



# Q3 2015 Catastrophe Bond & ILS Market Report

A market making steady progress

# ARTEMIS

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# INTRO

This report reviews the catastrophe bond and insurance-linked securities (ILS) market at the end of the third-quarter of 2015, looking at new risk capital issued and the composition of transactions completed during the quarter.

The third-quarter is typically a quieter period for catastrophe bond and ILS issuance, coming on the heels of the key June/July renewals when many cat bonds are renewed and issued. While this remained the trend in 2015 with Q3 issuance lower than the previous two quarters, cat bond and ILS market issuance during the quarter totalled \$1.093 billion, the second highest Q3 volume ever recorded by Artemis.

The \$1.093 billion of risk capital issued during the third-quarter came from nine transactions, five of which would be considered 'cat bond lite' transactions. Q3 also witnessed the first ever catastrophe bond focused on Chinese risks, in Panda Re, which brought some welcomed geographical and peril diversification to the market.

While Q3 2015 failed to break any records, issuance was strong and investor appetite continued pace from the levels seen in 2014 and the first-half of this year, taking the total outstanding catastrophe bond and ILS market size to \$25.026 billion, higher than it was a year earlier, at the end of Q3 2014.

Artemis is the leading, freely accessible source of timely, relevant and authoritative news, analysis, insight and data on the insurance-linked securities, catastrophe bond, alternative reinsurance capital and related risk transfer markets. The Artemis Deal Directory is the leading, freely available source of information, data and analysis on issued catastrophe bond and insurance-linked securitization transactions.

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# Transaction Recap

In line with a typical third-quarter, July, August and September 2015 saw 11 tranches of catastrophe bond and ILS notes from nine deals recorded in the Artemis Deal Directory. The majority of issuance came from returning sponsors, making up just shy of \$1 billion, or 91% of Q3 issuance.

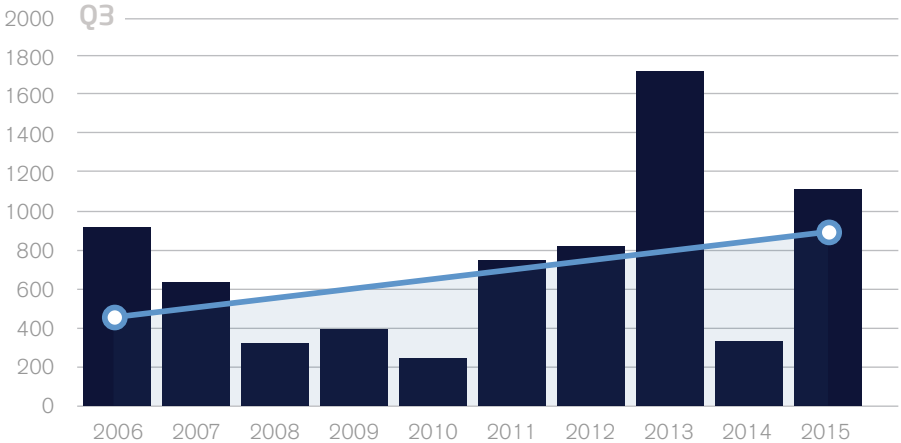
One new sponsor came to market during Q3, the pioneering, privately placed Panda Re deal from China Re, the first catastrophe bond focused on Chinese risks. Despite being relatively small, at \$50 million, Panda Re offered investors some welcomed geographical and peril diversification, underlining the potential for further cat bonds focused on Chinese risks.

More than half of the transactions brought to market in the third-quarter of 2015 were privately placed. However, owing to their typically smaller size, the five deals, which include Panda Re, the return of the Dodeka series, two Kane SAC transactions, and some Japanese earthquake diversification from Tokio Millennium Re's Hotaru deal, contributed just \$143.8 million, or 13% of the total risk capital issued in Q3.

ISSUER	SPONSOR	PERILS	SIZE (\$M)	DATE
Ursa Re Ltd. (Series 2015-1)	California Earthquake Authority	California earthquake	250	Sep
Bosphorus Ltd. (Series 2015-1)	Turkish Catastrophe Insurance Pool	Turkey earthquake	100	Aug
Bellemeade Re Ltd. (Series 2015-1)	United Guaranty (AIG)	Mortgage insurance losses	298.888	Jul
Kane SAC Limited - Series Ax Notes	Unknown	?	9.722	Jul
Acorn Re Ltd. (Series 2015-1)	Hannover Rück SE / Oak Tree Assurance, Ltd.	U.S. earthquake	300	Jul
Kane SAC Limited - Tralee	Unknown	?	176	Jul
Hotaru	Tokio Millennium Re AG	Japanese earthquake	47.6	Jul
Dodeka VII	Unknown	U.S. property catastrophe risks	18.899	Jul
Panda Re (Series 2015-1)	China Property and Casualty Reinsurance Company (China Re)	China earthquake	50	Jul

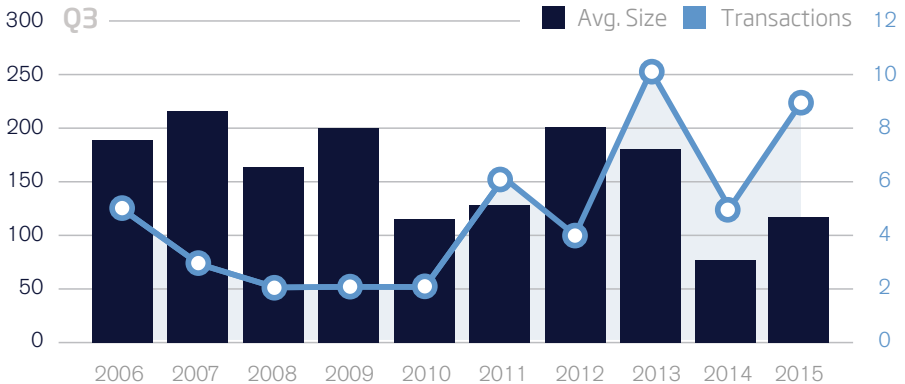
## Q3 ILS issuance by year (\$M)

The third quarter of 2015 saw \$1.093 billion of new risk capital issued in the global catastrophe bond market, taking this year's total issuance to \$6.316 billion. Q3 issuance in 2015 was roughly \$729 million higher than the same period last year, but roughly \$613 million less than Q3 2013, highlighting the divergent issuance levels that have proved typical during the quarter over the last decade. In line with the strong issuance trend witnessed throughout 2014 and so far in 2015, third-quarter catastrophe bond issuance was the second highest ever recorded by the Artemis Deal Directory.



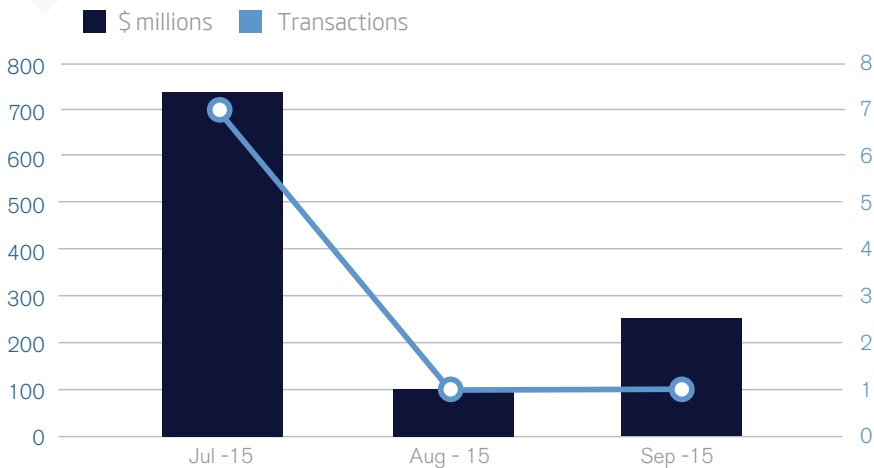
## ILS average transaction size & number of transactions by year (\$M)

The average transaction size during Q3 2015 was roughly \$36 million below the ten-year (2006-2015) average, totalling \$121.4 million, while the number of transactions, nine, was significantly above the ten-year average (4.9 transactions) for the period. Discounting any private cat bond transactions, a growing area of the market, and the average transaction volume spikes to approximately \$237 million from four transactions.



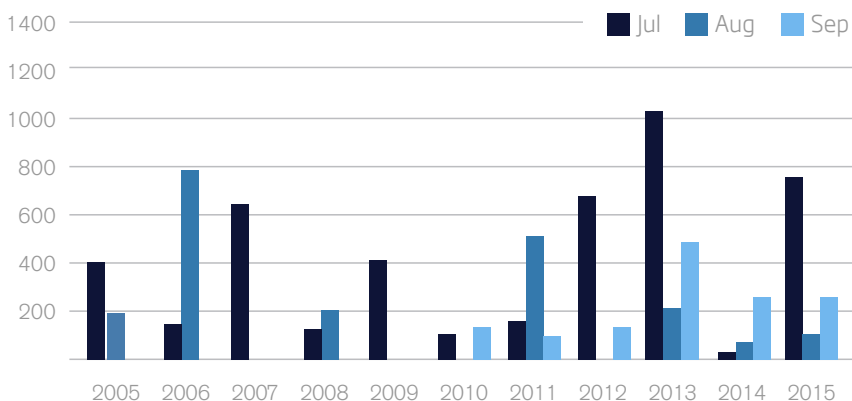
## Number of transactions and volume issued by month (\$M)

Unlike in 2014 and in line with a more typical third quarter, July witnessed the highest level of issuance of the three months, at \$743 million, or 57% of total cat bond transactions issued during the quarter. August and September did see some deals come to market but July's dominance was underlined by a number of private deals and the \$300m Acorn Re transaction, the largest cat bond of the quarter.



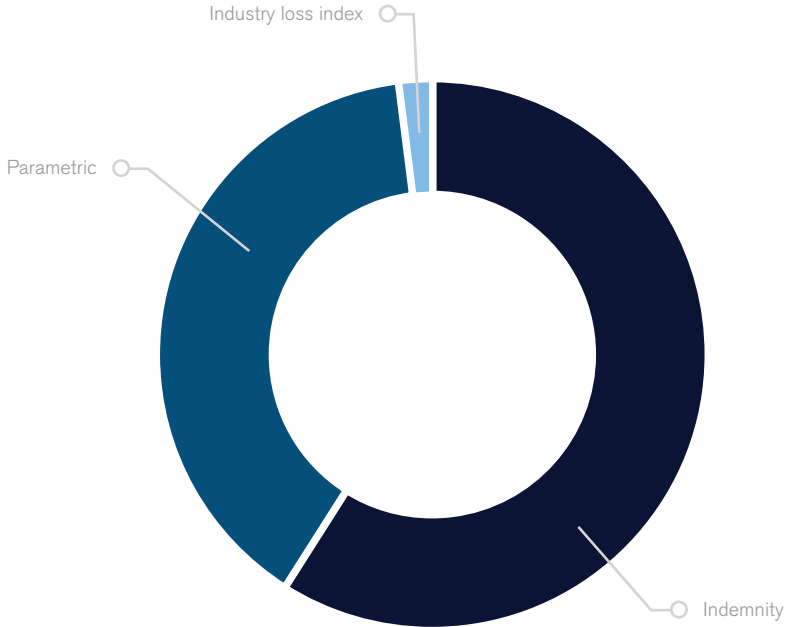
## Q3 issuance by month & year

Data from the Artemis Deal Directory shows that issuance during Q3 can be sporadic. In the last decade cat bonds have consistently been issued in July, while August and September have on occasions seen no deals come to market. However, the strong volume of deals at the start of the quarter helped Q3 cat bond issuance surpass the \$1 billion mark for the second time.



## Q3 2015 ILS issuance by type

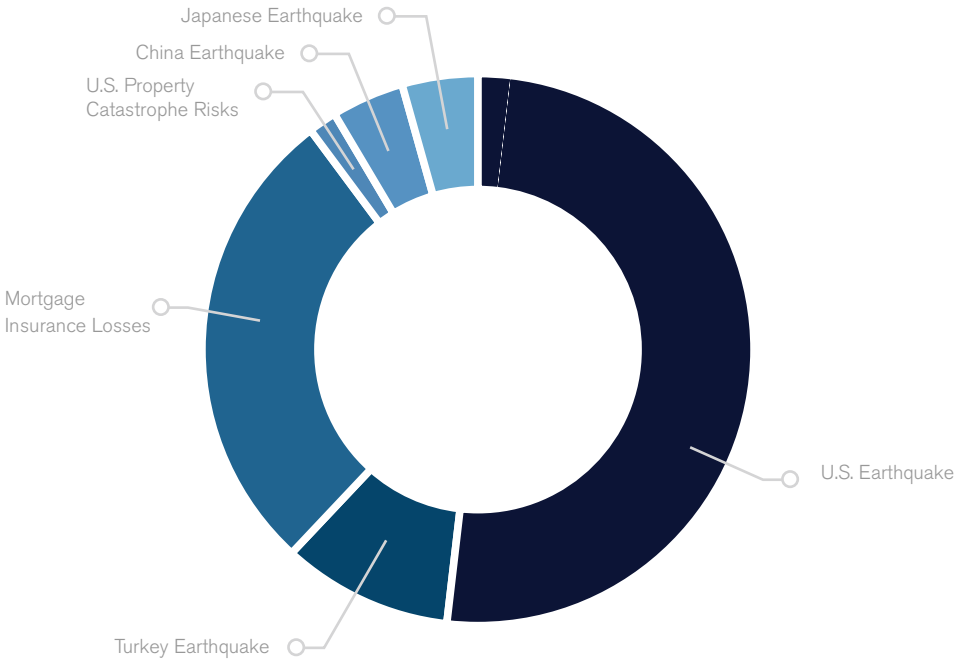
In line with the first-half of 2015 indemnity protection remained the most utilised trigger during Q3, falling just behind the \$600 million mark, and representing 58.8% of protection secured during the quarter.



Panda Re, Bellemeade Re and the California Earthquake Authority's (CEA) Ursa Re all used an indemnity trigger, taking total protection secured during Q3 on an indemnity basis to \$598.9 million of total risk capital issued and tracked by Artemis. The familiar Dodeka platform returned to the market in Q3, bringing some diversification to investors and securing \$18.9 million of industry loss trigger protection. The Turkish Catastrophe Insurance Pool's (TCIP) Bosphorus transaction, and the Acorn Re issuance brought \$400 million of parametric risk to investors during the third-quarter.

## Q3 2015 ILS issuance by peril

U.S. earthquake risks dominated issuance during Q3, with the bulk coming from the \$300 million Acorn Re U.S. but California focused quake deal and \$250 million of California earthquake risk from Ursa Re.

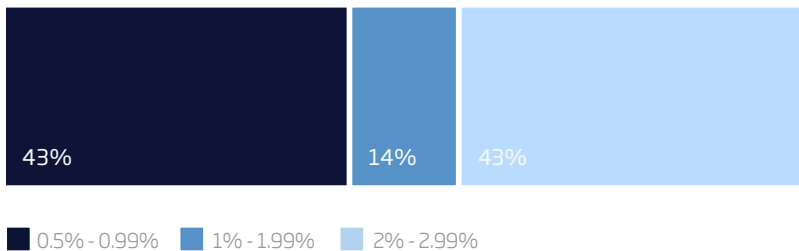


Additionally \$100 million of Turkey earthquake risk was issued by returning sponsor TCIP, while Tokio Millennium Re AG returned with some Japanese earthquake diversification, and the pioneering Panda Re brought Chinese earthquake risk to the market for the first time. As a result, global quake coverage during the third-quarter equalled \$747 million, or 68% of total risk capital issued and tracked by Artemis.

AIG returned to the market with a unique offering for investors, securing \$298.9 million of protection against mortgage insurance portfolio risks, amounting to 28% of total risk capital issued in Q3. Dodeka's return saw just \$18.9 million of U.S. property catastrophe risks return to market during Q3.

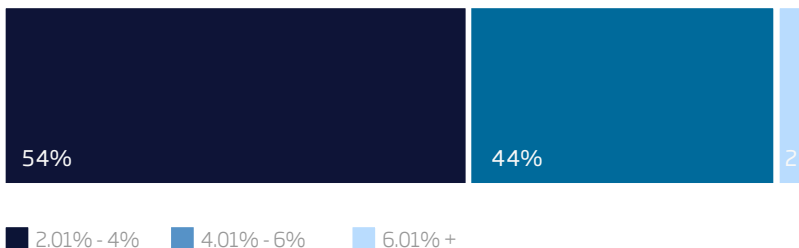
## Q3 2015 ILS issuance by expected loss

During the third-quarter just four tranches of notes came to market that we have expected loss figures for (which equals \$700 million of the risk capital issued), with capital deployment being split between three expected loss ranges. The lowest risk cat bond brought to market in Q3 was also the largest in volume, as Acorn Re offered investors an expected loss of 0.74%. The highest level of risk came from the CEA with its Ursa Re cat bond, which had an expected loss of 2.12%. The remaining \$100 million, or 14% of issuance had an expected loss of between 1% - 1.99%. The average expected loss in Q3 was 1.75%.



## Q3 2015 ILS issuance by coupon pricing

Falling back in line with the pricing trend witnessed at the end of 2014 and Q1 2015, the majority of third-quarter catastrophe bond and ILS capital deployed offered investors a yield of below 4%. This amounts to roughly \$540 million, or 54% of ILS issuance that we have pricing data for (which equals \$998.9 million of total risk capital issued). The highest priced deal came from the Class B-1 tranche of Bellemeade Re notes, with a coupon of 6.3%, the only deal to price above the 6% mark. \$444.3 million, or 45% of deals pay investors a coupon of 4% - 6%.

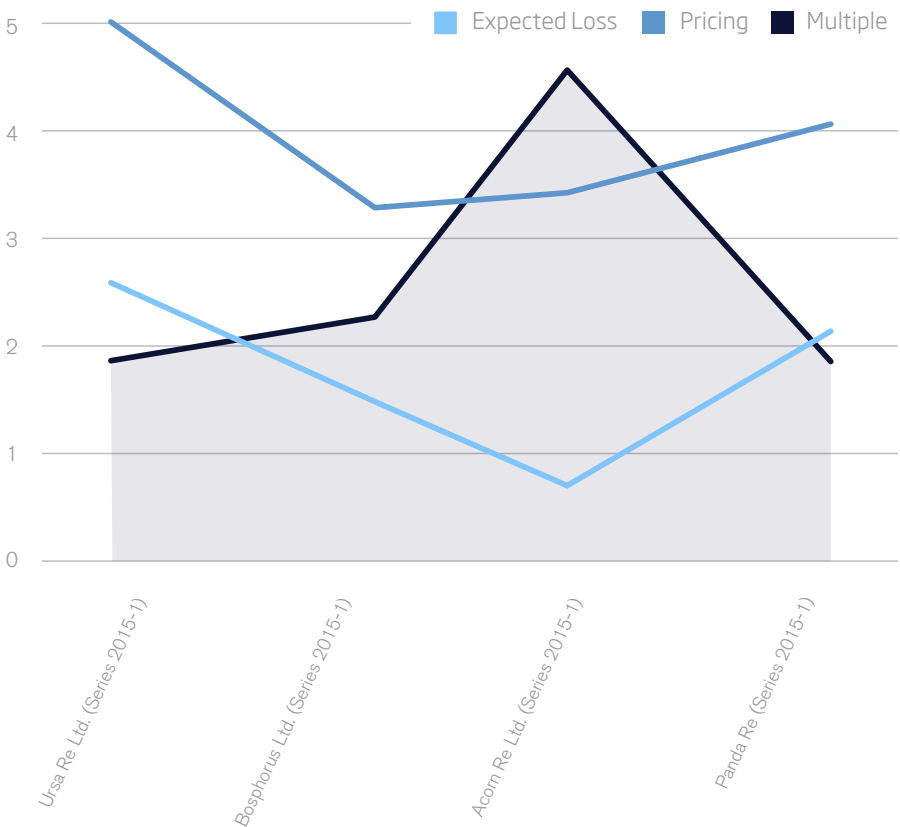




## Pricing Multiples

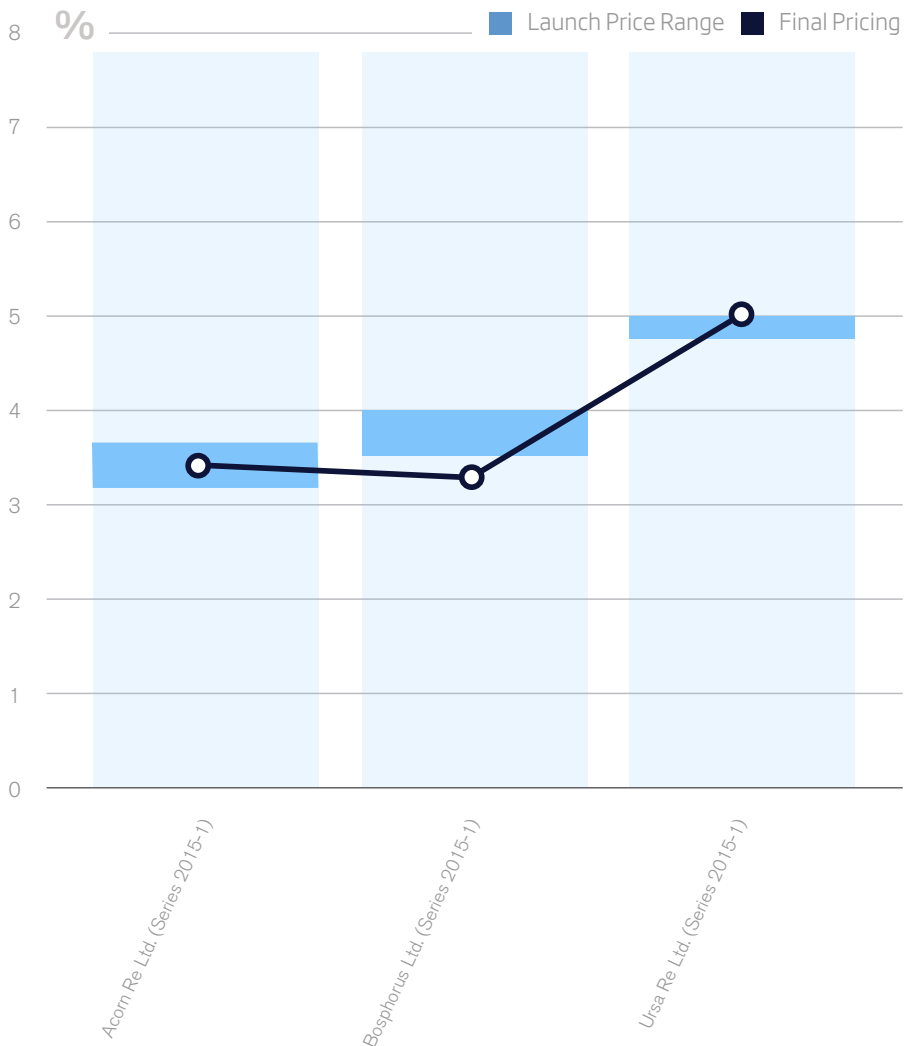
The average multiple (price coupon divided by expected loss) during Q3, of the deals we have pricing and expected loss data for (which equals \$700 million of total risk capital issued) was 2.65. This is somewhat lower than the average multiple seen in Q2 and more in line with the average multiple witnessed in Q1 and towards the end of last year. Continuing the pricing behaviour witnessed in Q2 2015, the majority of deals in the quarter priced at or above the initial price guidance, underlining discipline and price stabilisation in the cat bond and ILS market.

Panda Re and Ursa Re both saw multiples fall below 2 during the quarter, a sign that some investors are willing to take on more risk in return for greater yield, in a challenging market environment.



## Cat bond and ILS price changes during Q3 2015 issuance

Just three of the catastrophe bond and ILS transactions that completed in the third-quarter had full pricing data available (which equals \$650 million of total risk capital issued). Of these, just one deal, Bosphorus from the TCIP, priced below the initial price guidance, further evidence of some price stabilisation in the cat bond and ILS market. The average price change during the third-quarter of 2015 was -3.59%, compared with 0.86% during Q2.

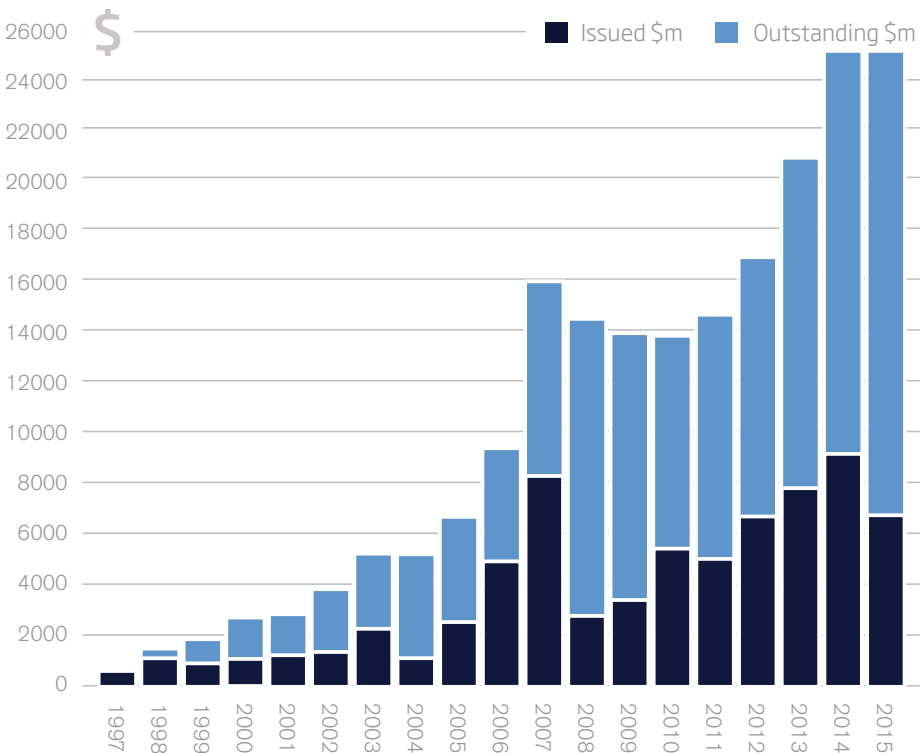


## Issued Outstanding

A reverse of the trend witnessed last year saw issuance during the third-quarter outpace catastrophe bond and ILS maturities, meaning the outstanding cat bond market grew by roughly \$500 million, ending the quarter at a size of \$25.026 billion. Total cat bond maturities so far in the year amounts to \$6.853 billion, with the bulk occurring in the first-half of the year.

Q3 typically sees fewer cat bond and ILS deals come to market. But revealing just how strong 2015 has been, issuance to date equals \$6.316 billion, only \$316 million less than the same period last year. For the second time since the catastrophe bond market's inception issuance surpassed \$1 billion in Q3, second only to 2013, which saw \$1.705 billion of total risk capital issued during the period.

\$764 million worth of deals are set to mature in the final quarter of the year, \$151 million more than experienced in Q3. With investor appetite predicted to persist it is to be expected that the outstanding market achieves outright growth in 2015.



If you want to see full details of every catastrophe bond and ILS transaction included in the data in this report please visit [www.artemis.bm/deal\\_directory/](http://www.artemis.bm/deal_directory/)



All catastrophe bond and ILS issuance data sourced from the Artemis Deal Directory.

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**CONTACT ARTEMIS:**

Steve Evans, Owner/Editor  
steve@artemis.bm  
+44 (0) 7711 244697

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