



Q3 2016 Catastrophe Bond & ILS Market Report

Weather risk returns, private
deals, market growth

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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 2016, looking at new risk capital issued and the composition of transactions completed during the quarter.

Data from the Artemis Deal Directory shows that the third-quarter of 2016 saw catastrophe bond and ILS issuance surpass \$1 billion for the third time in the last decade, exceeding the ten-year average of \$742 million.

Issuance in Q3 totalled \$1.087 billion from eight transactions, making it the third most active Q3 of the last decade, in terms of deal volume, and one of the busiest in the market's history in terms of number of deals. Strong investor appetite for catastrophe bond and ILS investment saw the outstanding market size increase from the \$25.174 billion recorded at the end of Q2, to \$25.449 billion.

In line with the second-quarter of this year, and in terms of number of deals, private catastrophe bond issuance dominated the marketplace in Q3, as smaller deals were issued through frequently used issuance platforms. Offsetting the smaller size of private cat bonds issued in the quarter, returning sponsors' of larger transactions helped the outstanding market grow since the end of the second-quarter.

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 source of information, data and analysis on issued catastrophe bond and insurance-linked securitization transactions.

Transaction Recap

8 deals consisting of 9 tranches of notes came to market in Q3, resulting in \$1.087 billion of new catastrophe bond risk capital issued.

In terms of number of deals, unknown sponsors dominated issuance in the third-quarter as a number of smaller, private deals came to market. The six private, or cat bond lite, transactions that were issued in the third-quarter amounted to just \$162 million, or 15% of total risk capital issued, and covered temperature, U.S. property catastrophe, and North east U.S. named storm risks.

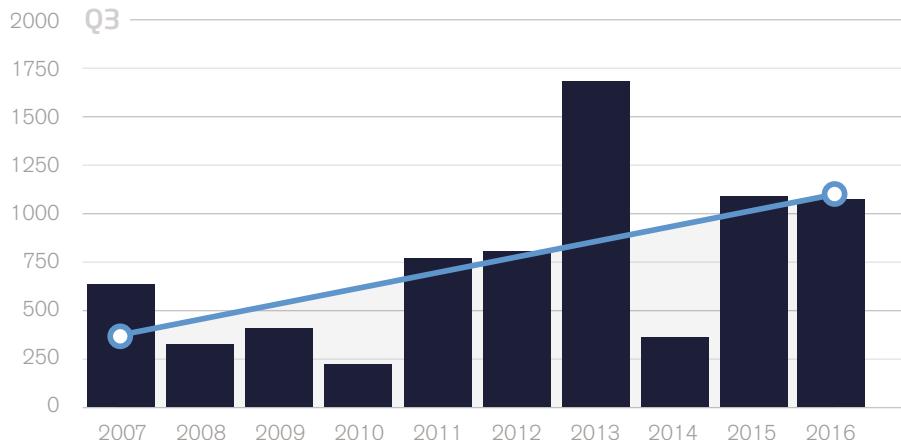
One of the private deals issued in Q3 disclosed very little information, so we are unsure of both the trigger structure and peril covered, along with expected loss and pricing metrics.

Zenkyoren returned to the market in Q3 with \$700 million of Japan earthquake risk, the largest deal issued in any third-quarter since the market's inception. Allianz Risk Transfer brought two separate deals to market in the third-quarter, including the innovative Market Re Ltd. (Series 2016-5) Class A deal, that offers protection for temperature risks. Blue Halo Re Ltd. (Series 2016-2) Class C also came from Allianz Risk Transfer, and brought \$225 million of U.S. named storm and U.S. earthquake risk to market.

ISSUER / TRANCHE	SPONSOR	PERILS	SIZE (\$M)	DATE
Nakama Re Ltd. (Series 2016-1) Class 1	Zenkyoren	Japan earthquake	550	Sep
Nakama Re Ltd. (Series 2016-1) Class 2	Zenkyoren	Japan earthquake	150	Sep
Market Re Ltd. (Series 2016-5) Class A	Allianz Risk Transfer	Temperature risks	30.75	Sep
Artex SAC Limited - Series CX Notes	Unknown		8.947	Aug
Dodeka X	Unknown	U.S. property catastrophe risks	21.274	July
Blue Halo Re Ltd. (Series 2016-2) Class C	Allianz Risk Transfer	U.S. named storm, U.S. earthquake	225	July
Dodeka V-2016	Unknown	U.S. property catastrophe risks	11.49	July
Dodeka IX	Unknown	U.S. property catastrophe risks	14.55	July
Market Re Ltd. (Series 2016-3)	Unknown	North east U.S. named storms	75	July

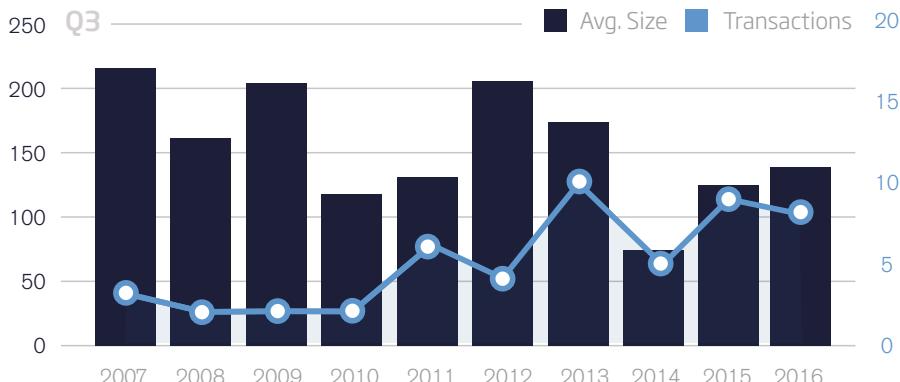
Q3 ILS issuance by year (\$M)

For the third time in the last decade catastrophe bond and ILS issuance surpassed the \$1 billion mark in the third-quarter of 2016, with \$1.087 billion of new risk capital issued. Data from the Artemis Deal Directory shows that issuance in Q3 2016 was roughly \$345 million above the ten-year average.



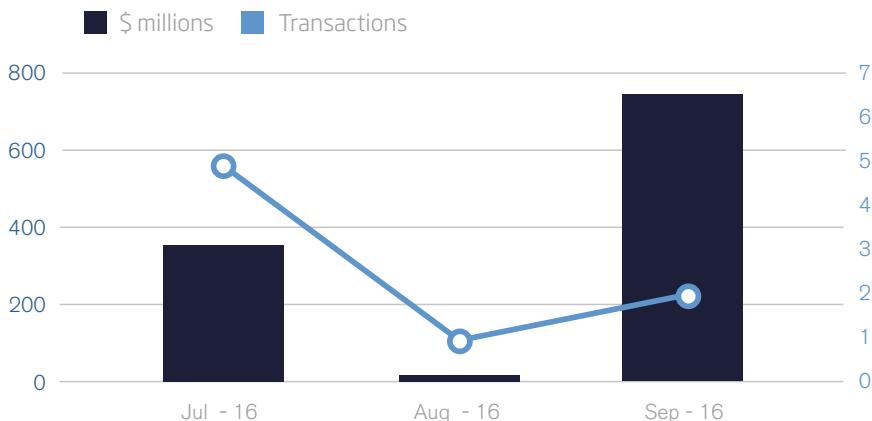
ILS average transaction size & number of transactions by year (\$M)

The average transaction size in the third-quarter of 2016 was roughly \$136 million from eight deals, which is around \$16 million below the ten-year average size, but 2.9 above the average number of transactions. Similar to the second-quarter of this year Q3 saw a range of smaller, private deals come to market, and while this reduced the average transaction size, the recorded average of \$136 million is actually higher than seen in both 2014 and 2015.



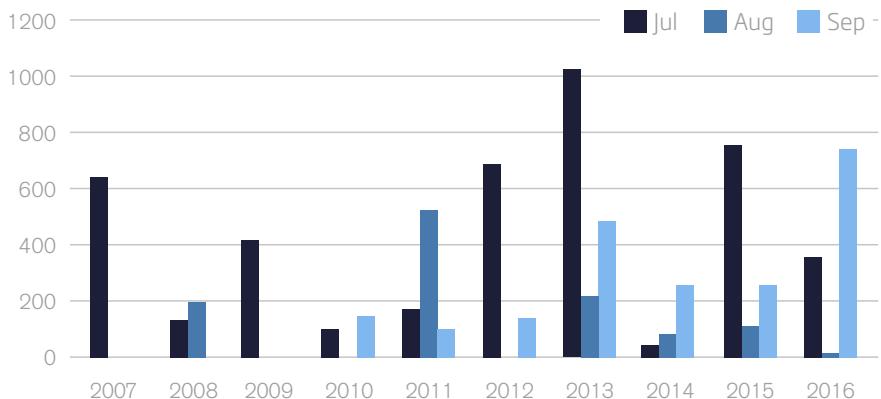
Number of transactions and volume issued by month (\$M)

In what is a rare occurrence for the third-quarter of any year September saw the majority of risk capital issued, with more than \$730 million of catastrophe bond and ILS issuance recorded in the month. Just one deal came to market in August, while over \$347 million of issuance in July helped Q3 issuance exceed \$1 billion.



Q3 issuance by month & year (\$M)

In terms of number of transactions issued, the majority came to market in the opening month of the quarter. But despite the increased number of transactions, the smaller nature of deals issued in July meant that the roughly \$347 million recorded is approximately \$76 million lower than the ten-year average. Issuance levels in Q3 are generally lowest in August, and this trend was again evident in 2016, which saw below \$9 million of issuance, from a single transaction.





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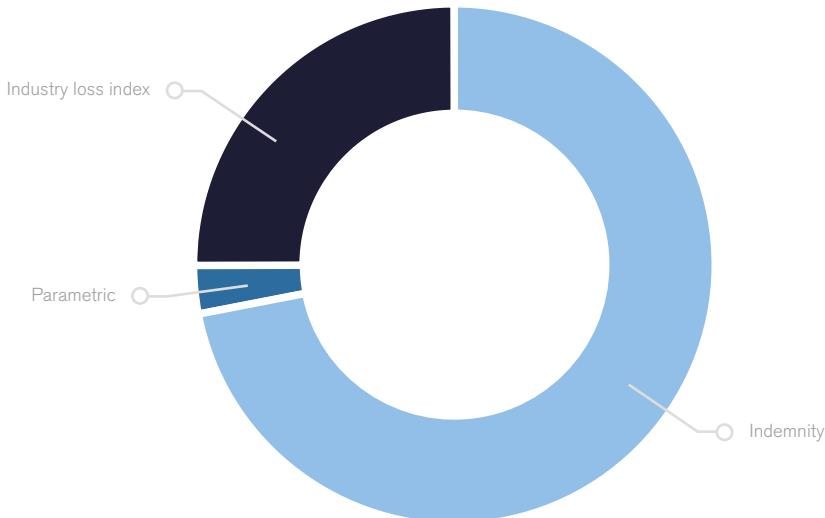
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Q3 2016 ILS issuance by trigger type

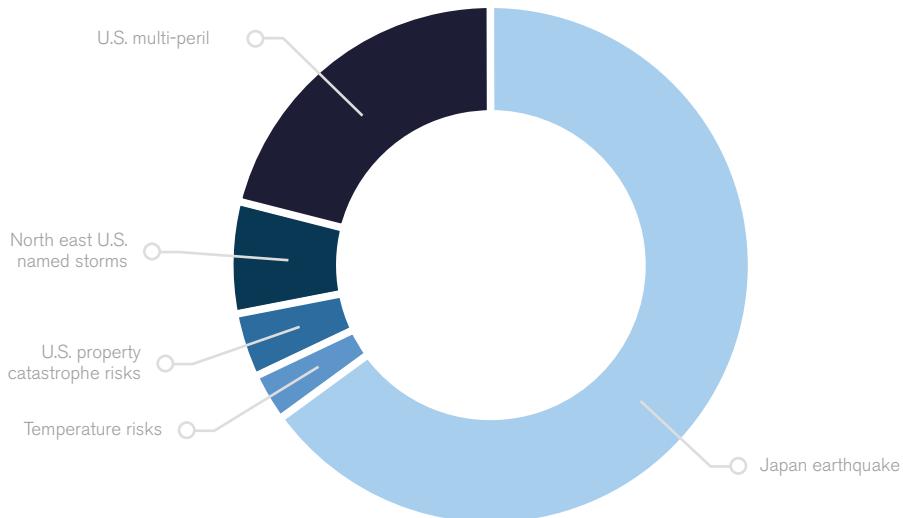
For deals that we have trigger structure information for, and in line with the first-half of 2016, indemnity protection dominated issuance in the third-quarter. Sponsors secured \$775 million of indemnity cover, accounting for roughly 72% of total risk capital issued in the quarter.



Roughly \$272 million, or 25% of issuance in the third-quarter utilised an industry loss index trigger. While the remaining 3%, or roughly \$31 million of new risk capital issued in the quarter brought some welcome diversification to investors, in the form of a parametric trigger structure. Trigger diversification was lacking in the second-quarter, so it's promising to see three different structures utilised in Q3 2016.

Q3 2016 ILS issuance by peril

Issuance in the third-quarter of 2016 was dominated by the Japanese earthquake peril, with \$700 million of issuance from the latest Nakama Re transaction making up almost 65% of total Q3 catastrophe bond issuance.

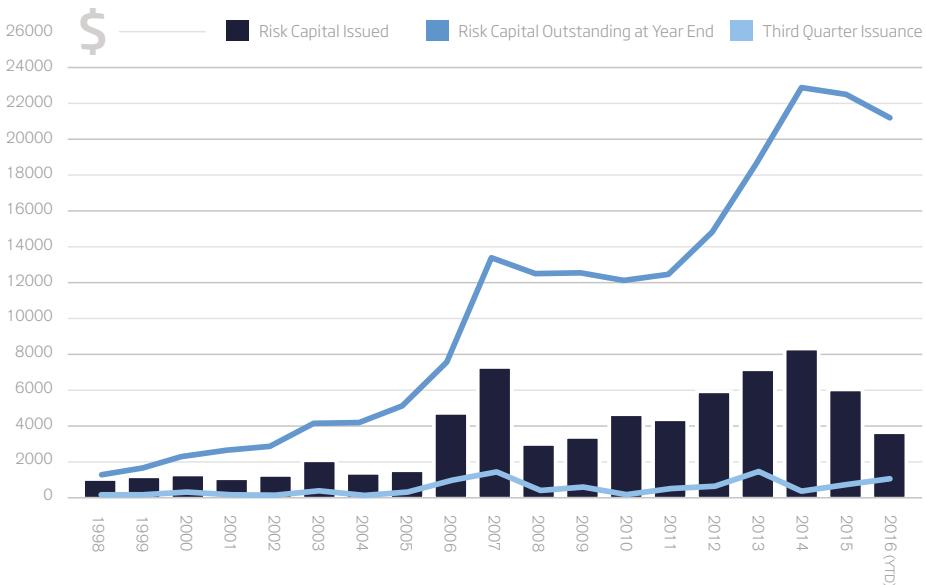


For the first time since 1999 (Kelvin Re), and the second time in the catastrophe bond & ILS market's history, temperature risk featured in the third-quarter. The innovative deal came from Allianz Risk Transfer, and made up almost \$31 million, just below 3%, of Q3 issuance.

The second largest slice of issuance in Q3, in terms of risk capital issued, also came from Allianz Risk Transfer, which brought \$225 million of U.S. multi-peril protection to the market. A range of unknown sponsors also featured in the third-quarter, bringing \$75 million of North east U.S. named storms protection, and over \$47 million of U.S. property catastrophe risks to market.

Market Dynamics - Investor Perspective

Two 144A property/casualty (P&C) catastrophe bond issuances were successfully executed in the third quarter totaling USD 925 million, which brings the total 2016 144A P&C catastrophe bond issuance through September 30, 2016 to USD 3.595 billion.



Strong investor demand for additional issuance, a persistent theme of 2016, continued throughout the third quarter. And, while the market remains organized there is no question that in the secondary market buyers far outnumber sellers, with light trading because existing holders are reluctant to sell positions (even at attractive valuations) without confidence in the issuance pipeline for the balance of the year. Investors are reacting to light issuance in the 144A market in two ways.

First, there does appear to be further room for risk spreads to decline as an inducement to sponsors to bring additional 144A opportunities to the market. The 144A market provides an important source of liquidity and transparency that investors are not eager to abandon. It also continues to serve as an important first port of call for new capital coming into the insurance risk space and provides sponsors with direct access to the deepest, most stable and lowest price capital on earth, the global fixed income market.



Secondly, in the absence of sufficient issuance and declining risk spreads in the 144A market, investors continue to expand their willingness and ability to supplement their 144A strategies through additional investment methods. Participation in collateralized reinsurance (both on an excess of loss and on a quota share or "sidecar" basis) continues to increase; the "private" cat bond market is growing, some investors are building out self-owned rated entities, or pursuing opportunities in the primary insurance market. In addition, there continues to be interest and growth among reinsurers looking to develop "third party" capital platforms that claim to offer investors enhanced portfolio construction options (relative to the 144A market) due to sponsor reinsurers' business access, broker relationships and willingness to offer tail protection / leverage. Each of these access methods carries a different suite of advantages and considerations; it is certainly not the case that one choice is universally better or worse than another.

Rather, appropriateness should be a function of each investor's risk and tolerance, return objectives and true liquidity requirements. Because these preferences vary significantly across the potential investor universe the most likely outcome seems to be the co-existence of multiple different access methods, with the 144A market featuring prominently as a component of an overall insurance risk investment strategy.

Subject to the eventual level of catastrophe losses in 2016, we expect all aspects of alternative capital including pricing, capacity and other terms and conditions to remain cedent friendly for the remainder of 2016 and into 2017, with investors willing to embrace the needs of sponsors.

One of the ways this is achieved is with improved indemnity and multiline coverages beyond property lines, where we expect to see innovation over the next six months. Sponsors are also seeking to structure ILS capital to be closer in duration to longer-dated traditional forms of capital. This creates an opportunity for the ILS marketplace given that traditional reinsurance faces more challenges in meeting longer multiyear risk transfer structures.



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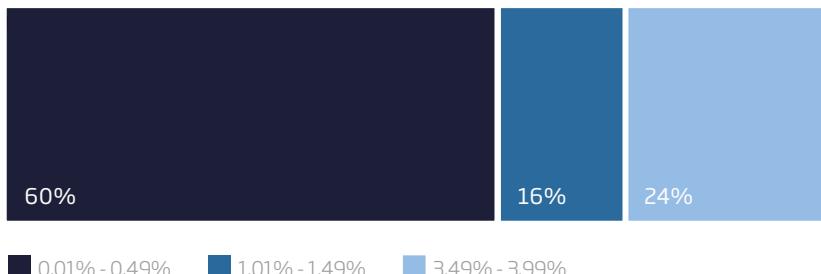
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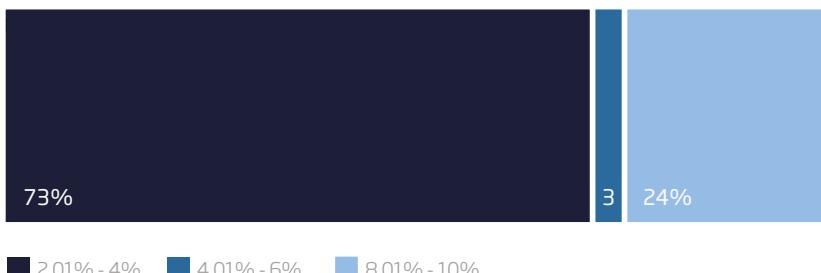
Q3 2016 ILS issuance by expected loss

For deals that we have expected loss data for (this amounts to \$925 million of total risk capital issued), \$550 million of risk capital issued had an expected loss of below 0.5%. The riskiest notes on offer during the quarter came from the Blue Halo Re Ltd. (Series 2016-2) Class C tranche of notes, which had an expected loss of 3.99%. Opposing this, the Class 1 tranche of Nakama Re Ltd. (Series 2016-1) notes had an annualised expected loss of 0.49%, while the Class 2 tranche of Nakama Re Ltd. (Series 2016-1) notes were riskier, with an expected loss of 1.47%. Only three out of the nine tranches of notes issued in the quarter disclosed expected loss information.



Q3 2016 ILS issuance by coupon pricing

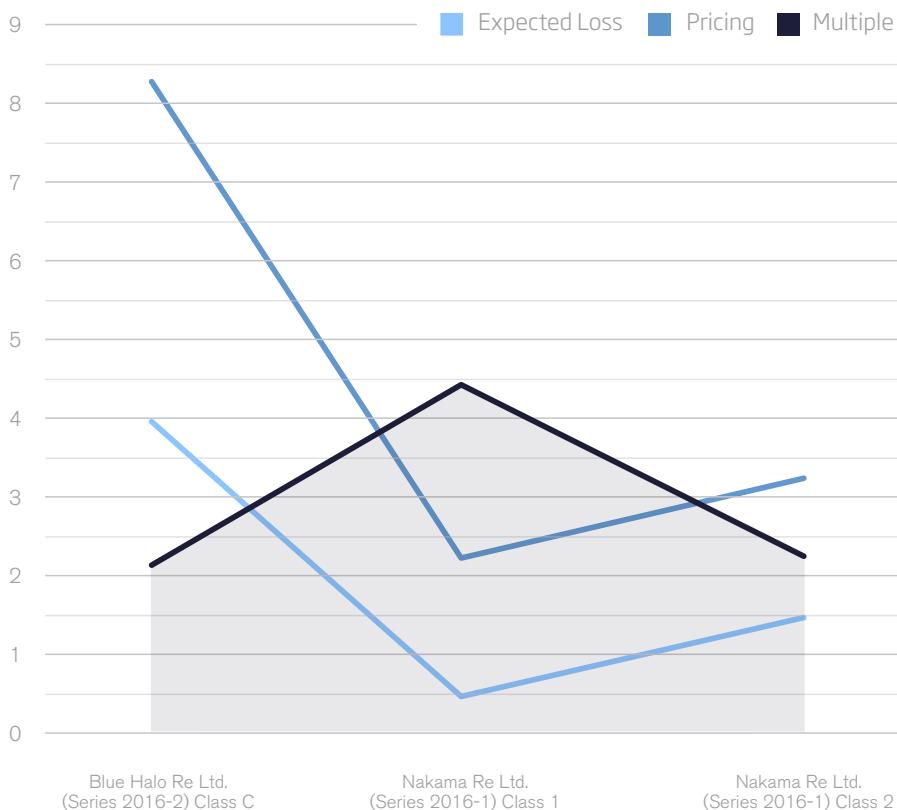
For the transactions that we have pricing data for (this amounts to \$955.75 million of total risk capital issued), \$700 million pay investors a coupon of below 4%, and came from the two tranches of Nakama Re Ltd. (Series 2016-1) notes. The innovative Market Re Ltd. (Series 2016-5) issuance from Allianz Risk Transfer, offered a coupon of 6%. Unsurprisingly, the highest paying coupon during the third-quarter came from the riskiest tranche of notes, Blue Halo Re Ltd. (Series 2016-2) Class C, which paid investors a coupon of 8.25%. Just four out of the nine tranches of notes issued in the quarter disclosed pricing information.



Pricing multiples of Q3 2016 issuance

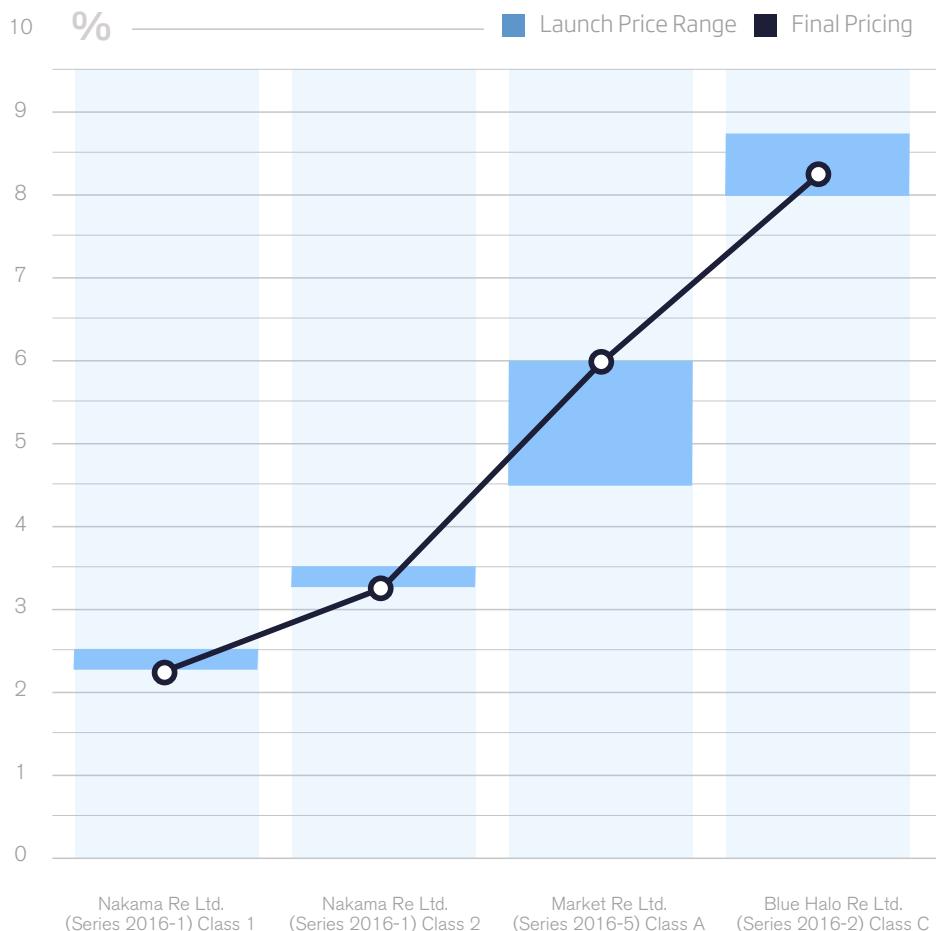
For deals that we have both the expected loss and pricing data for (this amounts to \$925 million of total risk capital issued, and just three of the nine tranches of notes issued in the quarter), the average multiple (price coupon divided by expected loss) during the third-quarter of 2016 was 2.92. The average multiple of catastrophe bond and ILS issuance had stabilised in the second-quarter of this year, remaining in line with the 2.12 reported in the first-quarter of 2016, after declining for several consecutive quarters.

While the average multiple improved in the third-quarter, a lack of expected loss and pricing data for the majority of Q3 transactions makes it difficult to analyse the multiple trend.



Cat bond and ILS price changes during Q3 2016 issuance

For deals that we have full pricing data for (this amounts to \$955.75 million of total risk capital issued), the average price change during the third-quarter was 0.68%. However, only one deal that we have full pricing data for, Market Re Ltd. (Series 2016-5) Class A, priced above the mid-point of initial price guidance, increasing by 14.28% while marketing. The most dramatic price decrease in the period came from the Class 1 tranche of Nakama Re notes, which declined by 6.38% while marketing. The Class 2 tranche of Nakama Re notes and the Class C tranche of Blue Halo Re notes also witnessed price declines in Q3, of 3.7% and 1.49%, respectively.

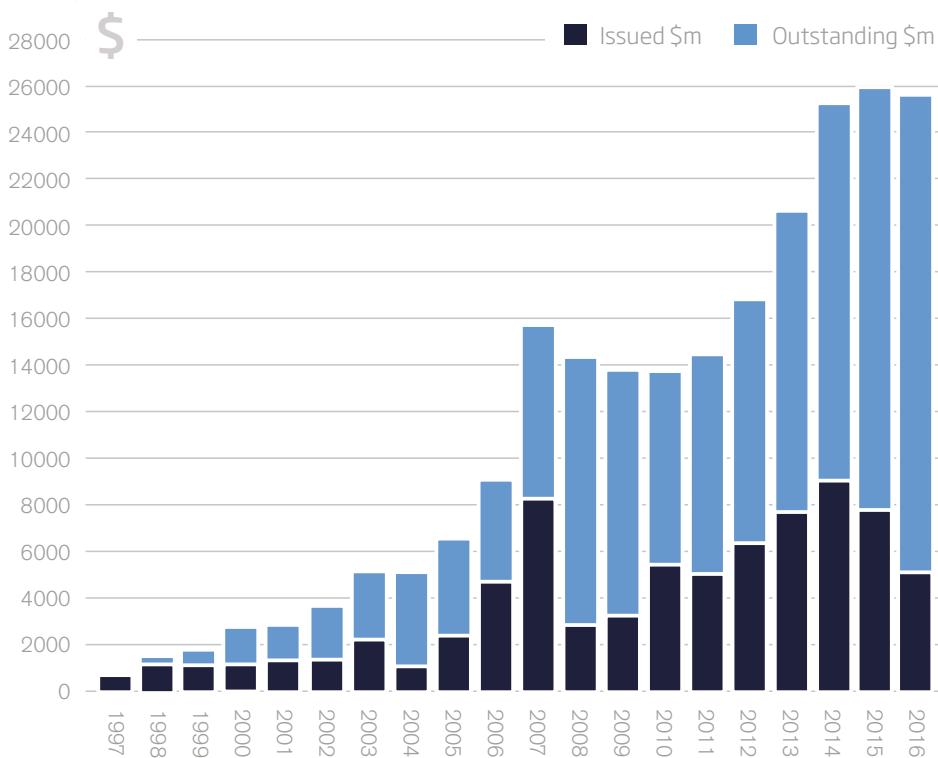


Issued / Outstanding

Despite failing to break any records, catastrophe bond and ILS issuance in the third-quarter of 2016 was actually only the fourth time in the market's history that the period saw issuance surpass \$1 billion, according to the Artemis Deal Directory. The \$1.087 billion of issuance witnessed in the quarter, combined with roughly \$813 million of maturities, helped the outstanding catastrophe bond and ILS market return to growth after a decline in Q2, with the markets size increasing by \$274 million.

The outstanding catastrophe bond and ILS market volume at the end of the third-quarter totalled \$25,449 billion, which is actually \$423 million larger than at the end of Q3 2015, according to data from the Artemis Deal Directory.

Typically, the third-quarter of any year is the quietest for catastrophe bond and ILS issuance, and while Q3 2016 failed to record issuance levels as high as those seen in Q1 and Q2, it was still an impressive quarter for the space. With \$755 million of cat bonds scheduled to mature in the final quarter of 2016, an average volume of issuance in Q4 would see the outstanding market size end 2016 above the \$26 billion threshold.



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/



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