Q1 2023 Catastrophe Bond & ILS Market Report

Spreads and multiples soar in busy opening quarter

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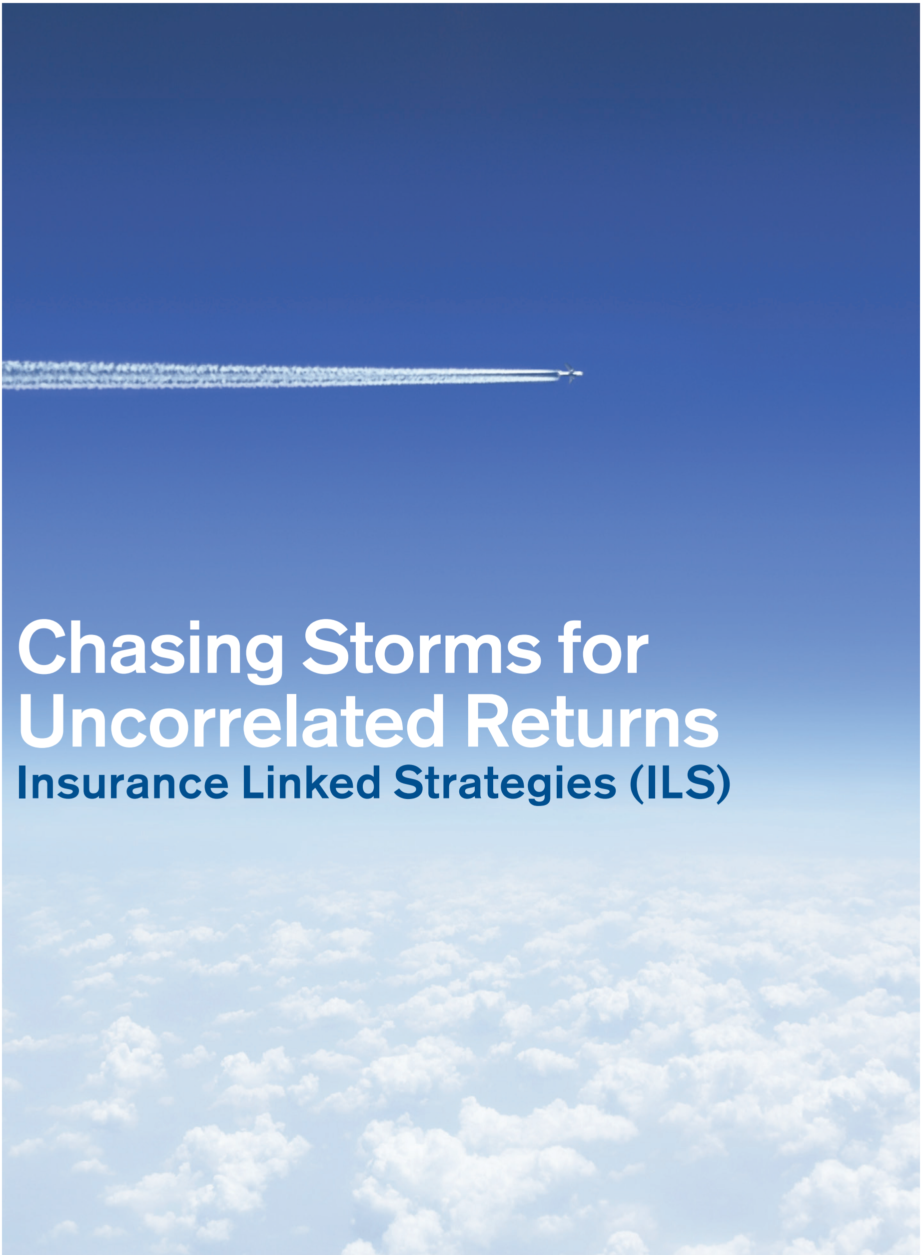

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INTRO

The Artemis Q1 2023 catastrophe bond and related insurance-linked securities (ILS) market report examines a period in which the average spread (coupon minus expected loss) of issued cat bonds reached an all-time high of 10.5%. While a flurry of deals in the closing weeks of March brought this down to 9.41% as at the end of Q1, Artemis' data shows that this is still higher than the average spread for any year in the market's history.

The significant rise in cat bond spreads reflect the higher reinsurance rates being paid by cedents, which, as the following pages of this report show, is also evidenced by the fact the average multiple (expected loss to coupon) of issuance so far in 2023 has risen significantly as well.

All in all, 19 transactions comprised of 29 tranches of notes completed first-quarter 2023 catastrophe bond and related ILS issuance, bringing a combined $3.3 billion of new risk capital to market. Year-on-year, this does represent a dip in issuance, but is still above the 10-year average for the quarter by more than $416 million.

Traditional 144a property catastrophe bonds once again dominated the quarter, although deals covering non-cat risks, including the very first cyber ILS deal, as well as some other private placements, also featured in the period.

The industry's first cyber cat bond was sponsored by Beazley, who alongside The Andover Companies were the only two new sponsors to feature in Q1. The remainder of issuance came from repeat sponsors, although for five of these it was just their second transaction.

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

The table below details the 19 cat bond transactions (four of which are private Seaside Re deals) issued in the first quarter of 2023, showing how traditional 144a placements continue to account for the bulk of issuance, and this is despite 2022 being another year of elevated losses from natural disasters.

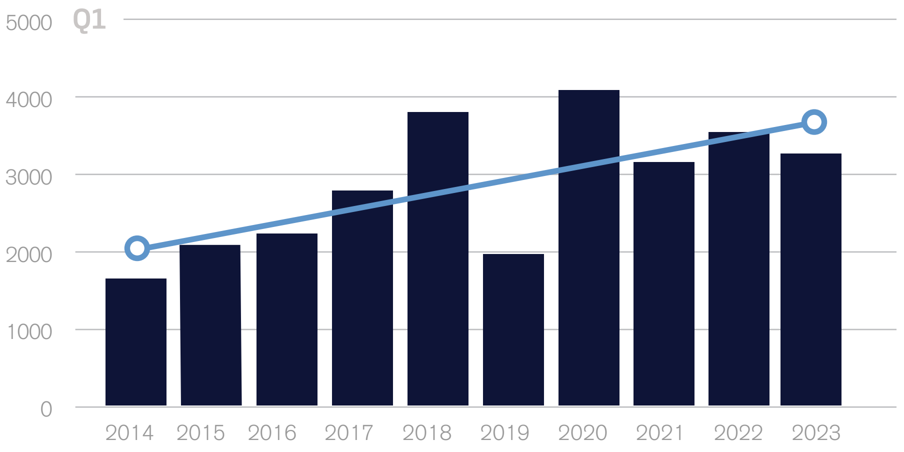
While new sponsor Beazley brought some new risk, in the form of cyber, to the market, The Andover Companies' first deal provided some additional US peril diversification. Notably, Convex Re, Kin, Republic of Chile, Ariel Re, and SURE returned for their second cat bonds in Q1 2023, with the remaining sponsors having now issued multiple deals over the years.

As this report discusses, peril and geographical diversification has been strong in the opening quarter of the year, and came from a mix of traditional 144a, cat bond lite deals, and transactions covering other exposures such as operational risks, and healthcare risks.

ISSUER / TRANCHE	SPONSOR	PERILS	$M	DATE
Sanders Re III Ltd. (Series 2023-1)	Allstate	U.S. multi-peril	250	Mar
Hestia Re Ltd. (Series 2023-1)	Kin Interinsurance Network	Florida named storm	100	Mar
Hypatia Ltd. (Series 2023-1)	Convex Re	International multi-peril	150	Mar
Locke Tavern Re Ltd. (Series 2023-1)	The Andover Companies	U.S. multi-peril	175	Mar
Integrity Re Ltd. (Series 2023-1)	American Integrity Insurance Company	Florida named storm	150	Mar
IBRD – Chile 2023	Republic of Chile	Chile earthquake	350	Mar
Lightning Re Ltd. (Series 2023-1)	Citizens Property Insurance	Florida named storm	500	Mar
FloodSmart Re Ltd. (Series 2023-1)	FEMA / NFIP	U.S. flood risk (from named storms)	275	Mar
Titania Re Ltd. (Series 2023-1)	Ariel Re	International multi-peril	125	Feb
Gateway Re Ltd. (Series 2023-1)	SURE	U.S. named storm	355	Feb
Vitality Re XIV Ltd. (Series 2023)	Aetna	Medical benefit claims levels	200	Jan
Seaside Re (Series 2023)	Unknown	U.S. property catastrophe risks	49	Jan
Mona Lisa Re Ltd. (Series 2023-1)	RenaissanceRe	International multi-peril	185	Jan
Bonanza Re Ltd. (Series 2023-1)	ARX Holding Corp	U.S. multi-peril	135	Jan
Beazley cyber cat bond 2023-1	Beazley	Cyber risks	45	Jan
Operational Re IV Ltd.	Zurich Insurance	Operational risks	217.25	Jan

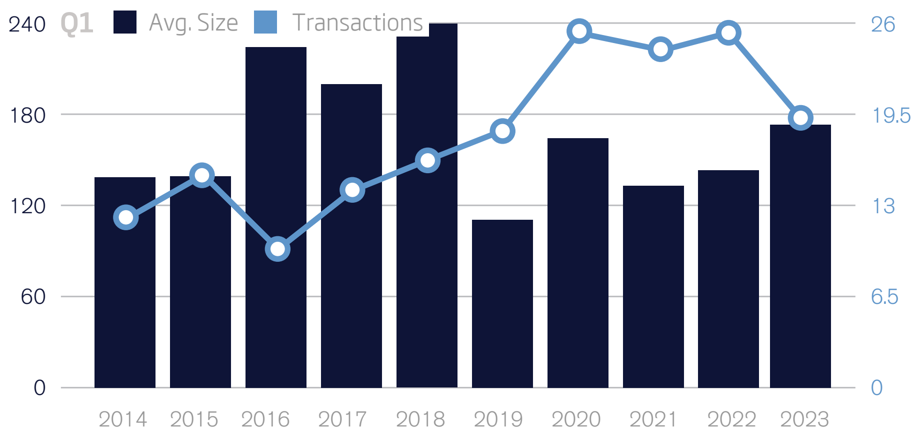
Q1 ILS issuance by year ($M)

Issuance of roughly $3.3 billion means Q1 2023 sits behind Q1 2022 as the fourth most active first-quarter in the cat bond market's history, in terms of risk capital issued. It's more than $416 million above the 10-year average for the quarter and ensures that, for five of the last 10 years Q1 issuance has exceeded the $3 billion mark. While down on last year by almost $260 million, this quarter's issuance is higher than it was in 2021, which ended up being a record year for cat bond issuance.



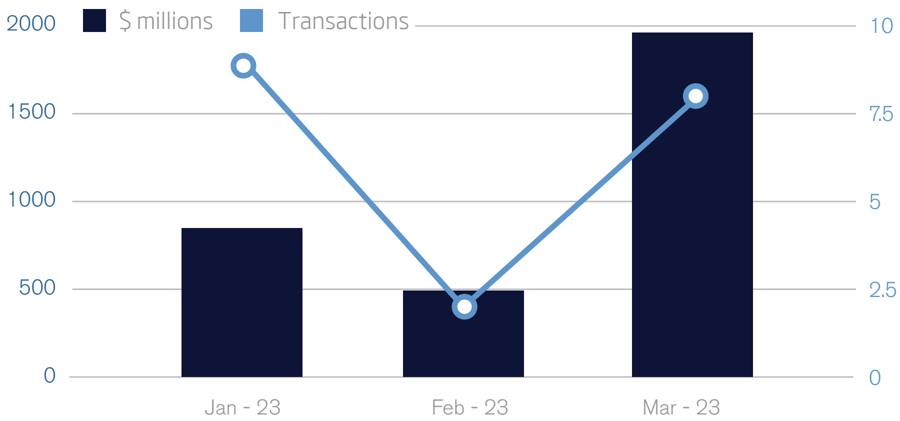
ILS average transaction size & number of transactions by year ($M)

Reflecting a decline on the trend of the past three years, when more than 20 deals came to market in the first-quarter, 19 traditional 144a, cat bond lite and other ILS transactions featured in Q1 2023. However, combined, the average size of transactions issued in the period increased from $141 million in 2022 to $172 million in 2023, which is actually the highest average deal size seen since 2018.



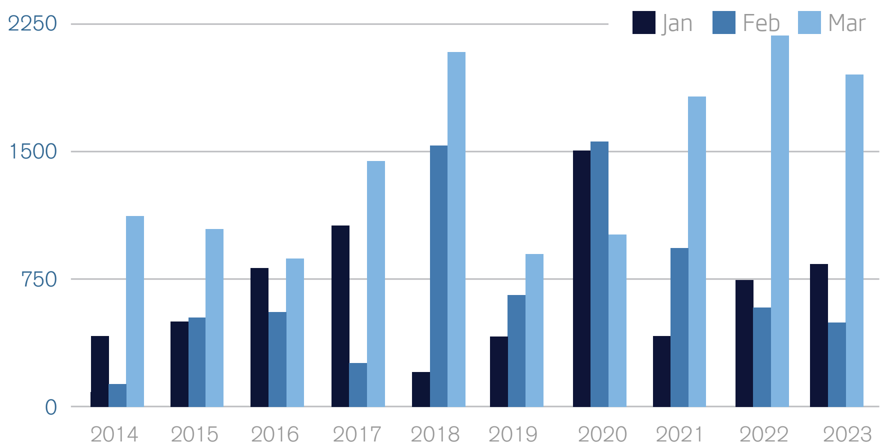
Number of transactions and volume issued by month ($M)

Cat bond and related ILS issuance started the year strong, with nine deals coming to market in January with a combined value of approximately $831 million, making it the third busiest opening month of the year of the last decade.



Q1 issuance by month & year ($M)

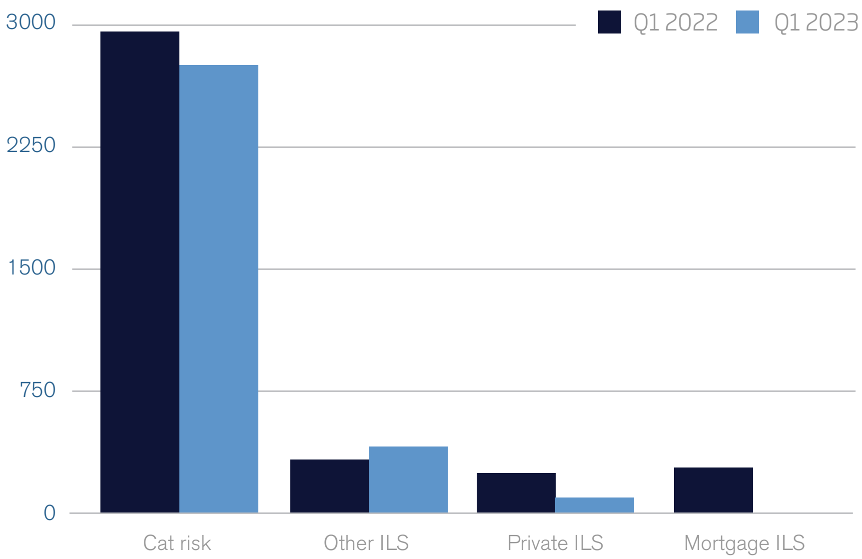
February is typically a more active month than January with a higher average issuance total over the past 10 years. This year, however, just two deals were issued in February with a combined value of $480 million, reflecting an unusually quiet month for the sector. Things once again picked up in March, though, with eight transactions resulting in $1.95 billion of new risk capital, which is above the 10-year average for the month by over $500 million. In fact, in nine of the past 10 years issuance in March has now exceeded $1 billion, and neared or breached $2 billion on three occasions.



Q1 ILS issuance by type

Firstly, it's notable that no mortgage ILS deals were issued in the first-quarter of this year, something which hasn't happened since 2017 when this part of the market was just getting started. This, as well as a significant year-on-year decline in the volume of cat bond lite deals and a slight dip in property cat bond issuance, partly offset by a rise in other ILS, are the drivers of the fall in total issuance.

Nevertheless, Q1 2023 is still a strong quarter for cat bond and ILS issuance. Year-on-year, property cat bond issuance fell by $200 million but is robust at $2.75 billion, accounting for almost 85% of quarterly issuance.



Growth of $86 million to $417 million in the other ILS sub-sector, which includes the operational risk deal from Zurich and Aetna's regular healthcare deal, almost offset the decline in property cat risk deals. However, Q1 2022 was particularly strong for private cat bond placements, whereas this year just $94 million of risk capital was issued via these structures, including the novel cyber deal from Beazley.

APPLEBY

NO SURPRISE IF IT'S A RECORD YEAR FOR CAT BONDS: BRAD ADDERLEY, APPLEBY

The coalescence of more deals, new sponsors, and importantly, new risks, suggests it could be an expansive and record year for the catastrophe bond space, according to Brad Adderley, Bermuda Managing Partner, Appleby.

"It seems to be that we have more cat bonds on the go, more cat bond quotes; simply more is being done than the last couple of years," said Adderley in an interview with Artemis.

"It definitely seems busier than normal. So, I can see why the investment banks are saying that it's going to be a great year, because of the quotes that we're getting," he continued.

At approximately $3.3 billion, first-quarter 2023 cat bond issuance is above the ten-year average for the period, although it is still below the record $4.1 billion seen in Q1 2020.

Nevertheless, it's been a busy opening quarter for the marketplace, and numerous deals upsized while marketing, which suggests strong investor appetite for property catastrophe risks, despite 2022 being another year of outsized losses for re/insurers.

"If that's already happening (deals upsizing), you've got to figure why wouldn't that happen with other deals when we know there's more deals in the market, and we know there's an appetite to do the deals from investors," said Adderley.

"So, I would not be surprised if it is a record year," he added.

Alongside more deals, Adderley noted that the market is also seeing new sponsors and, in light of the first-of-its-kind $45 million cyber ILS deal sponsored by Beazley in Q1, is seeing new risks which are ultimately becoming more accepted across the marketplace.

"That means that I think you'll see more cyber, and I think you'll also see more new risk," said Adderley.

"We have lots of clients out there talking to us about forming cyber brokers, cyber commercial reinsurers and so on. It is more of a common theme; it is definitely coming up on a more regular basis. So, you've got to figure that all of this has got to lead somewhere.

"You've got to assume that because the investors in the recent cyber deal were able to get comfortable that one time, and I realise all deals are far from the same, but we all know that it does take a while to get comfortable with things. But if investors got comfortable doing the Beazley deal, then surely that means that when it comes to the second deal or the third deal, it will take less time to get to that level of comfort," he continued.

As Adderley emphasised, "it is always harder to start than to follow", so it should be the case that in terms of cyber ILS, "the next one will be easier to close."

"It would be great to see two or three more deals this year before Monte Carlo, which build on the expansion of the market. So, while it would be good to have a record year, it would be great to have more risks become normalised and more acceptable, where people stop talking about these risks being new and instead say, we've done this now," continued Adderley.

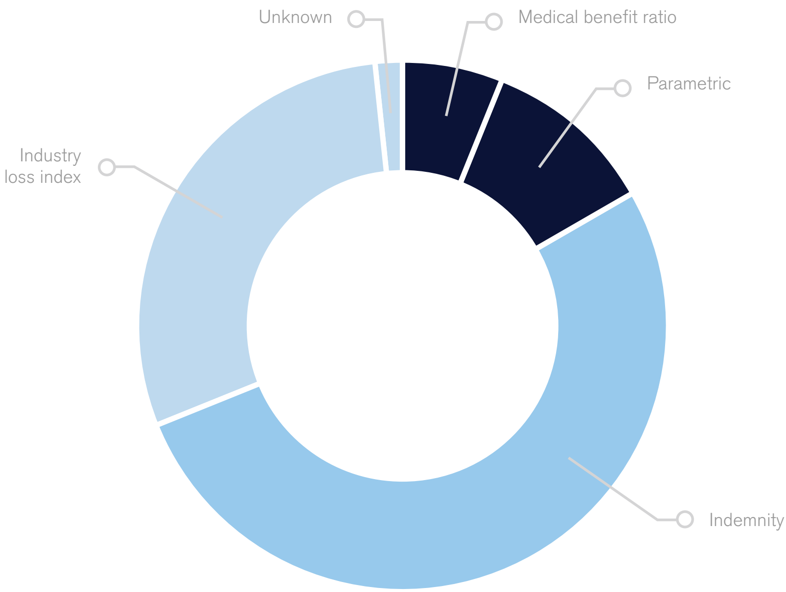
"All you need now is a couple of follow ups to some of these new risks, and I think, possibly, that builds on the fact that you've got these companies out there now that are focusing on cyber. The concepts, the thought processes and the education and analysis around these different risks is becoming normalised," he concluded.

BRAD ADDERLEY
BERMUDA MANAGING PARTNER

Q1 2023 ILS issuance by trigger type

Unsurprisingly, the indemnity trigger structure featured heavily in issuance in the opening quarter of 2023, although at $1.7 billion, or 52% of the total, its dominance was less than in previous years amid greater trigger diversification so far in 2023.

As was the case in the comparable prior year quarter, the use of industry loss triggers remained strong in Q1 2023, with four transactions with a combined value of $960 million, accounting for 29% of issuance, coming to market.



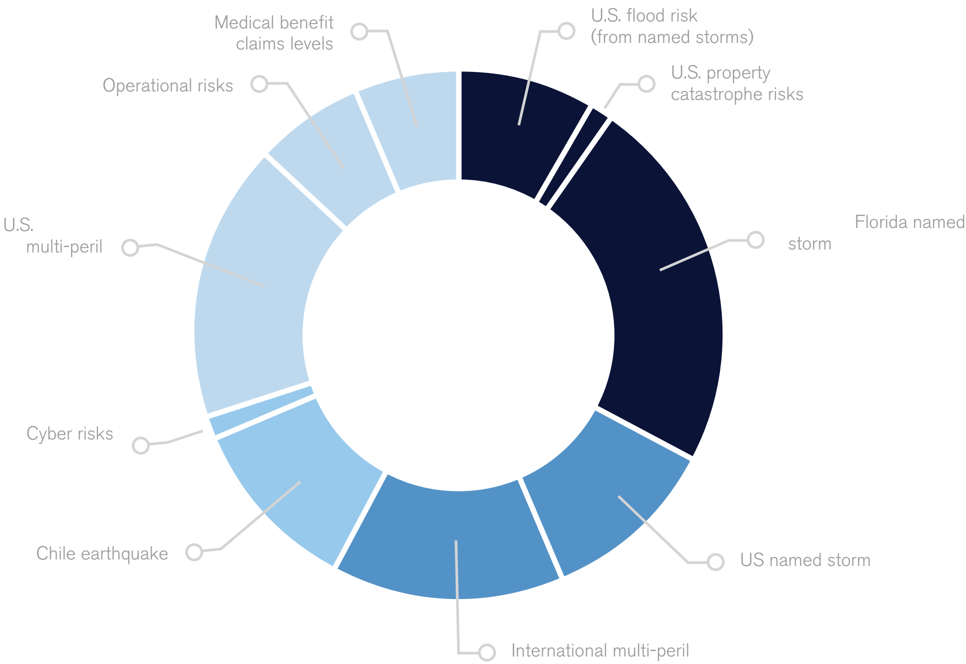
Additional trigger diversification came from a deal covering earthquake risk in Chile, which provided $350 million of parametric risk in Q1 2023, accounting for approximately 11% of issuance. Another deal leveraged a medical benefit ratio structure, accounting for 6% of issuance. We do not have trigger information for 1.5% of issuance, all related to the private Seaside Re cat bonds.

Q1 2023 ILS issuance by peril

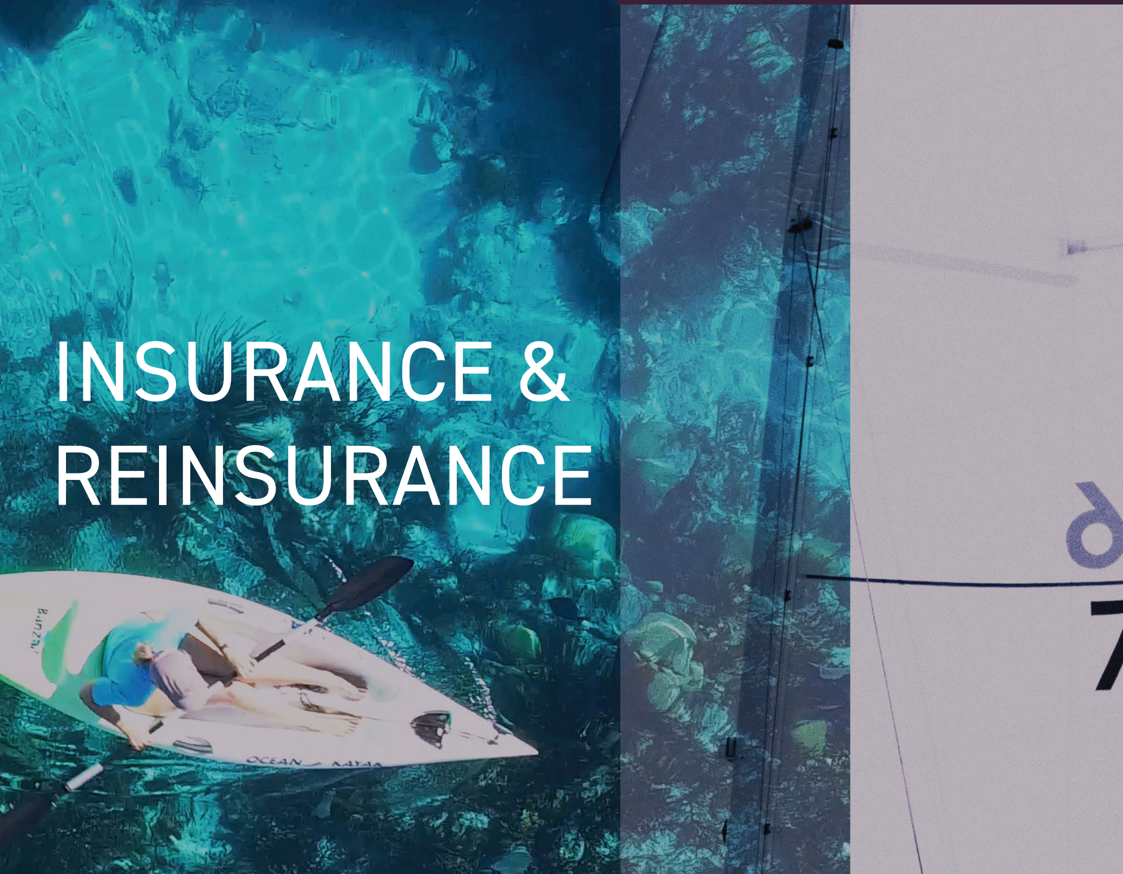
For the first time, a sponsor secured capital market investor-backed cyber reinsurance protection in Q1 2023. This $45 million transaction from Beazley is tipped to be the first of many cyber cat bond deals.

Importantly, the cyber deal brought some non-cat diversification to investors, as did Zurich's operational risk transaction, and Aetna's 14th Vitality Re issuance, which protects against an increase in medical benefit claim levels.

U.S. multi-peril deals from The Andover Companies and repeat sponsors ARX Holding Corp. and Allstate amounted to $560 million. Also in the U.S., American Integrity, Kin, and Citizens Property Insurance brought a combined $750 million of Florida named storm risk to market, while SURE brought $355 million of named storm protection for multiple U.S. states.

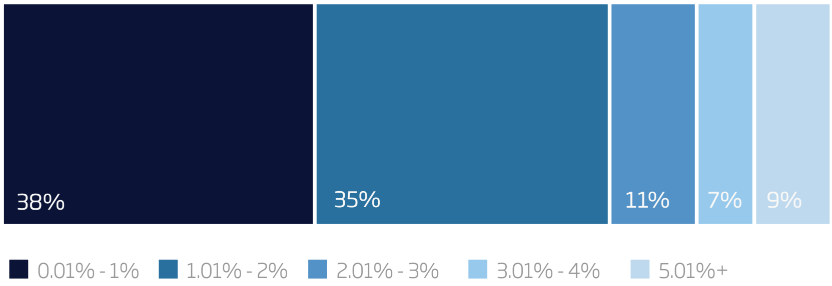


Deals from Convex Re, Ariel Re, and RenRe brought $460 million international multi-peril risk to market, although all of these deals include coverage for certain U.S. risks. That leaves the $350 million Chile earthquake deal, which is the only property cat bond issued which doesn't cover at least one U.S. peril.



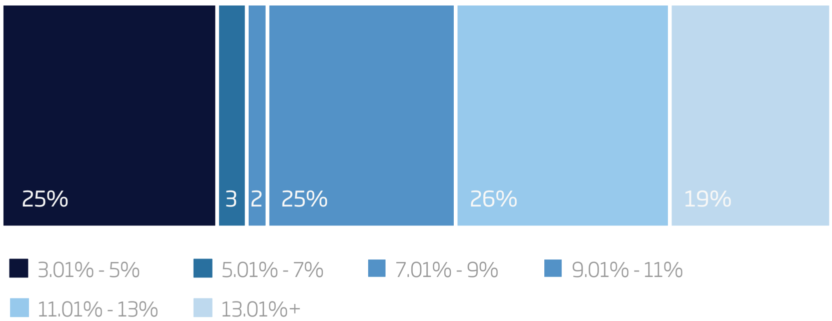
Q1 2023 ILS issuance by expected loss

A significant $2.16 billion, or 73% of quarterly cat bond issuance that we have expected loss data for, had an expected loss of less than 2%, with slightly more of this slice having an expected loss of under 1%. In contrast, just $515 million of notes issued in the quarter had an expected loss of between 2% and 4%, while the two tranches of FloodSmart Re notes had an expected loss of more than 5%. The Class B tranche of these notes had the highest expected loss, of 6.83%. Once again, the Class A tranche of Vitality Re notes had the lowest expected loss, of 0.01%.



Q1 2023 ILS issuance by coupon pricing

For the most part, investors achieved their demands for higher spreads during the first quarter of 2023, and this is evidenced by the fact none of the tranches of notes on offer paid a coupon of less than 3.5%. In fact, of the $2.95 billion of risk capital issued that we have pricing data for, a huge 70%, or $1.9 billion paid a coupon of more than 9%, with just 30% of issuance offering investors a coupon of between 3.5% and 9%. 3.5% was the lowest coupon seen in Q1 and came from the Class A tranche of Vitality Re notes. At 21.5%, the Class B tranche of FloodSmart Re notes paid the highest coupon.



OCORIAN

ILS REMAINS STRONG AMID BANK FAILURES, RISING INTEREST RATES & MACROECONOMIC STRESSES

Sherman Taylor is the Head of Capital Markets in Ocorian's Bermuda office and serves on the board of directors of several ILS vehicles. Below, he shares his views on the impact on ILS of recent bank failures, rising Interest rates and other macroeconomic stresses.

The total number of new insurance-linked securities (ILS) issued in the first quarter of 2023 beat the fourth quarter of 2022, with close to $1.7B (USD) of new ILS issued between January and March 2023. The average spreads of newly issued ILS in the quarter have reached record highs, and average expected losses have not risen for these new issuances. The general sentiment is that 2023 will be a good year for ILS, even with macroeconomic headwinds including inflation and a hard insurance market cycle.

Towards the end of the quarter, a sudden and rapid loss of confidence in certain U.S. regional banks led to 2 major bank failures, leading to sharp selloffs in the shares of U.S. regional banks amid worries of contagion. The U.S. Federal Reserve was forced to step in with emergency funding to restore confidence in the banking system and protect depositors. At the time of writing, the selloff in bank shares had slowly spread to international equity markets, although the global impact is not as severe as the banking crisis in 2008/2009.

The fallout from the failure of Silicon Valley Bank (SVB) and Signature Bank should not directly impact ILS; there have been no reports of direct exposure of ILS capital in either of the failed banks. Generally, ILS capital is not kept at U.S. regional banks, and it is unlikely that any contagion from the U.S. regional bank failures will spread to larger, national, and international corporate banks where ILS capital is typically stored. ILS deals are designed to ensure that investors' collateral is well protected from credit and market risks, and preserved so that it can either be returned to investors at the maturity of the ILS or made available to cedants if losses should attach to the ILS.

The selloff in bank shares triggered instability in an already volatile equity and bond market; with the Dow trending sharply downward in the days immediately following the collapse of SVB and Signature Bank. Although the instability may be short-term, the ILS market could indirectly benefit. Since ILS is not correlated to equity and bond markets, capital in flight from these markets could find a safe harbour in ILS, providing a good portfolio diversification tactic. Also, in a highly volatile equity and bond market, pricing could become more uncertain, and the relative stability of ILS could attract fresh capital seeking a more stably priced investment.

The U.S. Federal Reserve is expected to continue to raise its benchmark interest rate in small increments of approximately 25 basis points throughout 2023, and it is estimated by the end of Q2 2023 the benchmark rate could reach 5%-5.25%. If interest rates continue to rise then the bond market will become a more stable investment environment, some ILS investors could choose to not renew maturing ILS and invest in bonds instead.

Industry experts generally agree that there remains more upside for ILS than downside; the asset class is expected to continue to grow and provide capital to cover more non-cat risks while also incorporating evolving technology and ESG.

The Ocorian team provide a full suite of administration and fiduciary services to the ILS and captive market from our Bermuda office, ensuring that all structures remain compliant with applicable regulations in each jurisdiction. We add value throughout the life cycle and provide a "cradle to grave" solution from incorporation and licensing to unwinding and voluntary liquidations when the structure ends its natural life. Precision and technical expertise has been the hallmark of our service offerings to this important global insurance industry.

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

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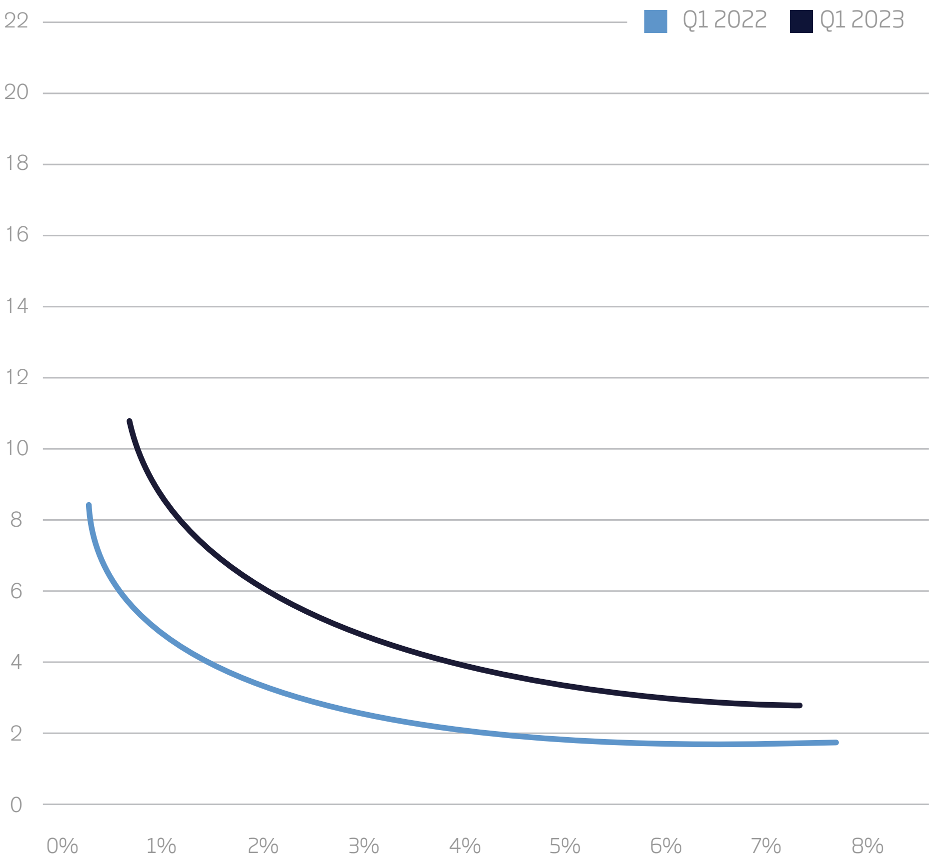
Q1 2023 expected loss & multiple year-on-year

With this chart, which plots the expected loss against the multiple (price coupon divided by expected loss) of quarterly issuance, the dark blue line represents Q1 2023 and the light blue line Q1 2022. It shows that, when compared with the prior year quarter, investors were paid more for the same level of risk in Q1 2023.

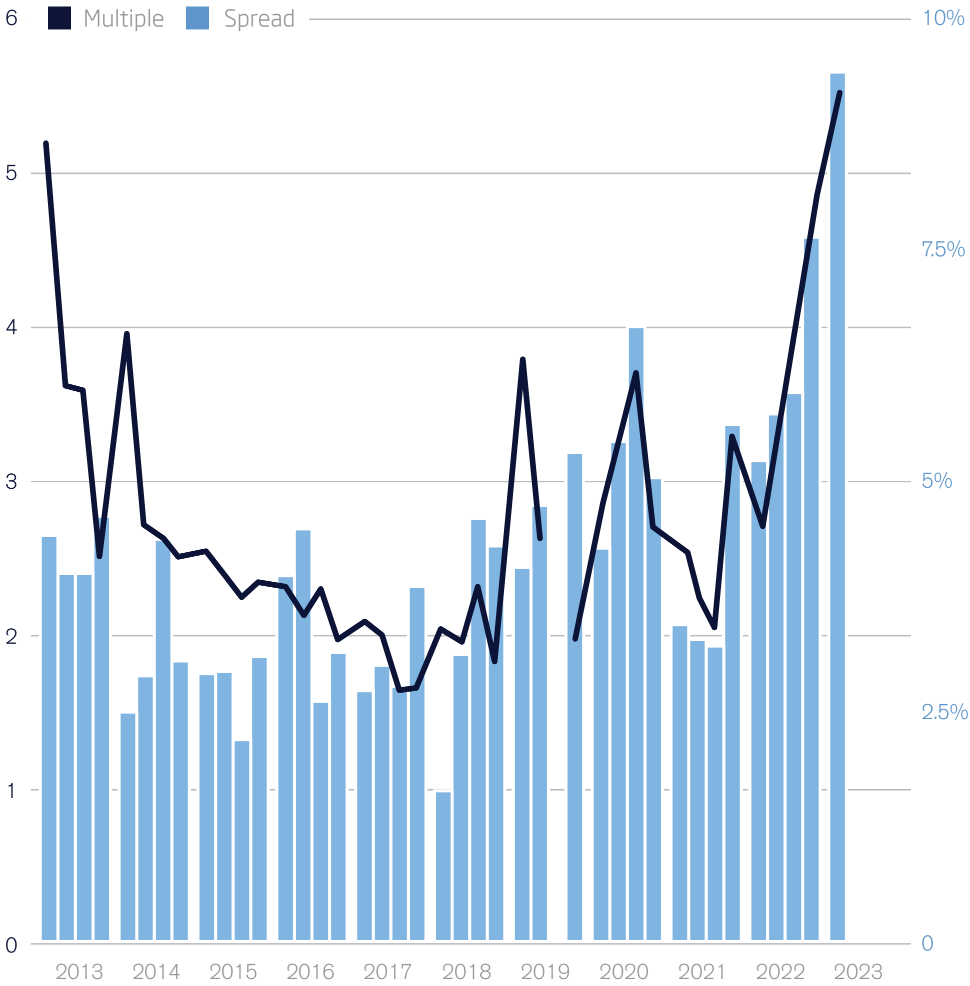
The higher multiples of note issued throughout the first quarter confirms the continuation of the market firming which began in 2021. The average multiple of expected loss was volatile 2010 through 2013, before trending downwards, with a few exceptions, between 2014 and 2021. Now, it seems investors are set to enjoy a period of higher returns.



Multiple and spread by quarter

This chart, which depicts the average multiple of quarterly cat bond issuance (the line) and the excess spread (the bars), shows just how much both metrics have risen so far in 2023, continuing the trend seen in the final quarter of last year. Artemis' data shows that during the quarter, the average spread actually reached an all-time high of 10.5%. However, some moderation of spreads was evident in the final weeks of March, but the average spread still ended the first quarter at 9.41%, which is substantially higher than any quarter of the past decade.

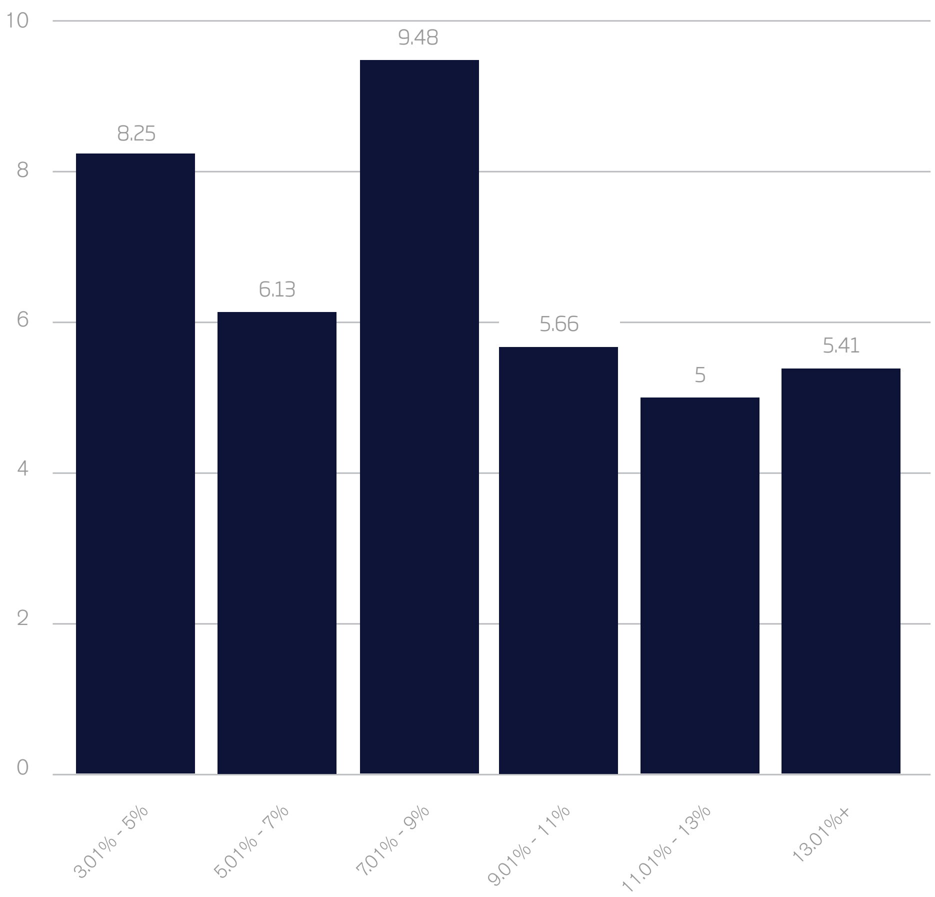
As the chart highlights, the average multiple had also been trending higher throughout 2022 and this has continued into 2023, ending Q1 2023 at 5.52, which is the first time the average multiple of cat bond issuance has exceeded 5 since Q1 2013.



Q1 2023 average multiple by coupon pricing

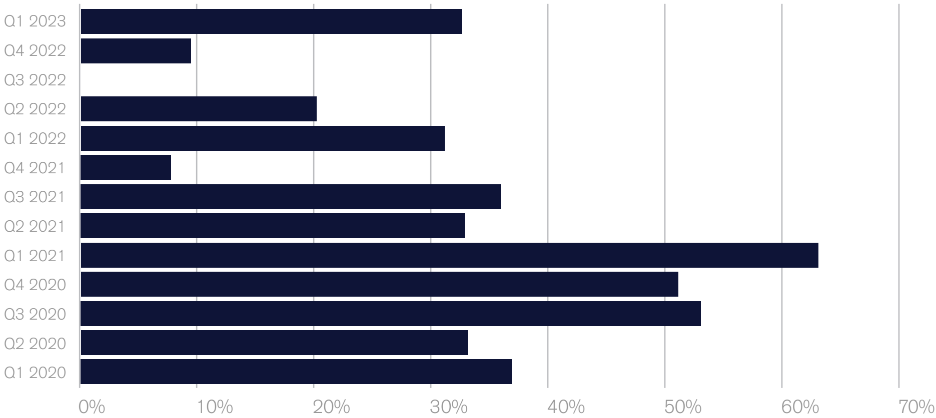
This chart shows the average multiple of quarterly issuance against the coupons on offer. For the most part, the lower deals priced then the higher the multiple, although there were some outliers with a couple of deals where it appears investors were able to achieve particularly strong pricing.

There were some notably high coupons in Q1 2023, and across the tranches of notes that we have pricing data for, the average coupon on offer in the quarter was 11.5%, compared with 8.8% in Q1 2022. It's clear from the chart that for these highest priced tranches of notes, the multiple came down.

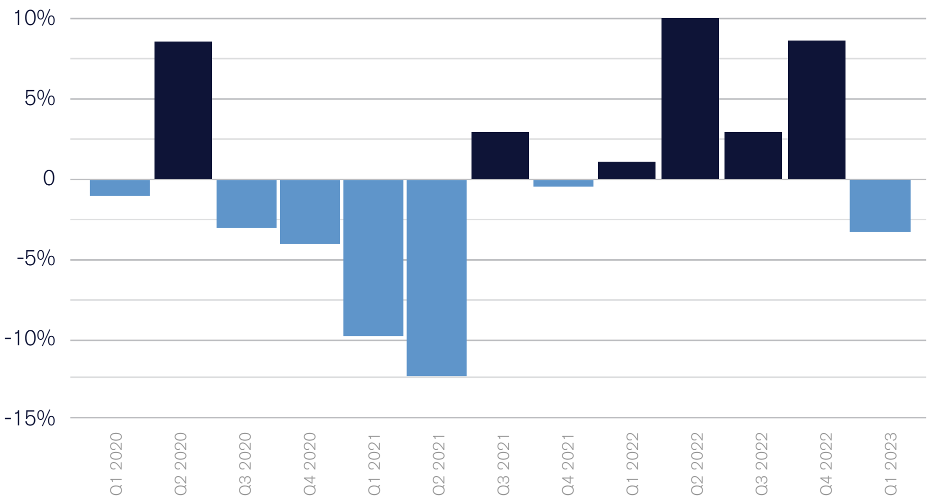


Issuance size and price changes

In the first quarter of 2023, the property cat bonds that were issued, on average, increased in size by 32.6% while marketing, signalling strong appetite from investors and a willingness from sponsors to capitalise on the current market environment despite higher pricing. This is now the 13th consecutive quarter in which deals have, on average, increased in size while out in the market. During this time, deals have increased by an average of 31.3%, so the upsizing of deals in Q1 2023 is above average.



For the 20 tranches of notes that we have full pricing data for, 10 priced below, eight above, and two at the mid-point of initial price guidance in Q1 2023. However, some of the price declines were fairly dramatic, meaning that across all tranches of notes in the period, the average price change of issuance was -3.2%. This represents a reverse of the trend witnessed throughout last year when, on average, tranches of notes priced above the mid-point consistently. The data suggests increasingly favourable placements for sponsors in Q1 2023, with players clearly taking advantage of investor appetite.

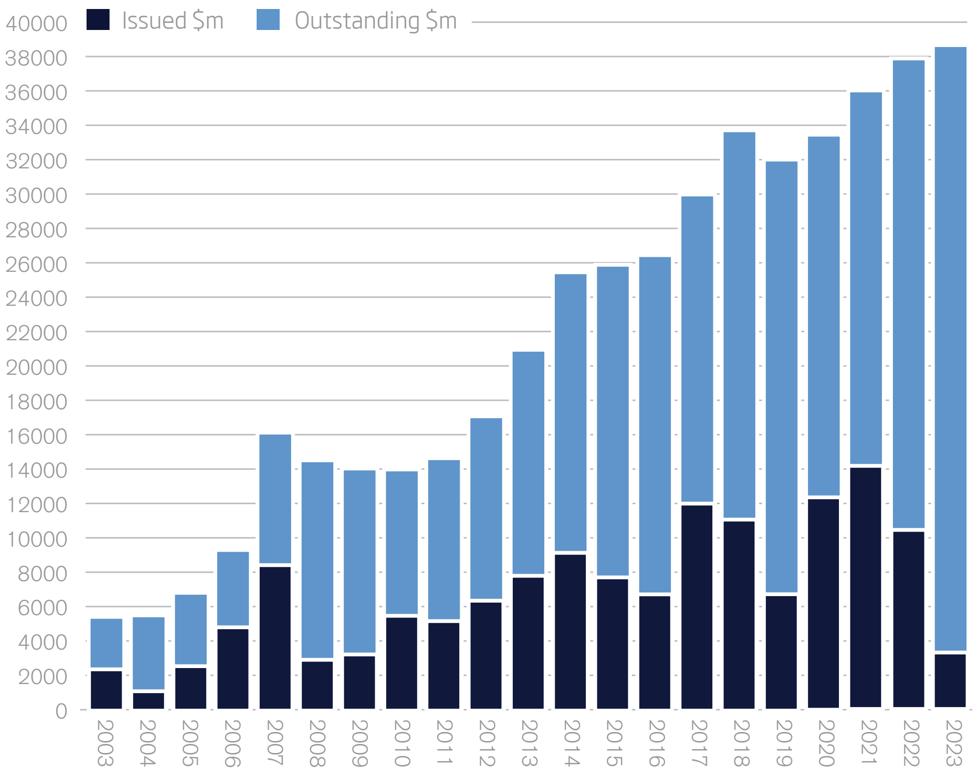


Issued / Outstanding

Once again, the catastrophe bond and related ILS market achieved outright growth in the opening quarter of 2023, expanding by almost 2% from the end of 2022 to an outstanding market size of $38.63 billion, which is a new end of quarter high for the sector.

First-quarter 2023 issuance of roughly $3.3 billion reflects another busy quarter for the marketplace. While Q1 issuance is down on the previous year, it leaves the market in a strong position heading into the second quarter, which is typically the most active period for cat bonds with the 10-year average issuance for Q2 standing at more than $4.1 billion, according to Artemis' data.

In fact, the Artemis Deal Directory shows that the cat bond pipeline for Q2 2023 is already building up nicely, with six deals already announced and noise of more to come. The record for H1 issuance was seen in 2017 when over $6.7 billion of new risk capital came to market in Q2, building on the $2.8 billion of Q1 issuance. So, it's going to take an extremely active Q2 2023 for this record to be broken.



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/

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

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