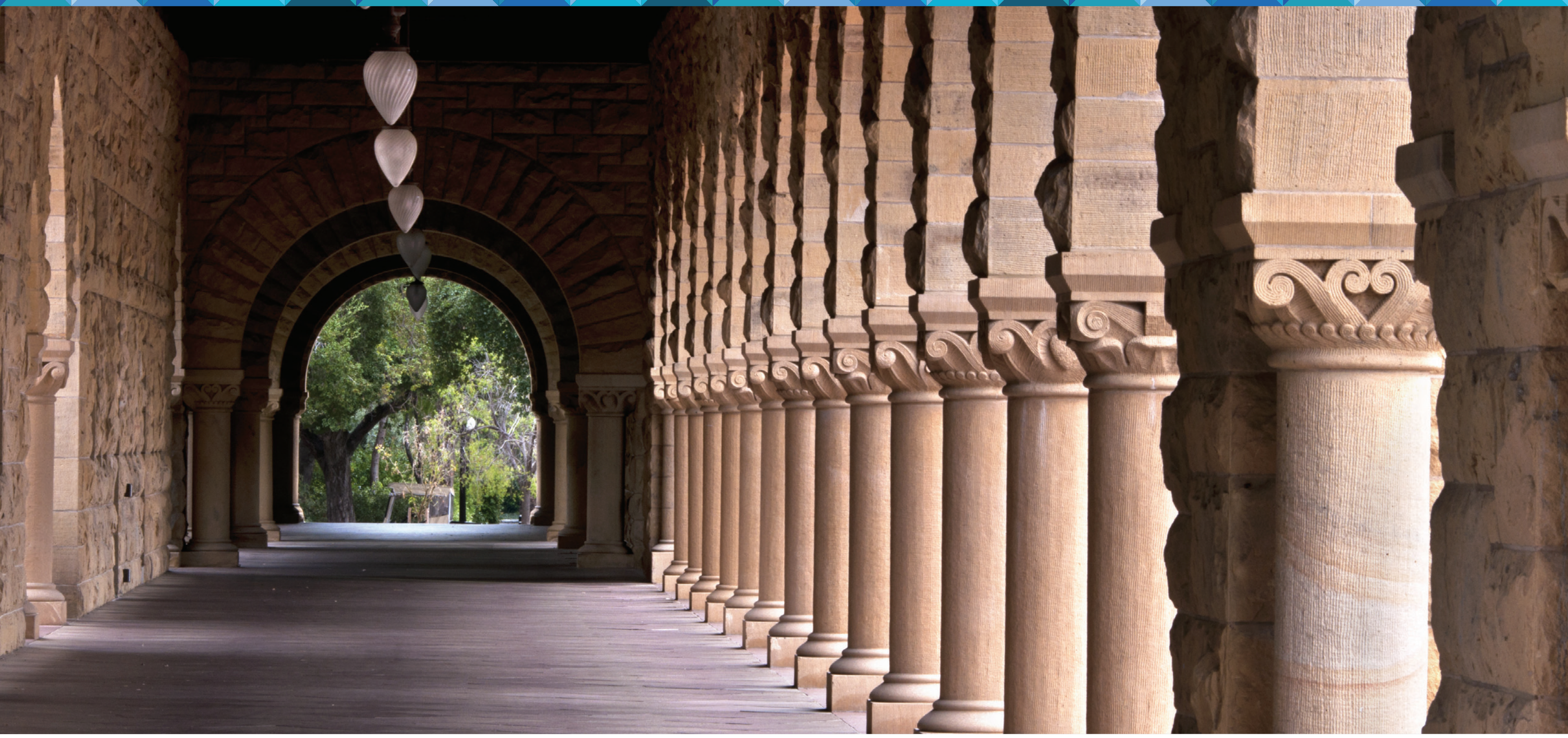
GUY CARPENTER



# CATASTROPHE BOND UPDATE: SECOND QUARTER 2015

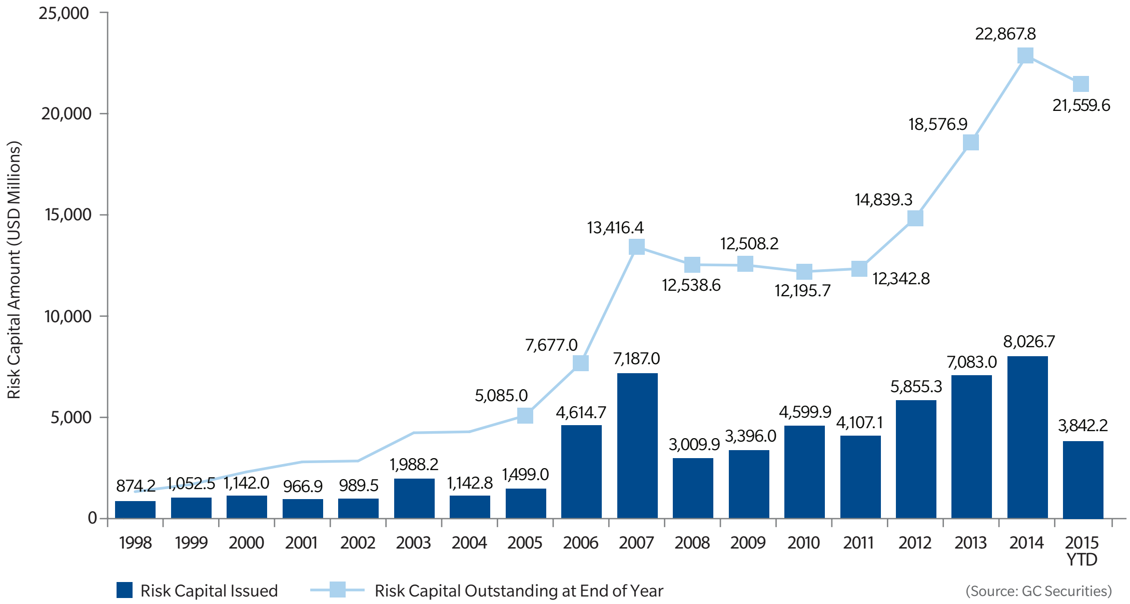
144A property and casualty (P&C) catastrophe bond primary issuance activity was healthy during the second quarter of 2015, recording the fourth highest second quarter on record despite dropping to an aggregate USD2.453 billon in volume. The total was lower than the previous two second quarters of 2013 and 2014 of USD3.303 billion and USD4.492 billion, respectively.

The investor base continued to embrace new sponsors and perils despite the emergence of a pricing floor (primarily for lower expected loss structures) as demonstrated by the pricing of second quarter new issuances. The investor base also supported significant growth in private catastrophe bonds, as issuances rose to their highest levels ever.

Seven sponsors re-entered the market in the second quarter to obtain either additional or replacement coverage for their respective programs. Florida Citizens (Everglades Re II Ltd.), Travelers (Long Point Re III Ltd.), Heritage (Citrus Re Ltd.) and USAA (Residential Reinsurance 2015 Ltd.) successfully executed deals across a broad range of perils and regions.

MARSH & McLENNAN COMPANIES

## F-1 | 144A P&C CATASTROPHE BOND RISK CAPITAL ISSUED AND OUTSTANDING – 1998 TO 2015 YTD




(Source: GC Securities)

The Massachusetts Property Insurance Underwriting Association (MPIUA) successfully issued USD300 million Series 2015-1 Notes via Cranberry Re Ltd., with the assistance of Hannover Ruck as the transformer reinsurer. MPIUA first utilized the cat bond market in 2010 via Shore Re Ltd., however, MPIUA did not elect to renew the bond at maturity in 2013. The Series 2015-1 Notes, with an annual aggregate indemnity trigger and exposure to losses resulting from named storms, severe thunderstorms and winter storms, assisted MPIUA in transforming their entire reinsurance program into an annual aggregate format — a significant milestone for the residual market insurer. Additionally, this was the first multi-peril catastrophe bond issuance to benefit a residual market insurer and was notable for not using a third-party event identification source for the perils of severe thunderstorms or winter storms.

## T-1 | CRANBERRY DEAL PROFILE

| Series 2015-I Notes | |
|---|---|
| Issuer | Cranberry Re Ltd. |
| Peril | Any Named Storm Event, Severe Thunderstorm Event or Winter Storm Event |
| Covered Areas | The State of Massachusetts |
| Trigger | Indemnity; Annual Aggregate |
| Risk Period | 3 years |
| Modeling Firm | AIR Worldwide Corporation |
| Collateral | U.S. Treasury Money Market Funds |
| Expected Loss | 1.377% (base)/1.383% (sensitivity) |
| Attachment Point | $300,000,000; P(attach) = 3.081 (base)/3.102% (sensitivity) |
| Exhaustion Point | $1,400,000,000; P(exhaust) = 0.697% (base)/0.699% (sensitivity) |
| Issuance Amount | $300M |
| Initial Spread | 3.80% |

Source: Marsh

The successful issuance of USD100 million Series 2015-1 Notes from a newly established catastrophe bond program, Pelican III Re Ltd., benefited Louisiana Citizens (LA Citizens) and highlights the significant changes to catastrophe bond pricing over the past several years. The Series 2015-1 Notes represent the third time that the Louisiana insurer of last resort has utilized the capital markets to secure catastrophe bond-based reinsurance protection. In renewing the protection, LA Citizens obtained a reinsurance protection risk level similar to that of the 2012 placement (as measured by the reinsurance layer's expected loss). The cost of cover was less than half the 2012 price and also included improvements in other terms and conditions, including a 30-day liquidity advancement feature and improved variable reset flexibility.

## T-2 | PELICAN DEAL PROFILE

| Series 2015-I Notes | |
|---|---|
| Issuer | Pelican III Re Ltd. |
| Peril | Named Storm |
| Covered Areas | Louisiana |
| Trigger | Indemnity; per occurrence |
| Risk Period | 3 years |
| Modeling Firm | AIR Worldwide Corporation |
| Collateral | U.S. Treasury Money Market Funds |
| Expected Loss | 3.23% (base)/3.51% (sensitivity) |
| Attachment Point | $175,000,000; P(attach) = 4.44 (base)/4.81% (sensitivity) |
| Exhaustion Point | $319,000,000; P(exhaust) = 2.35% (base)/2.57% (sensitivity) |
| Issuance Amount | $100M |
| Initial Spread | 6.00% |

Source: Marsh

The largest issuance of the quarter (and the first half of the year) was the Alamo Re Ltd. Series 2015-1 Notes that benefited the Texas Windstorm Insurance Association (TWIA). The two classes within the Series 2015-1 bonds were positioned alongside TWIA's traditional reinsurance program to provide annual aggregate protection from named storms causing at least USD50 million in loss to the association. The Series 2015-1 Class A Notes provide three years of risk transfer protection while the Series 2015-1 Class B Notes provide four years of protection. Additionally, the bonds were positioned below and above, respectively, the Series 2014-1 catastrophe bonds that remained outstanding after being issued in 2014 and they provide risk transfer protection for two future hurricane seasons. The three tranches were prudently designed to best manage the amount of catastrophe bond capacity maturing at any point in time to mitigate any refinancing risk associated with that capacity upon its maturity. With the combined Series 2014-1 and 2015-1 Notes outstanding, TWIA has obtained a total of USD1.1 billion of catastrophe bond-based protection, which makes it the sixth largest P&C catastrophe bond sponsor overall based on capacity outstanding as of July 31, 2015.

## T-3 | ALAMO DEAL PROFILE

| Series 2015-I Notes | | |
|---|---|---|
| Issuer | Alamo Re Ltd. | |
| Peril/Covered Area | Named Storm in the State of Texas | |
| Trigger | Indemnity; Annual Aggregate | |
| Risk Period | 3 years | |
| Modeling Firm | AIR Worldwide Corporation | |
| Collateral | U.S. Treasury Money Market Funds | |
| | **Class A** | **Class B** |
| Expected Loss | 2.46% / 2.68% | 1.42% / 1.58% |
| | base / sensitivity | base / sensitivity |
| Attachment Point | $2,600,000,000 | $4,000,000,000 |
| | 2.74% / 2.99% | 1.61% / 1.77% |
| | base / sensitivity | base / sensitivity |
| Exhaustion Point | $3,200,000,000 | $4,800,000,000 |
| | 2.14% / 2.36% | 1.30% / 1.44% |
| | base / sensitivity | base / sensitivity |
| Issuance Amount | $300M | $400M |
| Initial Spread | 5.90% | 4.60% |

Source: Guy Carpenter

## NEW SPONSORS

Insurance-linked securities (ILS) investors' high demand for non-traditional diversifying and non-traditional exposures continued to warrant new sponsors' evaluation of alternative capital for protection in regions not yet ceded to the alternative capital and/or catastrophe bond market.

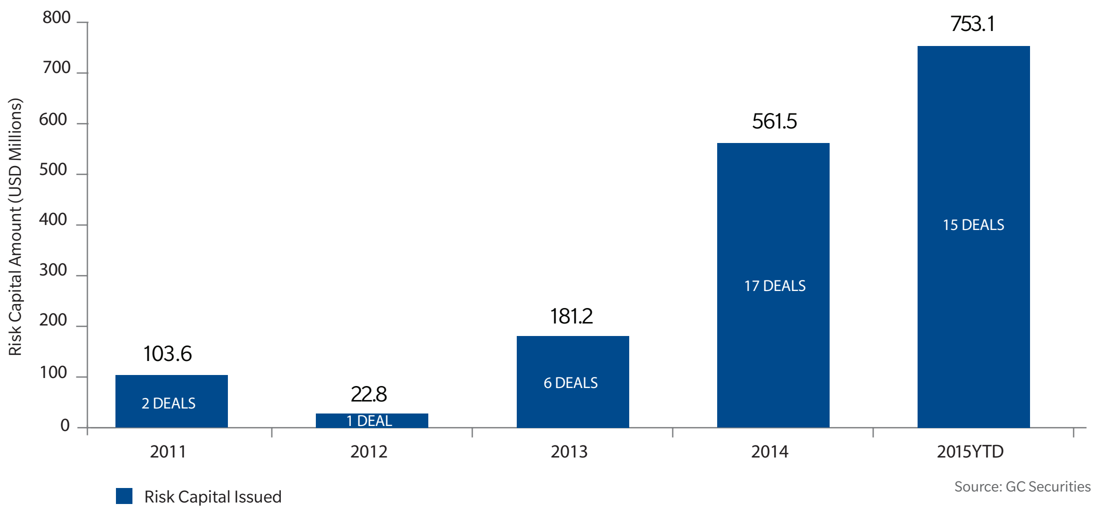
The second quarter featured the successful execution of Azzurro Re I, the first catastrophe bond to securitize European earthquake risk on an indemnity basis. First time sponsor UnipolSai Assicurazioni took advantage of favorable capital market conditions to source protection against the exposure on an indemnity per occurrence basis. Investor interest in the Azzurro Re I Notes resulted in the transaction being upsized to EUR200 million.

An exciting development in the second quarter was the Panda Re Ltd. Series 2015-1 Notes, which was the first bond to provide protection against a Chinese peril and the first ILS transaction issued by a Chinese sponsor. The Series 2015-1 Notes provide China Re retrocession protection against earthquake-related losses in China on an indemnity basis. China Re sought the expertise and knowledge of GC Securities*, the sole structuring and placement agent on the deal, for an introduction to the ILS market and for guidance in accessing the capital markets. The Series 2015-1 Notes have a three-year term effective July 1, 2015 and feature an indemnity trigger on a per occurrence basis. While the bond was structured in private placement format, the transaction comprised many of the structural features found in 144A placements. The bond aimed to minimize foreign exchange risk with its design of the response to an earthquake event while balancing and optimizing the participation of capital markets investors, with the issuance of the bond in U.S. dollar denomination.

## PRIVATE CAT BOND MARKET

The private catastrophe bond market continued its significant growth in the second quarter as nine deals came to market representing USD556.32 million of risk capital, outpacing the growth in the 144A catastrophe bond market. AIG elected to pursue a USD300 million private cat bond as opposed to the 144A cat bond format used for its prior catastrophe bond issuances. The six-month risk period cat bond exposed to named storms was structured in a zero-coupon bond format and with a trigger based on a parametric index. As of June 30, 2015, the size of private cat bond transactions ranged from as small as USD3.75 million to as large as AIG's USD300 million bond. The average size of private transactions in 2015 year-to-date (YTD) is USD50.2 million.

### F-2 | PRIVATE CATASTROPHE BONDS: RISK CAPITAL ISSUED



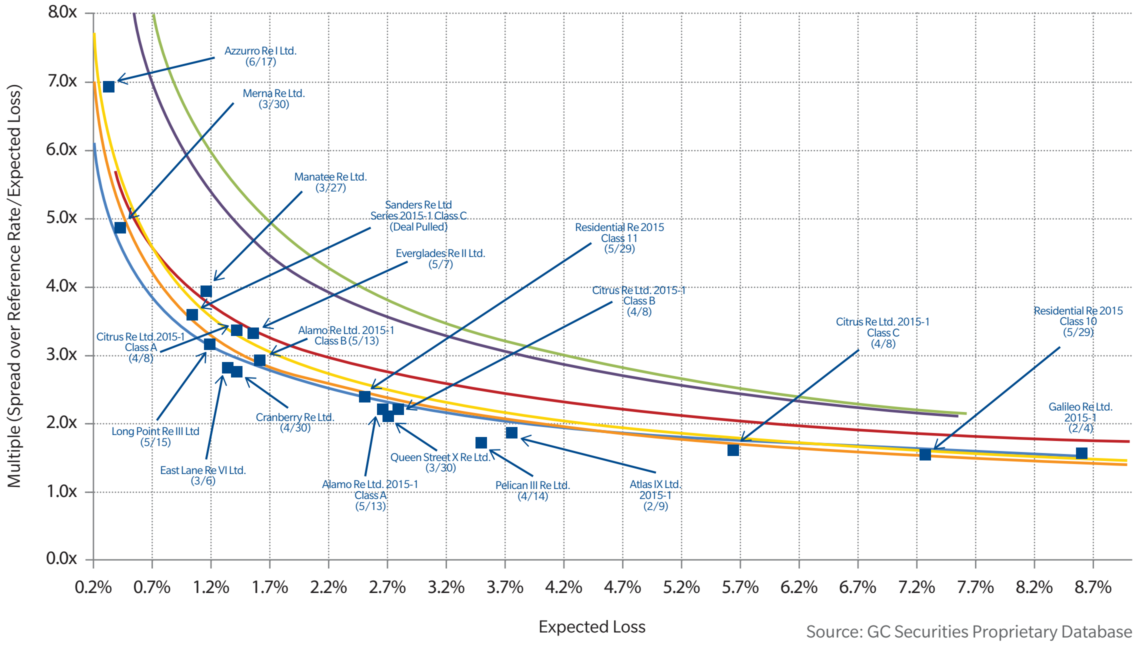

Source: GC Securities

Note: Private catastrophe bonds as of June 30, 2015 excluding deals currently being marketed.

## PRICING TRENDS

An interesting pricing trend in the cat bond market that developed further in the second quarter (a trend that we expect to continue to see for the near future) was a pricing floor particularly for lower expected loss catastrophe bond structures. As illustrated in the figure below, this development was further evidenced by the secondary pricing of outstanding 144A P&C catastrophe bonds. The secondary pricing trend curve has trended upward throughout the year. As of June 30, 2015, it was sitting above the 2015 initial issuance trend curve, suggesting that investors are demanding a higher spread than the primary issuance spread in order to facilitate a trade in the secondary market. This was particularly noticeable in the transactions with a lower expected loss, as the secondary trading curve sat above 2015 YTD and 2014 primary issuance and alongside the 2013 primary issuance curves. The reach for yield, even within the catastrophe bond asset class, has resulted in some investors reducing allocations to lower expected loss deals. This should encourage sponsors to cede less remote risks to the capital markets where a pricing floor is not yet definitive.

## F-3 | PRICING TRENDS




Source: GC Securities Proprietary Database

■ 2015 Issuances — 2015 Initial Issuance[1] — 2014 Initial Issuance — 2013 Initial Issuance
— 2012 Initial Issuance — 2011 Initial Issuance[2] — June 30th Secondary

1. Kizuna Re II Ltd. not displayed (EL 0.018%, 11.1x).
2. Excludes Combine Re Class A
Note: P&C catastrophe bonds as of June 30, 2015 excluding private transactions.

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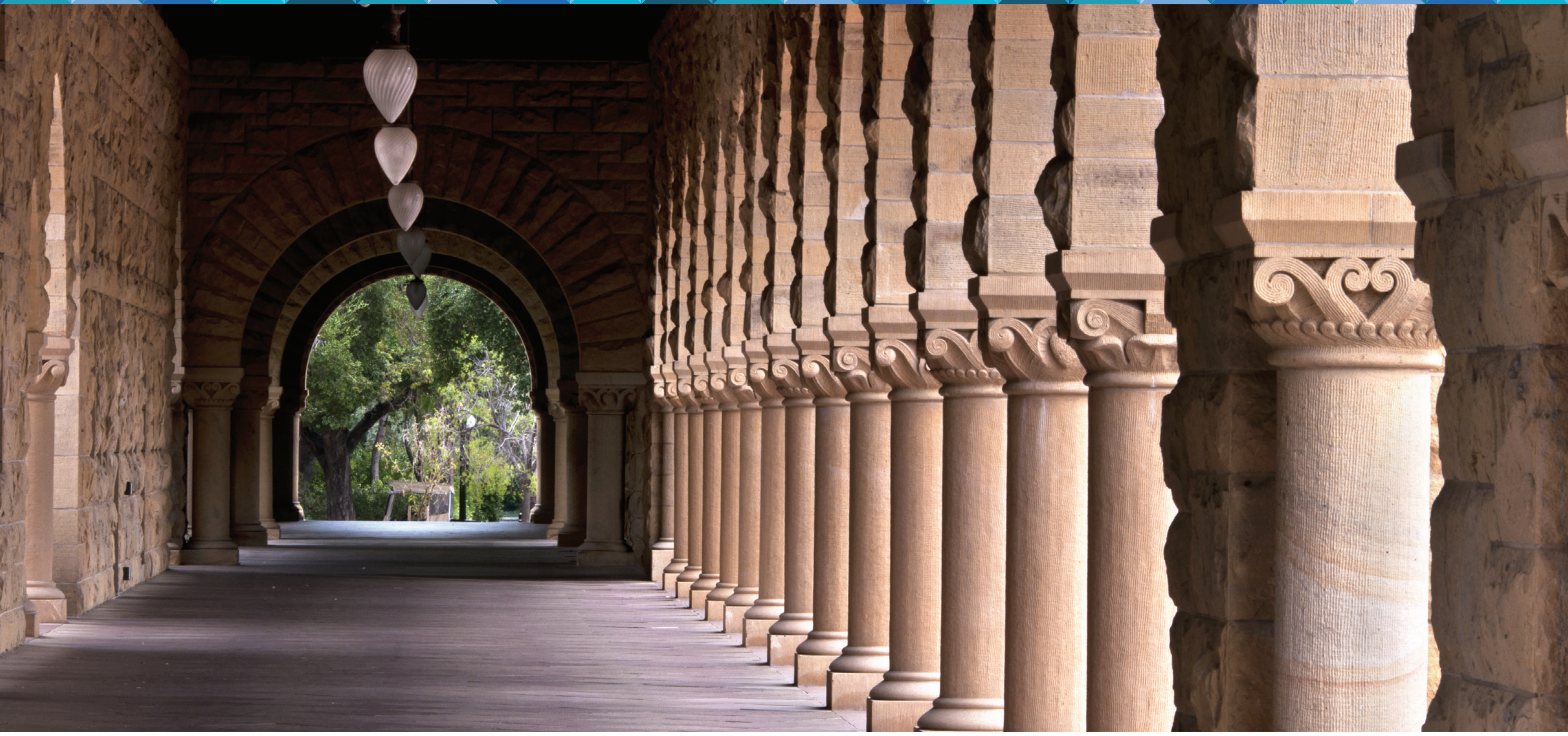

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