Q2 2023 Catastrophe Bond & ILS Market Report

The biggest single quarter of issuance ever

ARTEMIS

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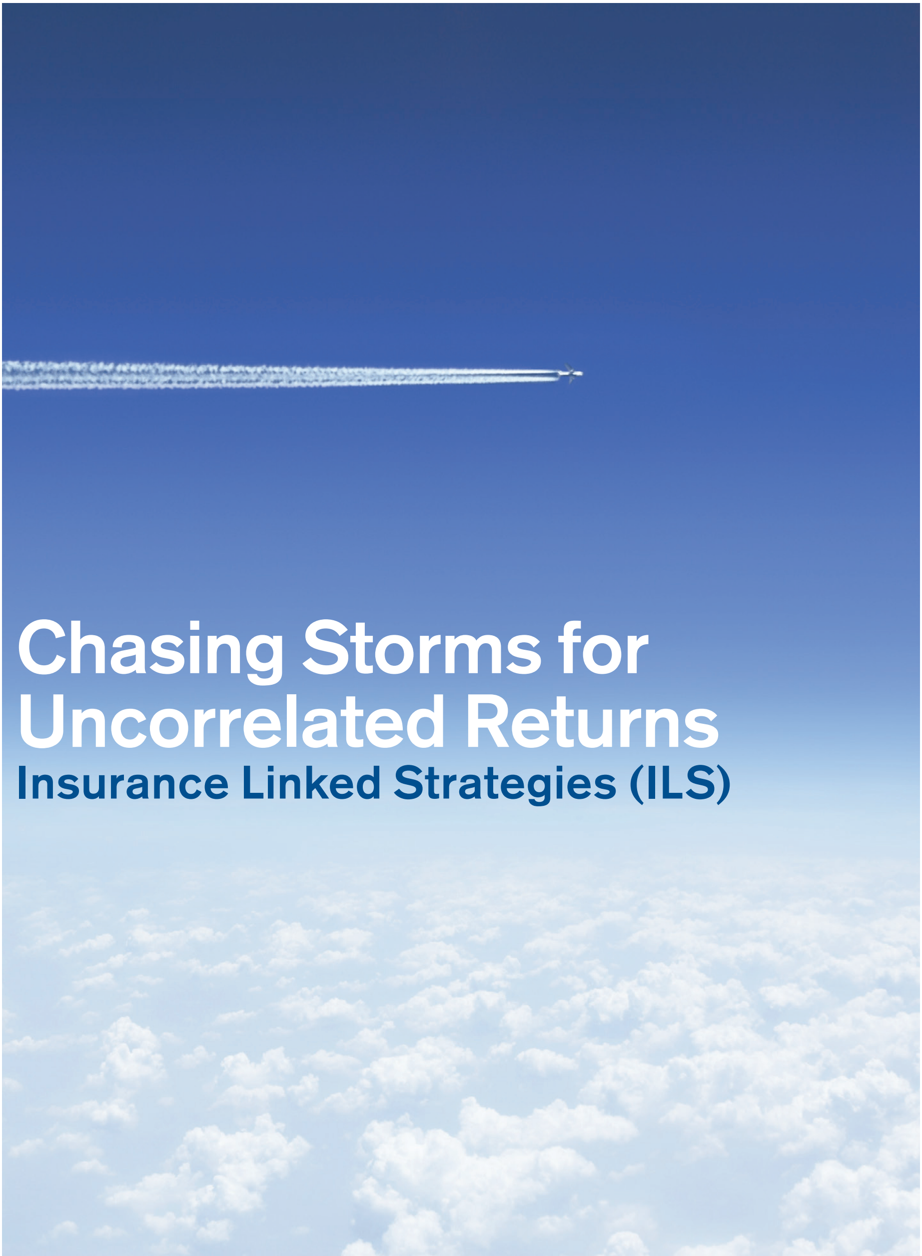

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INTRO

For the first time in the market's history, catastrophe bond and related insurance-linked securities (ILS) issuance has exceeded $7 billion in a single quarter, ensuring H1 issuance has also set a new record at over $10.3 billion, the largest half-year ever.

This quarter's $7.1 billion of issuance came from 36 transactions comprised of 48 tranches of notes, the large majority of which were traditional 144a property cat bonds, with just a few cat bond lite deals placed.

In fact, it was a record quarter for property cat bond issuance, which, alongside metrics for half-year issuance – another record – is examined in the following pages of the Artemis Q2 2023 cat bond and related ILS market report.

While most of the deals brought to market came from repeat sponsors, Conduit Re, Spinnaker Insurance Company, Korean Re, and the New Zealand Earthquake Commission all entered the cat bond space for the first time in Q2 2023.

This report also dissects the pricing of cat bond notes issued in the quarter, revealing that the average multiple (price coupon divided by expected loss) remains high despite a dip from the previous quarter.

Another feature of Q2 2023 issuance is the substantial upsizing of deals while marketing, as sponsors took advantage of strong appetite from the investor base in order to secure their reinsurance and retrocession needs.

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

This table is based on data from the Artemis Deal Directory and lists all of the catastrophe bond and related ILS transactions issued in the second quarter of 2023, that we are aware of. In terms of the number of transactions and the size of deals issued, it's been an extremely busy period for the marketplace.

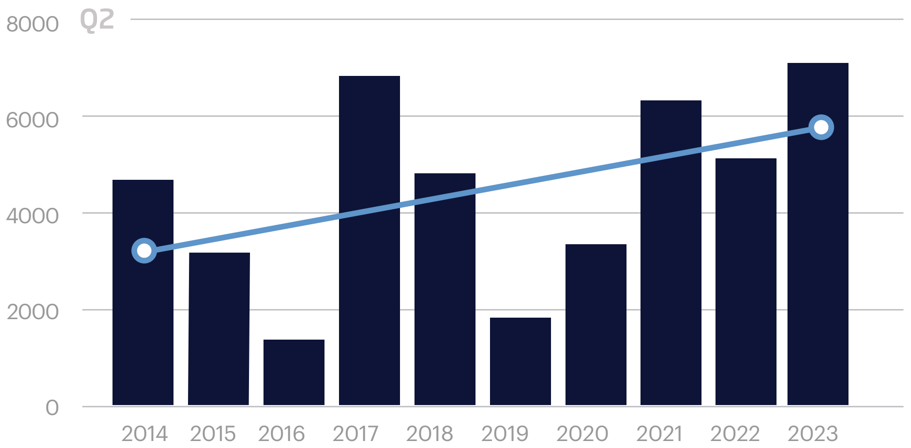
Traditional 144a property cat bonds dominated Q2 2023 issuance, accounting for 89% of the deals issued, and setting a new quarterly and half-year record for these types of deals.

ISSUER / TRANCHE	SPONSOR	PERILS	$M	DATE
Lower Ferry Re Ltd. (Series 2023-1)	NJM Insurance	US named storm	190	Jun
Mayflower Re Ltd. (Series 2023-1)	Massachusetts PIUA	Massachusetts multi-peril	250	Jun
Baldwin Re Ltd. (Series 2023-1)	Vermont Mutual Insurance Co.	US multi-peril	100	Jun
Eiffel Re Ltd. (Series 2023-1)	AXA SA	European windstorm	164	Jun
Acorn Re Ltd. (Series 2023-1)	Hannover Rück SE	US earthquake	150	Jun
Commonwealth Re Ltd. (Series 2023-1)	The Hanover Insurance Group	US named storm	150	Jun
Solomon Re Ltd. (Series 2023-1)	Korean Re	US multi-peril	75	Jun
Randolph Re (Groupama)	Groupama	France multi-peril	109.3	Jun
Stabilitas Re Ltd. (Series 2023-1)	Conduit Re	US multi-peril	100	Jun
Sutter Re Ltd. (Series 2023-1)	California Earthquake Authority	California earthquake	425	Jun
Gateway Re Ltd. (Series 2023-2)	SureChoice	US named storm	100	Jun
Totara Re Pte. Ltd. (Series 2023-1)	New Zealand Earthquake Commission	New Zealand multi-peril	135.1	May
Mountain Re Ltd. (Series 2023-1)	Spinnaker Insurance Company	US multi-peril	110	May
Sanders Re III Ltd. (Series 2023-2)	Allstate	Florida multi-peril	370	May
Atlas Capital DAC (Series 2023-1)	SCOR	International multi-peril	75	May
Torrey Pines Re Ltd. (Series 2023-1)	Palomar Specialty Insurance Co.	Cal & US earthquake	200	May
Everglades Re II Ltd. (Series 2023-2)	Citizens Property Insurance	Florida named storm	450	May
Everglades Re II Ltd. (Series 2023-1)	Citizens Property Insurance	Florida named storm	300	May
Beazley cyber cat bond (Cairney II)	Beazley	Cyber risks	20	May

ISSUER / TRANCHE	SPONSOR	PERILS	$M	DATE
Aquila Re I Ltd. (Series 2023-1)	Nationwide Mutual Insurance Co.	US multi-peril	300	May
MetroCat Re Ltd. (Series 2023-1)	NYC MTA	New York storm surge	100	May
Bayou Re Ltd. (Series 2023-1)	Louisiana Citizens	Louisiana named storm	195	May
Queen Street 2023 Re dac	Munich Re	US named storm	300	May
Residential Reinsurance 2023 Limited (Series 2023-1)	USAA	US multi-peril	400	May
Citrus Re Ltd. (Series 2023-1)	Heritage P&C Insurance Co.	US named storm	235	May
Eclipse Re Ltd. (Series 2023-1A)	Unknown	Unknown property cat risks	8.73	May
Eclipse Re Ltd. (Series 2023-2A)	Unknown	Unknown property cat risks	10	May
Nakama Re Ltd. (Series 2023-1)	Zenkyoren	Japan earthquake	225	Apr
Cape Lookout Re Ltd. (Series 2023-1)	North Carolina IUA	North Carolina named storm	350	Apr
Gateway Re II Ltd. (Series 2023-1)	SageSure	US named storm	125	Apr
Ursa Re Ltd. (Series 2023-1)	California Earthquake Authority	California earthquake	200	Apr
Alamo Re Ltd. (Series 2023-1)	TWIA	Texas multi-peril	500	Apr
Purple Re Ltd. (Series 2023-1)	Slide Insurance Co.	US multi-peril	100	Apr
Merna Re II Ltd. (Series 2023-1)	State Farm	US multi-peril	250	Apr
Merna Re II Ltd. (Series 2023-2)	State Farm	Texas named storm	200	Apr
First Coast Re IV Ltd. (Series 2023-1)	Security First Insurance Co.	Florida multi-peril	100	Apr

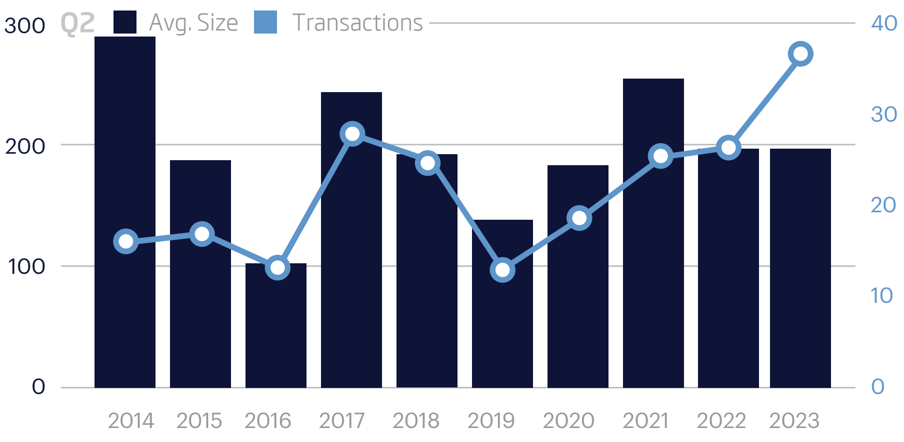
Q2 ILS issuance by year ($M)

At $7.1 billion, Q2 2023 is the first quarter in the market's history that issuance has exceeded $7 billion, increasing year-on-year by almost $2 billion, and coming in $3.8 billion higher than Q1 2023. It's also $2.6 billion higher than the ten-year average for the quarter and is actually higher than full-year issuance for two of the past 10 years, setting the market up for a potentially record-breaking level of annual issuance.



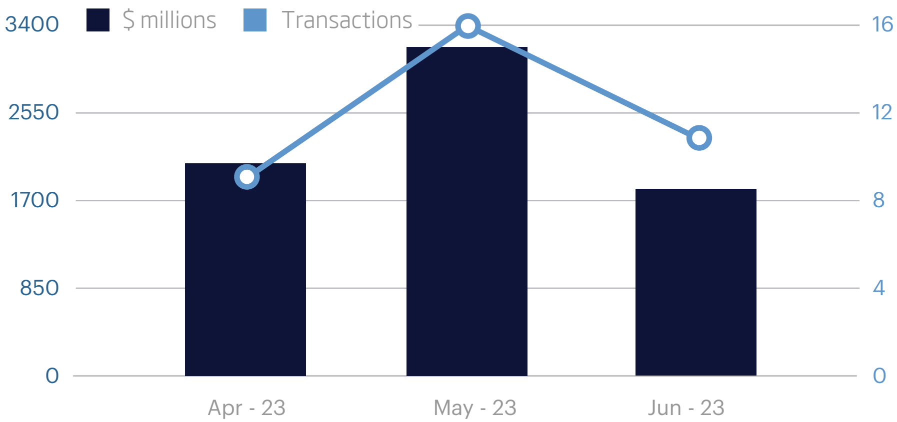
ILS average transaction size & number of transactions by year ($M)

A record 36 catastrophe bonds featured in the second quarter of 2023, beating the previous high of 28 seen in 2017. Year-on-year, the number of transactions increased by roughly 39%, although the average size of deals mirrored last year at $196 million. The highest average transaction size of any Q2 was in 2014 at almost $290 million, although during this quarter only 16 deals came to market.



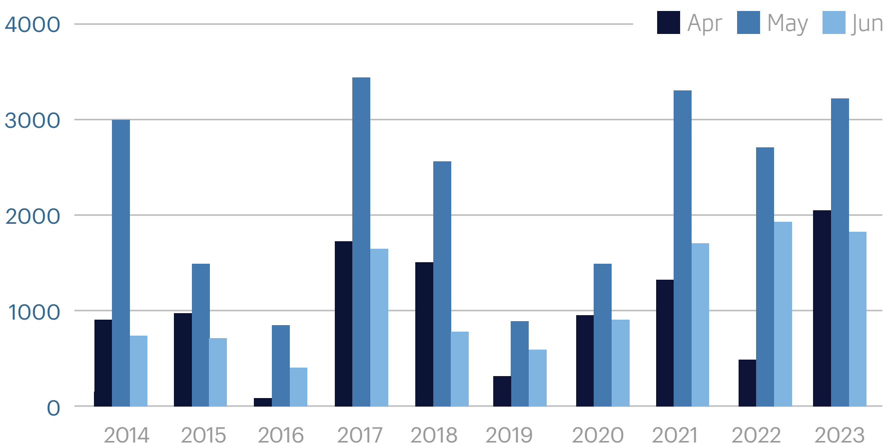
Number of transactions and volume issued by month ($M)

On the back of a busy end to Q1, April issuance maintained the trend with nine deals bringing more than $2 billion of new risk capital to market, all of which were traditional 144a property cat bonds. In May, issuance really picked up with 16 deals at a combined value of more than $3.2 billion. In terms of risk capital issued, June was the quietest month of the quarter at $1.8 billion from 11 deals.



Q2 issuance by month & year ($M)

Artemis' data shows that this was the first April where issuance surpassed $2 billion, with the total for the month exceeding the ten-year average by more than $1 billion and last year's April by over $1.5 billion. It was the third most active May ever, in terms of risk capital issued, which beat the ten-year average by $930 million. June issuance actually fell year-on-year, but still came in above the ten-year average for the month by roughly $693 million.



APPLEBY

PRICING STILL NOT WHERE IT NEEDS TO BE: APPLEBY'S BRAD ADDERLEY

In spite of climate impacts and some large insurers pulling out of certain markets, there's been some talk of rate softening in the reinsurance market, which Brad Adderley, Bermuda Managing Partner at Appleby says, "makes little sense".

"We've got climate anomalies, people are continuing to pull out, and we don't really know how much capital has been raised, and yet, for some reason, people are saying there's rate softening, which I just don't understand," said Adderley, in an interview with Artemis.

This May, Canada experienced its worst wildfires in the month, which were so bad that they impacted flights in New York. There's also been record flooding in Italy this year, and with the Atlantic hurricane season underway, there's ample uncertainty around activity as a result of warmer than average sea surface temperatures.

In any year, the number of catastrophic events and the financial impact of these is inherently uncertain, but the fact is that in recent times, more than $100 billion in annual re/insured losses has become the norm.

Elevated losses from large catastrophes and so-called secondary perils are one of the key drivers of rate hardening in the global reinsurance market, notably for cat-exposed business, but have also contributed to dwindling appetite for certain risks from primary insurers and reinsurers.

Against this backdrop, Adderley explained that it's "interesting there's been references to pricing softening."

"It's a disappointing comment because one could argue that over the last six years or so, one renewal season does not make up for your losses that have occurred since. It's hard to see how that would be the case.

"I personally don't think the pricing has got to where it needs to be. Over the last 20 years, how much inflation has there been? And then how much have people lost in these cat-prone areas over the same timeframe?

"So, how much do you actually have to raise rates by to cover all of the money you've lost over say just the last eight years? It's a lot," he added.

In spite of some commentary suggesting rate softening, the reinsurance market remains hard, but interestingly, this hasn't driven significant capital raising from existing players or led to the emergence of new ones.

"Currently, investors don't believe in the market. That's why they haven't been flooding into the market to take into this better pricing and better terms," said Adderley. "And, with more climate change and inflation, it's clear that investors either no longer like the risk, fear it, or they just can't price it because of what's going on in the world."

It feels like a very important time for the risk transfer industry as a whole, and it will be interesting to see if more players pull out of key markets and whether more capital enters the sector, and what this does to supply demand dynamics and ultimately rates ahead of the January 2024 renewals.

What is clear, though, is that catastrophe bonds, which attach at a high limit, remain attractive as a source of reinsurance and retrocession.

"Just going by the facts, we have probably done more cat bonds than we've done for a long time - it's constant," said Adderley.

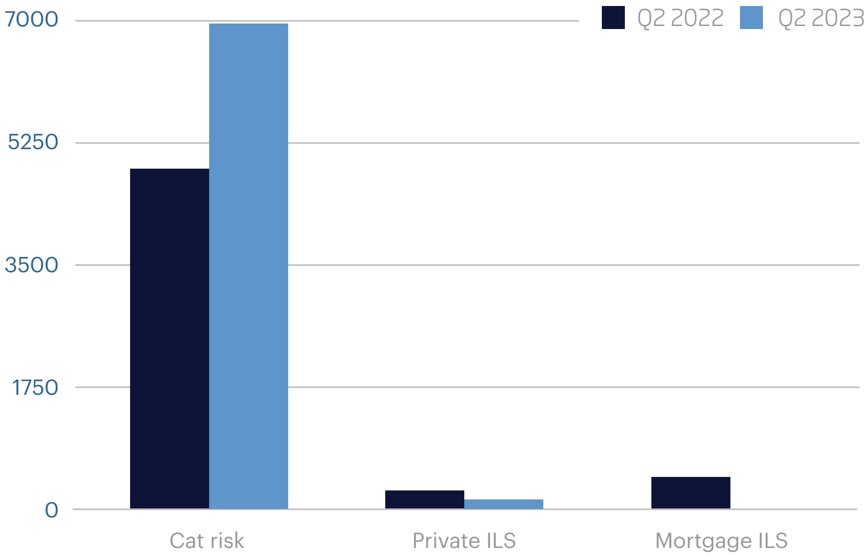
Whether this trend persists through the rest of the year remains to be seen, but regardless of cat activity in the second half of 2023, it's certainly going to be a very interesting year for the marketplace.

BRAD ADDERLEY
BERMUDA MANAGING PARTNER

Q2 ILS issuance by type

Year-on-year, second quarter 114a property cat bond issuance increased by more than $2 billion to a record $6.9 billion, which is roughly $500 million higher than the previous Q2 record set in 2017. It's the busiest quarter ever for these types of deals. Artemis' data shows that Q2 2023 property cat bond issuance is above the H1 average for the past decade, and even higher than full-year totals for three of the last ten years.

Q2 2023 also featured four privately placed, or cat bond lite deals, which added $148 million to the total. With the exception of Beazley's $20 million, privately placed cyber risk deal, the other three transactions also covered property catastrophe risks.

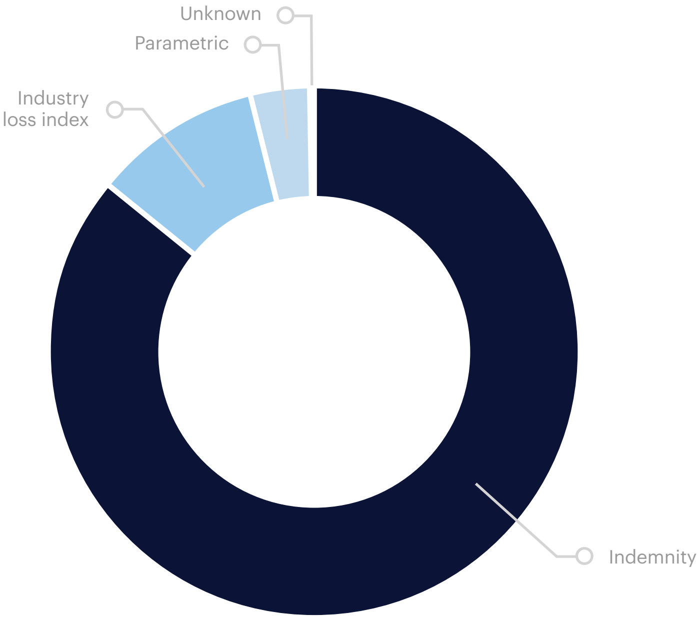


In both Q2 2023 and Q2 2022 there were no deals launched covering non-catastrophe risks. It was also another quarter in which no new mortgage ILS deals were issued.

Q2 2023 ILS issuance by trigger type

More than $6 billion, or 86% of quarterly issuance leveraged an indemnity trigger structure, compared with 52% in the prior year second quarter. Indemnity deals always dominate quarterly issuance, but it was more the case than usual this quarter, with 38 out of 48 tranches of notes utilising an indemnity trigger.

10%, or $714 million of Q2 2023 issuance used an industry loss trigger, compared with 29% a year earlier. Just 3.5% of issuance, or $250 million from two tranches of notes utilised a parametric trigger. The data shows that while trigger diversification was evident, in terms of tranches of notes, it was less so than in previous years.

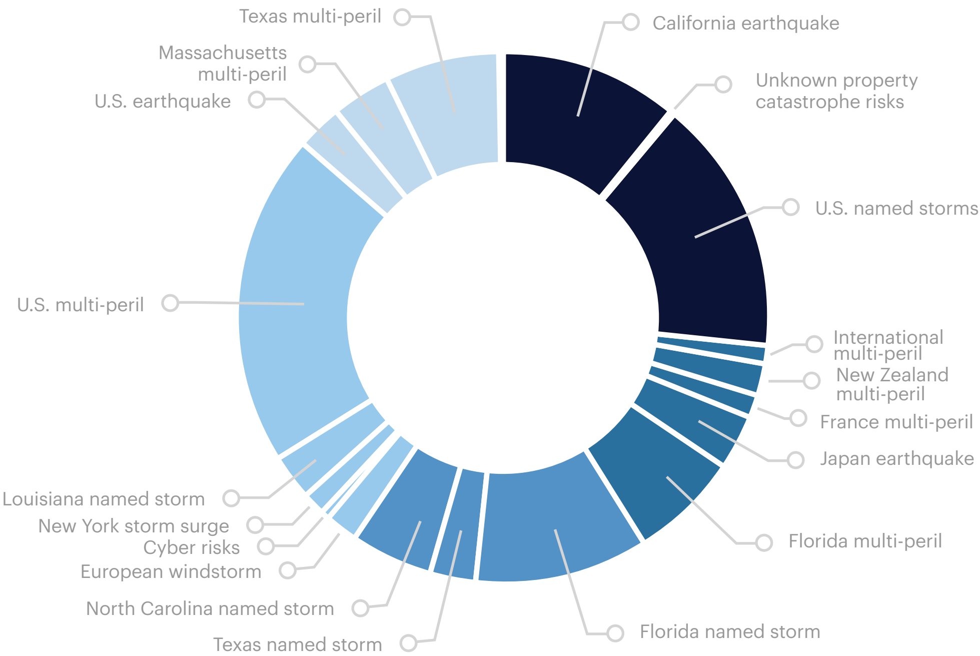


We do not have trigger information for roughly $19 million of issuance, as these were privately placed transactions.

Q2 2023 ILS issuance by peril

Of the $7.1 billion of risk capital brought to market in Q2 2023, 89%, or roughly $6.3 billion covered risks in the U.S. This includes earthquake protection in California and other states, and U.S. named storm protection across the country, including deals covering specific states such as Texas, Louisiana, Florida, and North Carolina. Multi-peril deals were also placed for risks in Massachusetts, Texas, and Florida, as well as other states. $100 million of New York storm surge protection was also secured in Q2.

Peril diversification outside of the U.S. was fairly robust in the quarter, and includes the European windstorm peril, Japan earthquake, and also multi-peril protection in New Zealand, a first for the market, as well as multi-peril protection in France and internationally.

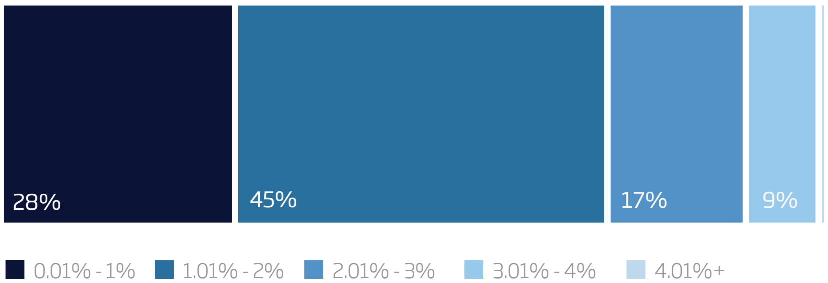


Additionally, two private deals brought almost $19 million of unknown property catastrophe risks to market.

The only deal issued in the quarter to not over property catastrophe exposure came from Beazley, as the specialist insurer sponsored its second cyber cat bond of the year, a $20 million privately placed transaction.

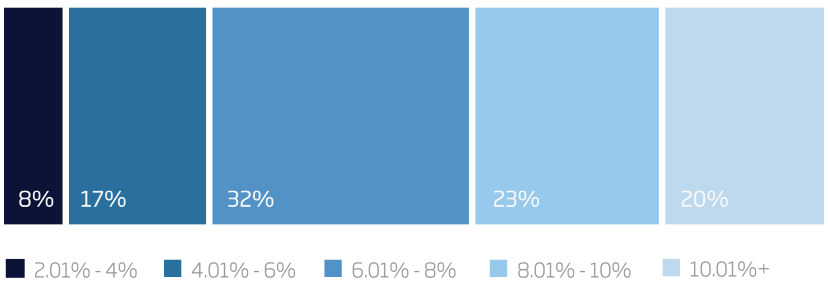
Q2 2023 ILS issuance by expected loss

Approximately 73% of Q2 2023 issuance had an expected loss of below 2%, although the majority of this was above 1%, accounting for around $3.1 billion of issuance. Roughly 27% of issuance had an expected loss of more than 2%, with just $70 million of issuance having an expected loss above 4% in the period. This came from the Class B tranche of Sanders Re III notes, which at 19.08%, had the highest expected loss in Q2. The lowest expected loss came from the Class A tranche of Aquila Re notes, at 0.37%.



Q2 2023 ILS issuance by coupon pricing

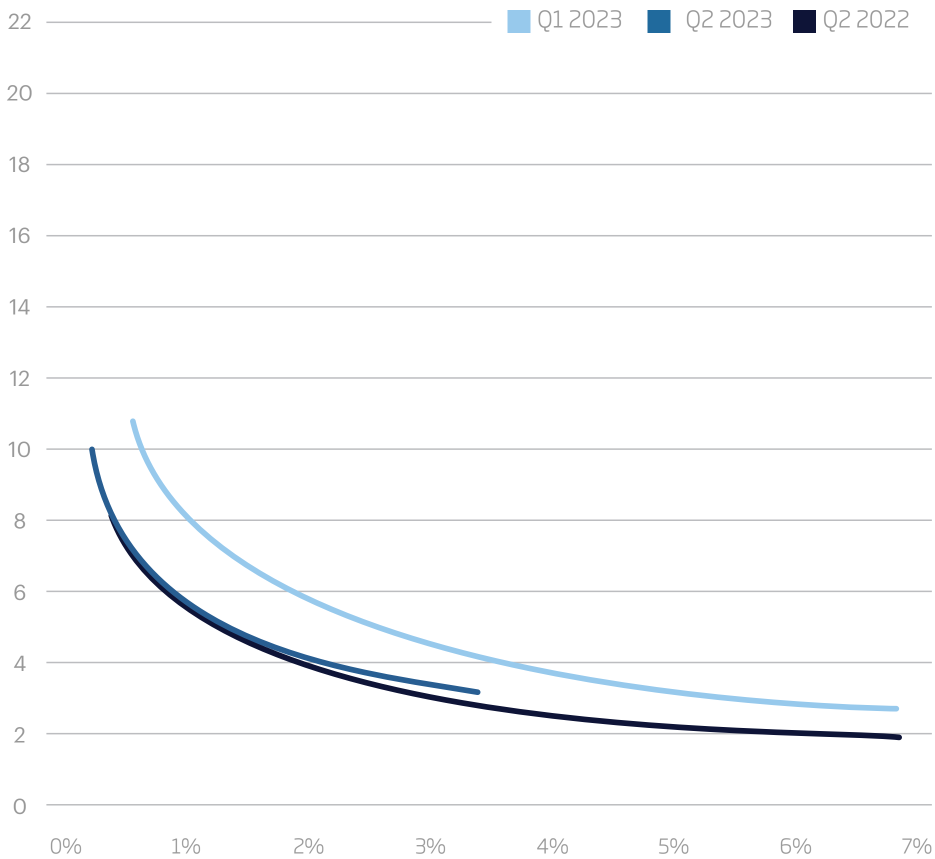
Similar to last year, Q2 2023 issuance continued the trend of paying more, higher coupons. Approximately 75% of issuance paid a coupon of more than 6%, while roughly 20% of issuance paid a coupon of more than 10% in the quarter. The highest coupon on offer came from the Class B tranche of Bayou Re notes at 19.5%. The lowest coupon came from the Class A tranche of Nakama Re notes at 2.5%, the only tranche to pay a coupon of less than 3% in the quarter.



Q2 2023 expected loss & multiple year-on-year

The lightest blue line represents Q1 2023, the middle Q2 2023, and the darkest Q2 2022. It shows that this quarter the trend remains that the lower the expected loss the higher the multiple (price coupon divided by expected loss). Year-on-year, the average expected loss has come down by 0.74%, but the average coupon by slightly less (0.47%) so is higher than Q2 2022, which is reflected in the higher average multiple year-over-year.

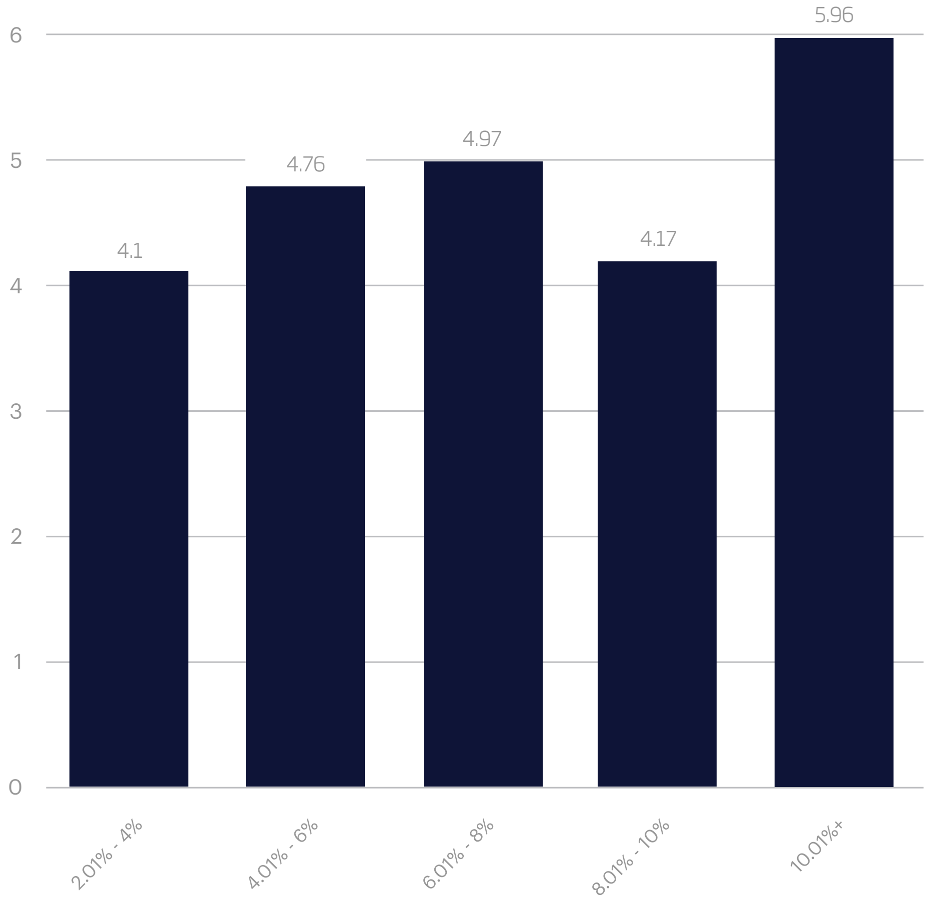
Cat bond investors have continued to demand harder pricing as reinsurance and retrocession rates continue to firm on the back of consecutive heavy loss years, inflation, and a supply demand imbalance. However, there is some signs of moderation, with prices seemingly softer in Q2 than in Q1 of 2023.



Q2 2023 average multiple by coupon pricing

In Q2 2023, some of the higher priced deals had some of the highest multiples, suggesting that the investor base remained steadfast in their demands for elevated levels of risk-adjusted returns for cat bonds in the hard market cycle.

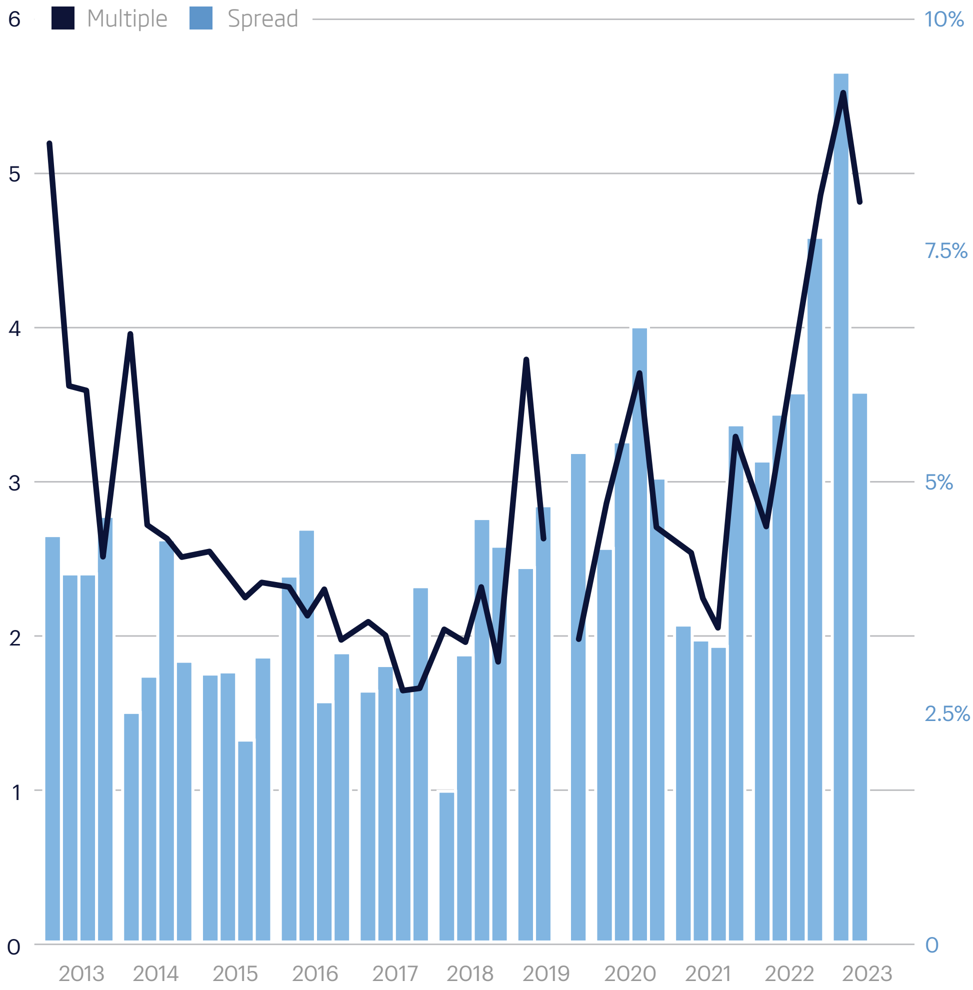
Across the tranches of notes placed this quarter, the average coupon was 7.52%, compared with 7.99% in Q2 2022. However, year-on-year, the average multiple has risen by 1.35 and while lower than seen in Q1 2023, when it reached a record 5.52, and Q4 2022's 4.93, it's the highest average Q2 multiple since 2012.



Multiple and spread by quarter

This chart shows the average multiple (the line) of quarterly issuance and the excess spread (the bars) since the start of 2013. Quarter over quarter, the average multiple has fallen from its record high of 5.52 to 4.82 in Q2 2023, but Artemis' data shows that this is still the fourth highest average multiple seen in any quarter since 2013. The average multiple has now been above four for four consecutive quarters, which is a first, and shows that investors are consistently demanding higher returns.

The excess spread has also fallen quarter over quarter, again from a record of 9.41% in Q1 2023 to 5.96% in Q2 2023. Year over year, however, the spread is 0.27% higher and is actually the fourth highest quarterly spread since the start of 2013.



INSURANCE CODE OF CONDUCT: ENHANCING GOVERNANCE & BOARD EFFECTIVENESS IN BERMUDA'S INSURANCE SECTOR

In August 2022, the Insurance Code of Conduct underwent its most significant revision since its inception in 2014, as announced by the Bermuda Monetary Authority (BMA). It outlines the governance requirements for insurance entities, (including limited purpose insurers such as insurance-linked securities (ILS) vehicles) emphasising the evaluation of board effectiveness and the qualifications of board members.

To shed light on these crucial aspects and provide insights into the board effectiveness policies for Bermuda ILS entities, we recently sat down with Sherman Taylor, Head of Capital Martkets in Bermuda at Ocorian.

To start, Taylor explained the importance of evaluating board effectiveness in the ILS industry.

"Evaluating board effectiveness is crucial to promoting sound governance practices within the wider insurance industry. Effective boards with qualified members can make informed decisions, enhance transparency, and drive the long-term success of insurance entities," said Taylor. "ILS offer unique risk and return characteristics that differ from traditional assets and provide investors with exposure to insurance-related risks, such as natural catastrophes or other specified events."

According to Taylor, the goal of board effectiveness in the insurance sector is to evaluate and improve the performance and governance of the board of directors as well as to lay out the values, norms, and processes that direct the board's operation.

"Insurance companies must be able to pay insurance claims when they arise, and therefore policyholder protection is a key responsibility of insurance companies' boards. For ILS vehicles, there is an additional element of protecting investors who put up the collateral to support the insurance liabilities via their investment in loan notes and bonds. The objective of the board of ILS vehicles must therefore combine policyholder and investor protections," said Taylor.

Discussing the BMA specifically, Taylor explained that its approach is to use the 'proportionality principle' when evaluating board effectiveness and code compliance for Bermuda insurers.

"This means that the evaluation takes into account the nature, magnitude, and complexity of each insurer's operations. Factors such as the relationship between the policyholder and insurer, the volume of business written, and the complexity of organisational structures are considered collectively rather than in isolation," he noted.

"It ensures that insurers with higher risk profiles have a more robust governance and risk management framework. ILS vehicles in Bermuda are simple structures that accommodate complex, high value transactions governed by cross jurisdictional contractual arrangements and regulations." added Taylor.

To conclude, Taylor highlighted some of the key elements that a comprehensive board effectiveness policy should encompass.

This includes "a process for selecting, appointing, and evaluating board members including consideration of term limits for board members and guidance on the selection, composition, and functioning of board committees."

There's also a need for a "clear definition of the roles and responsibilities of the board to mitigate single-person risk, guidelines for meeting frequency, timing, conduct, and voting rules, and encouragement of strategic discussions and effective communication among directors," said Taylor.

He went on to note the importance of regular evaluation of the board's performance to identify areas for improvement, as well as a code of conduct with ethical standards, conflict guidelines, and confidentiality, and a commitment to ongoing education and professional development for directors.

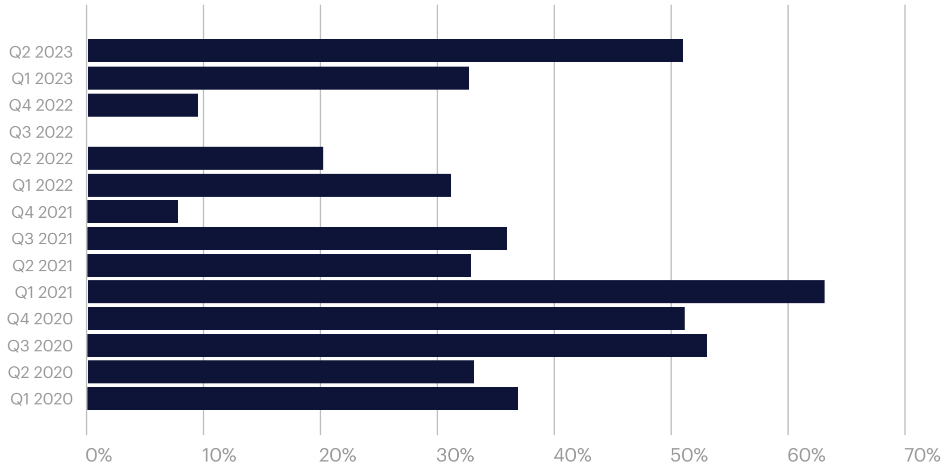
"Emphasis on independent directors and clear definitions of independence," is also key, explained Taylor, as is the "implementation of a succession plan for continuity and talent rotation, and director access to necessary information on conflict resolution, and legal/governance expertise."

If you would like to discuss how we could support your ILS or captive needs, please visit Ocorian.com contact Sherman.taylor@ocorian.com.

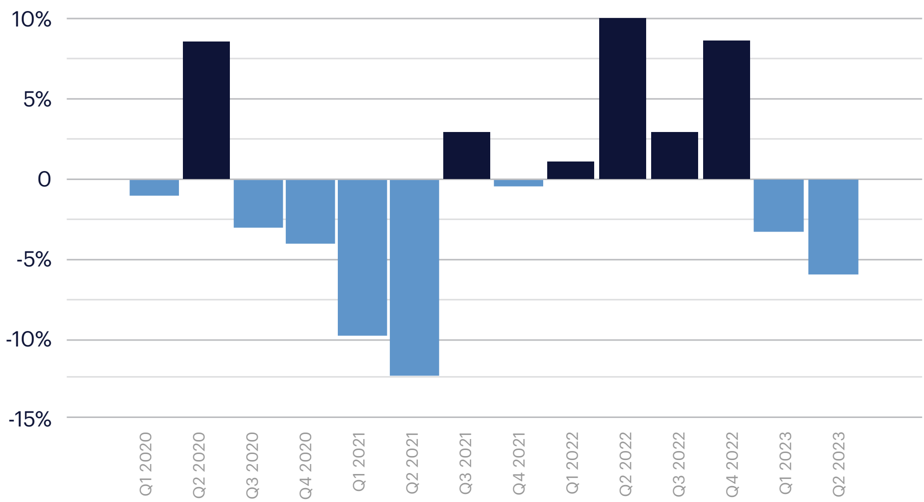
SHERMAN TAYLOR
HEAD OF CAPITAL MARKETS
IN BERMUDA

Issuance size and price changes

Of the tranches of property cat bond notes issued in the second quarter of 2023, 30 increased in size while marketing as sponsors capitalised on strong demand from the investor base. In fact, just one deal downsized while marketing, while 11 tranches of notes remained at their initial target size. All in all, the size of property cat bonds issued in Q2 2023 increased by an average of 51% while marketing, with one tranche of notes growing in size by a huge 350%.



For the tranches of notes that we have full pricing data for (41), the average price change of Q2 2023 issuance was -6.3%, which is steeper than the -3.2% seen in Q1 2023 and means there's been a negative average price change in eight of the last 14 quarters. It suggests increasingly favourable placements for sponsors. Of the tranches of notes, 34 priced below the mid-point of initial guidance, six above, with just one tranche pricing at the mid-point.



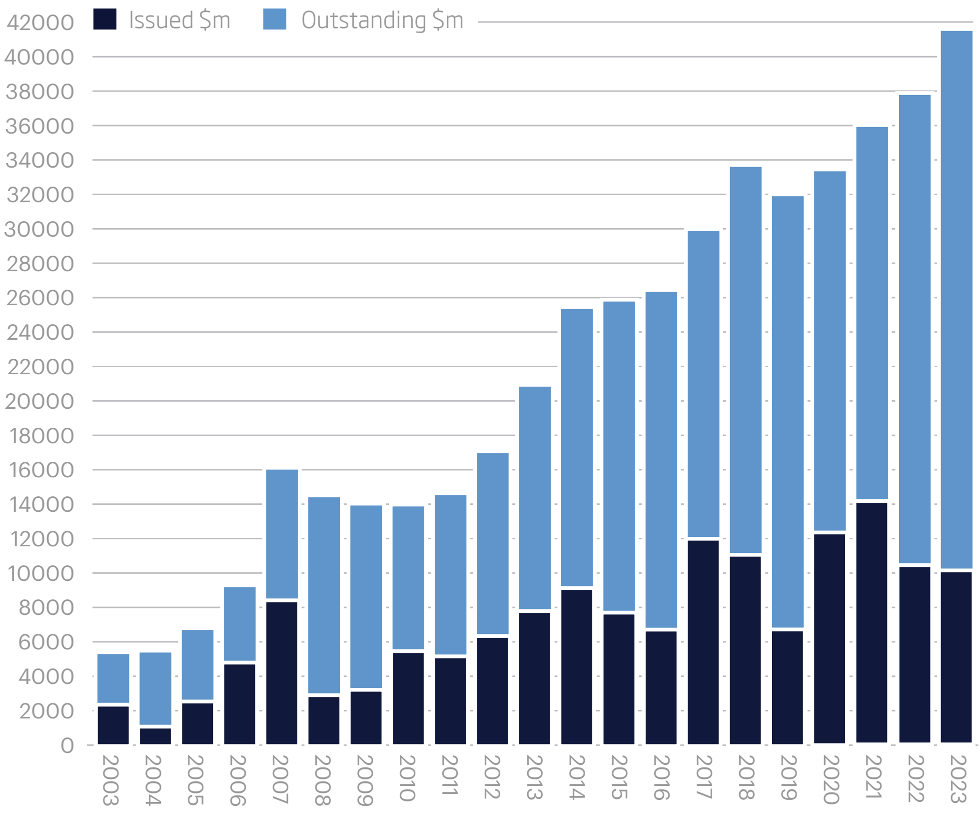
Issued / Outstanding

Combined with the above-average level of issuance seen in the opening quarter of the year, record second quarter issuance of $7.1 billion has resulted in a new half-year high of approximately $10.3 billion, the only time issuance in a half-year period has surpassed the $10 billion threshold. In fact, over the past decade, full-year cat bond issuance has only exceeded $10 billion on five occasions, highlighting just how active 2023 has been for the marketplace.

Data from the Artemis Deal Directory shows that during the quarter there were a significant number of deals that matured, but the combined value of these failed to outstrip the level of new risk capital brought to market from the 36 transactions placed.

As a result, the market has achieved outright growth once again, with the outstanding market ending the quarter at a new high of $41.6 billion, reflecting growth of almost $3.7 billion from the end of 2022.

With six months of the year remaining and with the Artemis Deal Directory already listing two deals for July, it is increasingly likely that 2023 will be a record year for the issuance of cat bonds and related ILS.

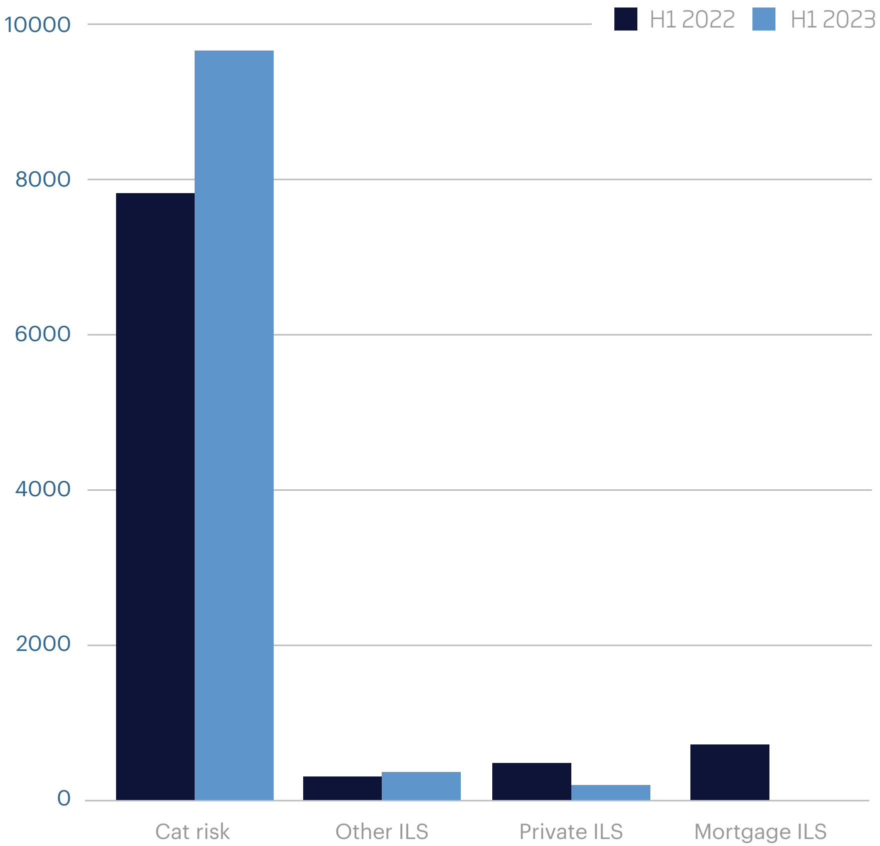


If you want to see full details of every catastrophe bond and ILS transaction included in the data in this report please visit www.artemis.bm/deal_directory/

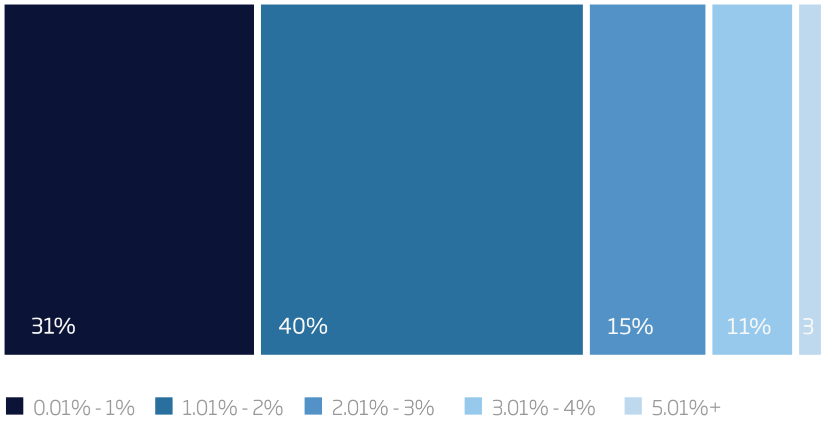
First-half ILS issuance by type

In the first half of 2023, the Artemis Deal Directory lists a record-breaking $9.7 billion of 114a property cat bond issuance, which is roughly $1.9 billion higher than H1 2022 and around $3.2 billion above the ten-year average for the period. It's even higher than full-year property cat bond issuance for six of the last 10 years, and with H2 to come, is on track to break the full-year property cat bond record of $12.5 billion witnessed in 2021.

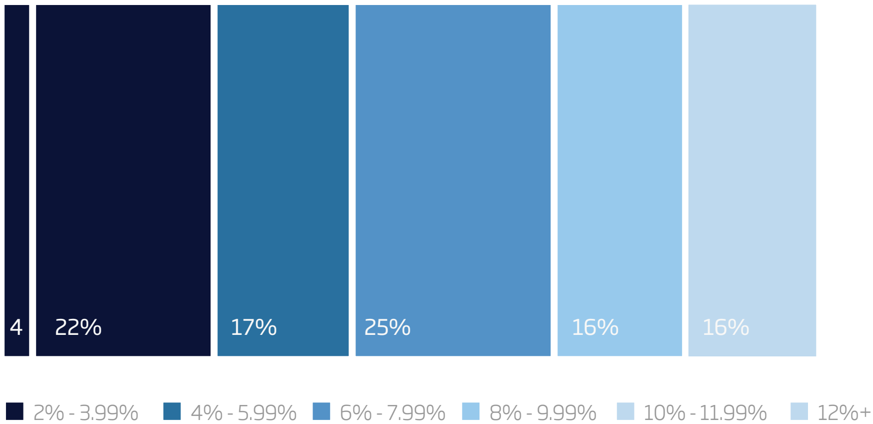
Year-on-year, H1 also saw a rise in issuance volume covering other, non-catastrophe risks, from $331 million to $417 million. In contrast, privately placed, or cat bond lite issuance fell from $498 million in H1 2022 to $247 million in H1 2023. There has been no mortgage ILS deals this year, compared with $756 million of issuance in H1 2022.



First-half 2023 ILS issuance by expected loss

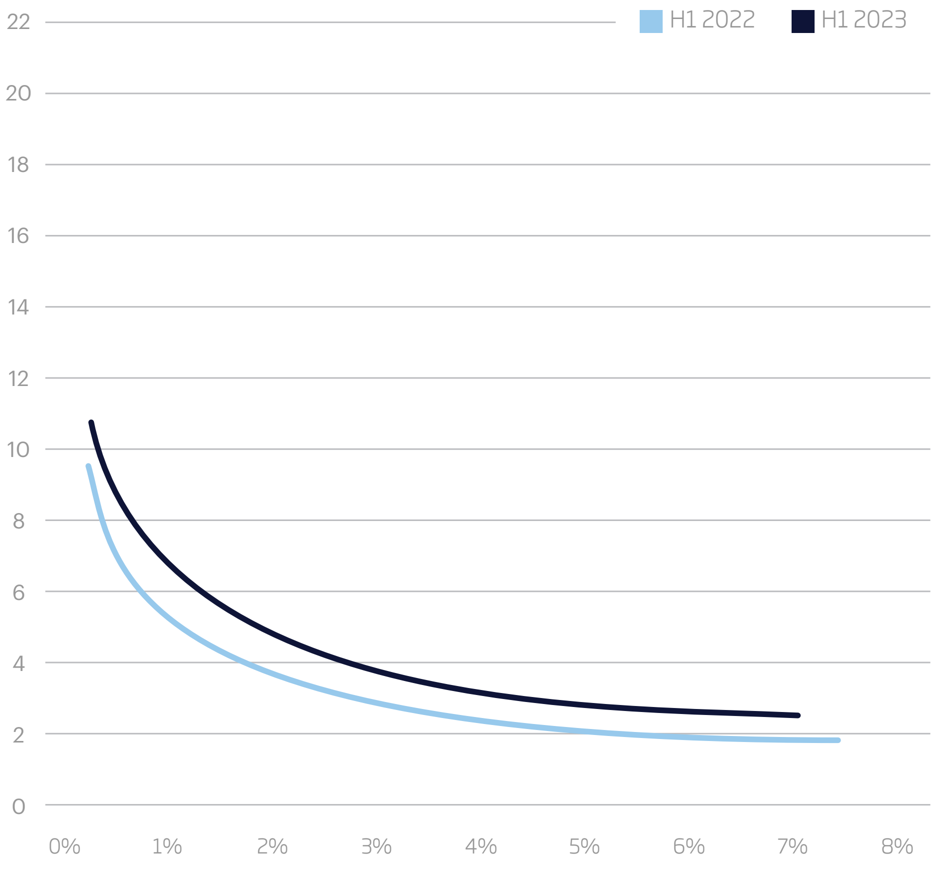


First-half 2023 ILS issuance by coupon pricing

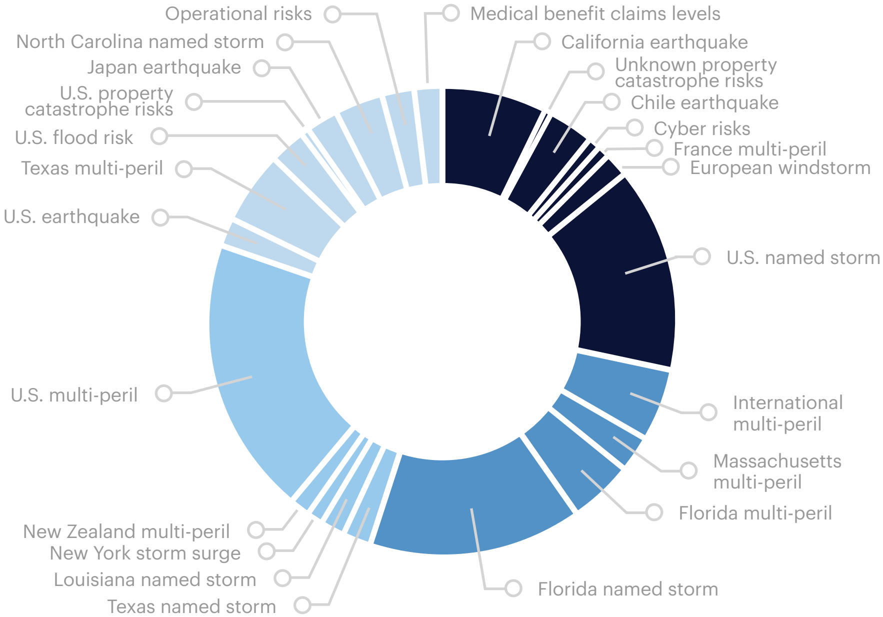


First-half 2023 expected loss & multiple year-on-year

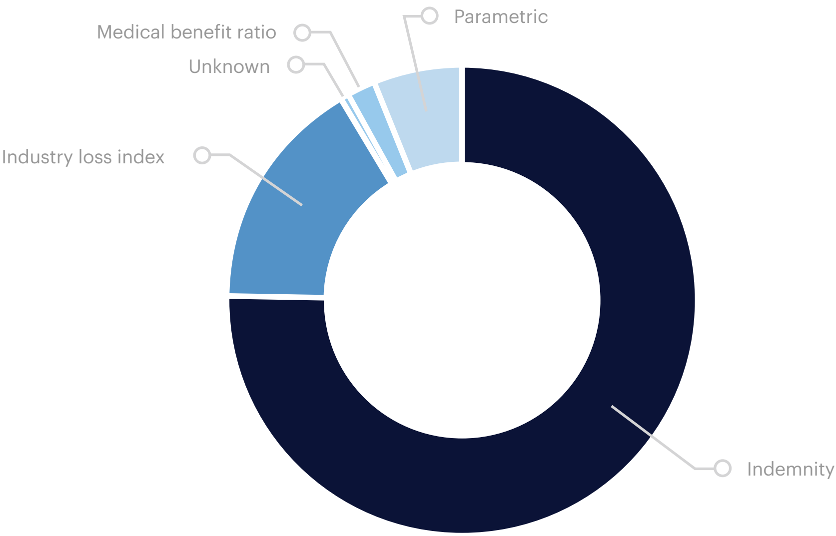
The light blue line represents H1 2022 and the dark blue line H1 2023. It plots the expected loss and multiples of the tranches of cat bond notes issued in each period, showing that the lower the expected loss the higher the multiple.



First-half 2023 ILS issuance by peril



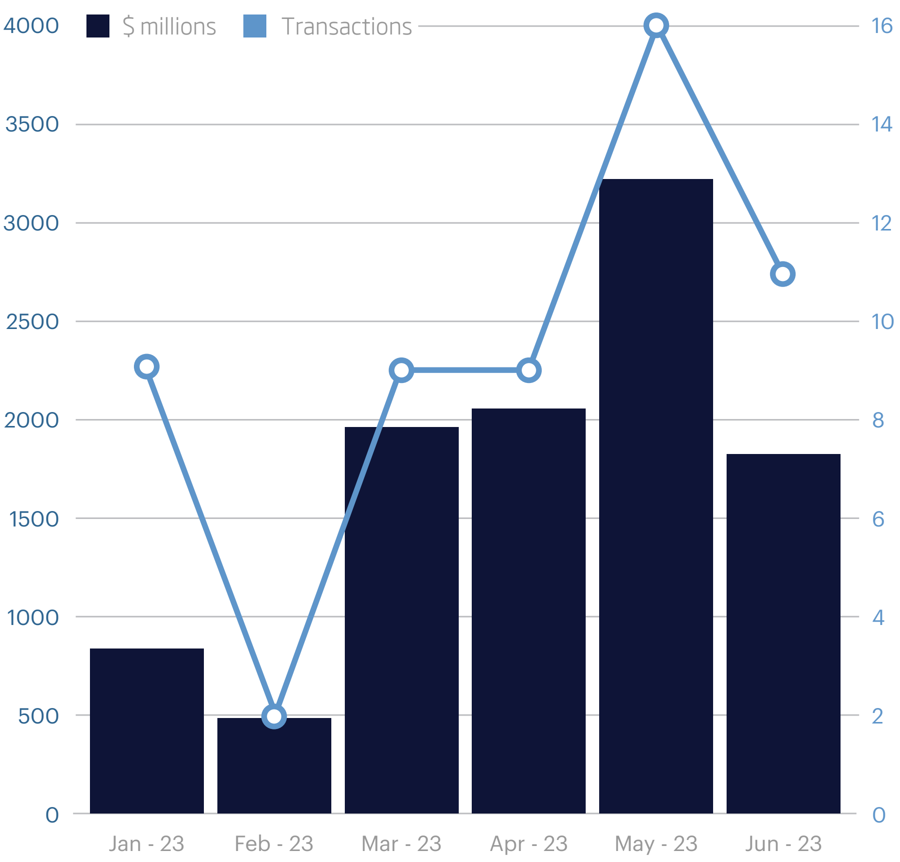
First-half 2023 ILS issuance by trigger



First-half 2023 number of ILS transactions and volume issued by month

56 deals were issued in the first half of 2023 compared with 51 in the comparable prior year period. February is typically the least active month of the year, in terms of the number of transactions, and this was also the case this year when just two deals with a combined value of $480 million came to market. Nine transactions were issued in January, March, and April. In June, 11 transactions were issued, while May was the busiest month of the year, witnessing 16 deals.

Unsurprisingly, May was also the most active month in terms of risk capital, with $3.2 billion of issuance, making it one of the busiest months ever for cat bonds. In fact, with the exception of February, all other months in the opening half of 2023 saw issuance levels exceed their respective ten-year average.



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

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