@willistowerswatson.com

Quentin Perrot
Vice President

+44 20 3124 6499

quentin.perrot@willistowerswatson.com

http://www.willis.com/client_solutions/services/wcma/

The Insurance Industry Experts

New York | London | Hong Kong | Sydney