



Q1 2022 Catastrophe Bond & ILS Market Report

Outstanding market hits new
high after strong first quarter

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INTRO

Welcome to the Artemis Q1 2022 catastrophe bond and related insurance-linked securities (ILS) market report. On the following pages, we dissect the robust level of new risk capital issued in the quarter on the back of a record-breaking year for the space.

Last year, the volume of risk capital from traditional 144a cat bonds reached a new high of more than \$12.5 billion. This year, momentum in the property cat bond space has persisted with 10 transactions bringing a combined \$3 billion of risk capital to market, representing year-on-year growth of \$385 million.

Private, or cat bond lite issuance was also strong in Q1 2022 at approximately \$240 million, which is a slight increase on the level reported a year ago.

As well as the peril and geographical diversification offered by the range of property cat and private ILS deals witnessed in the opening quarter of the year, investors welcomed \$200 million of healthcare risk and \$131 million of terrorism risk in cat bond form.

Additionally, a single transaction from Arch Capital brought more than \$282 million of mortgage risk to market in Q1 2022, which this report examines in a dedicated mortgage ILS section.

Combined, property cat, private, and other ILS issuance exceeded \$3.5 billion in the first quarter of 2022, making it the third most active Q1 in the market's history, in terms of risk capital issued, and taking the outstanding market size to a new high of \$37.5 billion.

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.

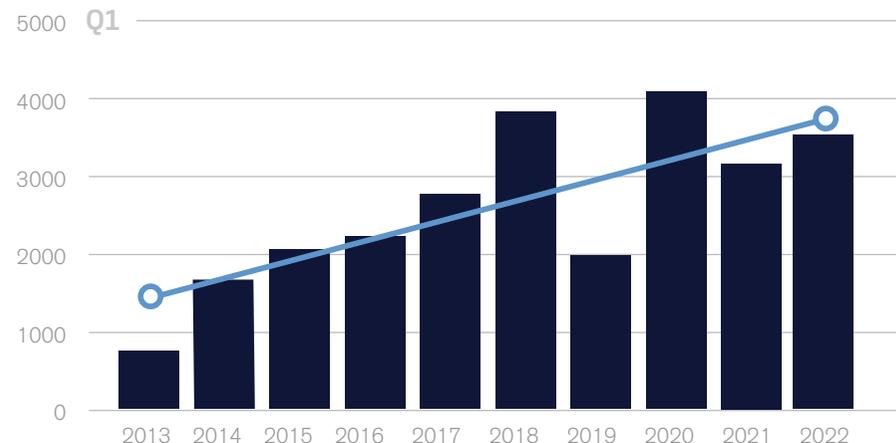
Transaction Recap

The table below provides brief details of the 10 traditional 144a property cat bonds, 13 private (nine of which are Seaside Re issuances) cat bonds, two transactions covering non-catastrophe risks, and one mortgage ILS transaction. While year-on-year the number of transactions remained flat, the volume issued in Q1 2022 is higher.

ISSUER / TRANCHE	SPONSOR	PERILS	\$M	DATE
Merna Re II Ltd. (Series 2022-1) Class A	State Farm	U.S. property catastrophe risks	300	Mar
Asagao V - White Rock Insurance (SAC) Ltd.	Unknown	Japan earthquake	16.2	Mar
Tomoni Re Pte Ltd. (Series 2022-1)	Mitsui Sumitomo, Aioi Nissay Dowa	Japan multi-peril	220	Mar
Sanders Re III Ltd. (Series 2022-1)	Allstate	U.S. multi-peril	550	Mar
Montoya Re Ltd. (Series 2022-1)	Inigo Insurance (Syndicate 1301)	International multi-peril	115	Mar
Cape Lookout Re Ltd. (Series 2022-1)	North Carolina Insurance Underwriting Association	North Carolina multi-peril	330	Mar
Matterhorn Re Ltd. (Series 2022-1)	Swiss Re	International multi-peril	325	Mar
Bonanza Re Ltd. (Series 2022-1)	American Strategic Insurance Group	U.S. named storms	135	Mar
Baltic PCC Limited (Series 2022-1)	Pool Re	Terrorism risk	131	Mar
Eclipse Re Ltd. (Series 2022-1A)	Unknown	Unknown property catastrophe risks	75	Mar
FloodSmart Re Ltd. (Series 2022-1)	FEMA / NFIP via Hannover Re	U.S. flood risk (from named storms)	450	Feb
Blue Halo Re Ltd. (Series 2022-1)	Allianz Risk Transfer	U.S. multi-peril	125	Feb
Bellemeade Re 2022-1 Ltd.	Arch Capital Group Ltd.	Mortgage insurance risks	282.5	Jan
Vitality Re XIII Ltd (Series 2022)	Aetna	Medical benefit claims levels	200	Jan
Seaside Re (Series 2022)	Unknown	U.S. property catastrophe risks	108.5	Jan
LI Re (Series 2022-1)	Unknown	California earthquake	15	Jan
Tailwind Re Ltd. (Series 2022-1)	Validus Holdings	International multi-peril	400	Jan
Artex SAC Limited - Silver Crane Notes	Toa Re Europe	International multi-peril	25	Jan

Q1 ILS issuance by year (\$M)

Q1 2022 is the third most active first-quarter ever for catastrophe bonds, in terms of risk capital issued. At \$3.52 billion, issuance increased over the prior year quarter and ensured that Q1 exceeded the \$3 billion mark for the fourth time since 2018. Artemis' data shows that issuance in Q1 2022 came in 36%, or \$929 million above the 10-year average for the period.



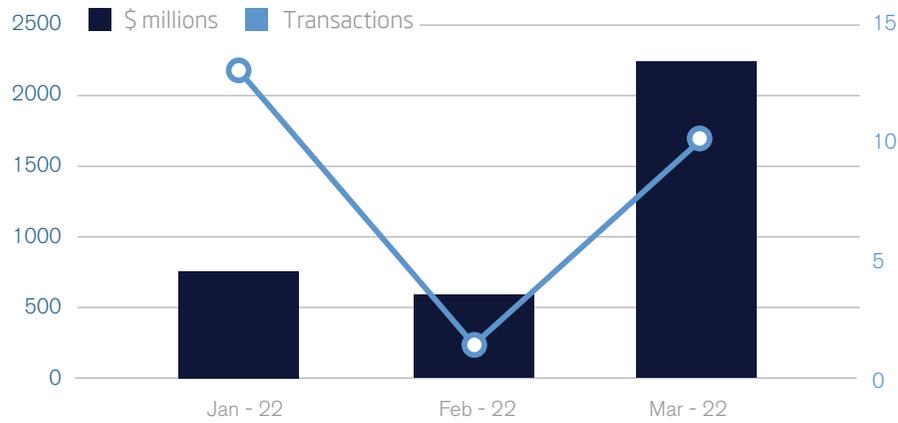
ILS average transaction size & number of transactions by year (\$M)

For the third year running, a combination of more than 20 traditional 144a, cat bond lite and other ILS transactions came to market in the first quarter of the year. Year-on-year, the average transaction increased slightly, but at \$140 million is below the 10-year average for the quarter.



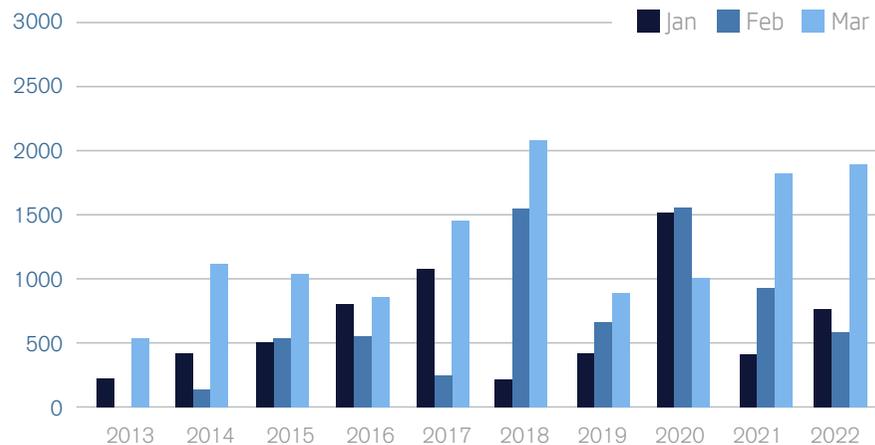
Number of transactions and volume issued by month (\$M)

In Q1 2022, issuance in the month of March set a new record at almost \$2.2 billion, which is \$874 million more than the combined volume of issuance in January and February. Issuance in January, at \$749 million, did still exceed the 10-year average for the month. In February, however, only two deals were issued with a combined value of \$575 million, which is below the 10-year average for the month.



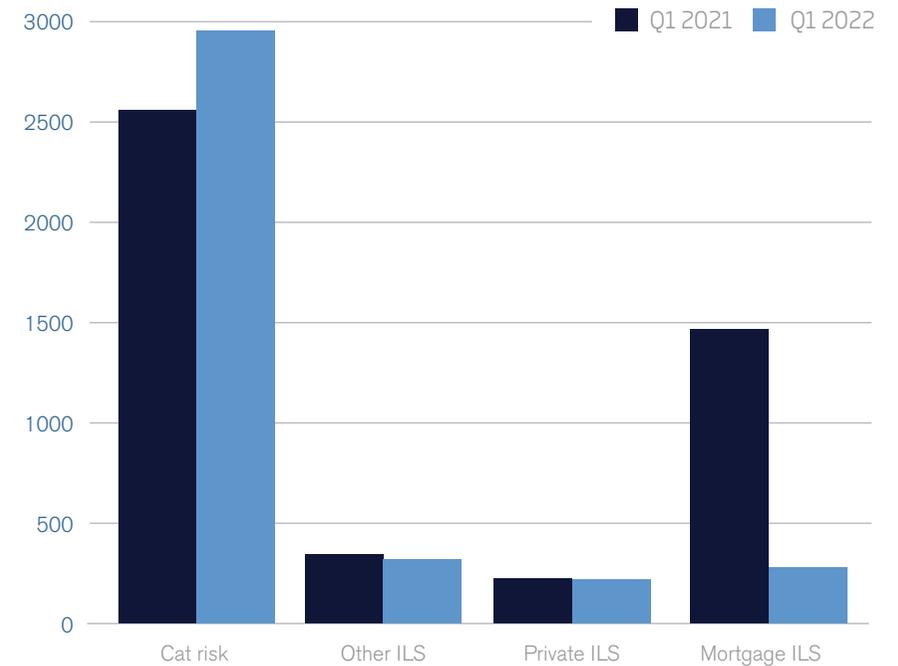
Q1 issuance by month & year (\$M)

Despite being the most active month in terms of risk capital issued, 10 transactions featured in March, which is less than the 13 witnessed in January. In fact, the Artemis Deal Directory shows that since the start of Q2 2021, no month has seen more transactions than January of this year, aided in part by the robust private cat bond sub-sector.



Q1 ILS issuance by type

As the chart shows, year-on-year, the universe of 144a property catastrophe bonds saw the most significant growth, rising to \$3 billion, accounting for 84% of Q1 2022 issuance. Once you include the property cat focused private transactions, the Q1 2022 total rises to roughly \$3.2 billion, which is up on Q1 2021 but below the record set in 2020 of approximately \$3.9 billion.



In 2020 and then again in 2021, property catastrophe bond issuance broke records for the full-year after strong first quarters set the tone for the months ahead. It remains to be seen whether this plays out again in 2022, but strong investor and sponsor appetite has produced a robust start to the year for cat risk deals ahead of Q2, which is historically the busiest time for the market.

This year also saw the volume of cat bond lite issuance rise slightly when compared with Q1 2021, while the volume of cat bond deals covering other lines of business (life/health/specialty etc) fell minimally this quarter, when compared with the prior year.

THERE'S MORE GOOD NEWS THAN BAD IN WHAT'S AN INTERESTING TIME FOR THE ILS MARKET: BRAD ADDERLEY

It's likely the insurance-linked securities (ILS) asset class has outgrown its niche label, but while the market's evolution continues and growth prevails, Brad Adderley, Bermuda Managing Partner at Appleby, questions whether the high tide is raising all ships.

"If we look at the beginning of this year compared to some previous years, there's definitely an uptick in catastrophe bond issuance. To give you an idea of the number, we have anywhere between six to eight on the go at any given time," said Adderley. "But last year, and I was a bit surprised by this, I was involved in a transaction that didn't proceed, which is rare."

While it's still early in the year, there's every chance cat bond issuance is once again extremely robust on the back of consecutive record-breaking 12-month periods

for the sub-sector of the ILS space, and a strong start to 2022.

More broadly, new marketplaces and exchanges continue to form as existing platforms and tools evolve, all of which Adderley expects to fuel additional growth across the industry.

"So, for my purposes, there's a lot more good news than negative news out there. I definitely think you're going to see, by the end of the year, more ILS capital, more exchanges, more marketplaces being formed and succeeding," said Adderley.

"I also think it's interesting that a lot of the new startups over the past few years all have, or most of them have ILS platforms, which previously wasn't the case. And that's only going to fuel the market," he added.

As noted by Adderley, while exchanges and marketplaces can struggle, the more people do it the more chance there is some of them will stick.

"Also, the industry is getting more comfortable with the technology that underpins these tools. It's almost like the ILS market has grown so much that this is just the right time," said Adderley.

As well as more tools and platforms coming to the ILS market, Adderley also expects to see people in the space continue to raise capital, but stressed that this isn't across board.

"I think the ILS market is really, really interesting in the fact that, you have some funds or managers who have been so fast at growing their capital base over the past 18 months, while others are struggling to raise capital," continued Adderley.

"It's interesting that it is certainly horses for courses right now, and I do not know why some are able to raise capital quicker than others, considering a lot of the new players have track records. It doesn't appear as though the high tide is raising all ships, and to me, that is interesting, and while there's a host of good reasons, such as climate change, I'm not sure what the deciding factor is.

"You've got to figure that most people out in the marketplace would love to raise capital right now, considering how much business they have locked up," he concluded.

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BRAD ADDERLEY
BERMUDA MANAGING PARTNER

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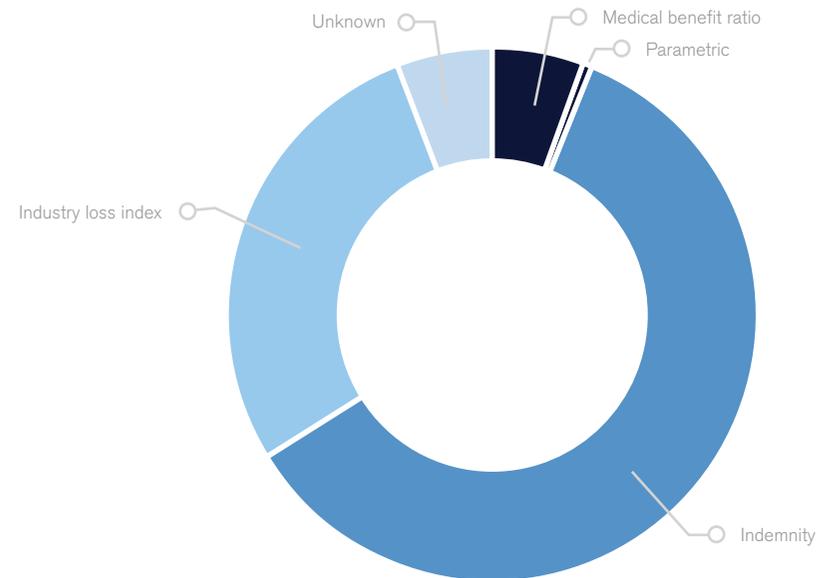
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Q1 2022 ILS issuance by trigger type

When looking at risk capital issued by the type of trigger used, Q1 2022 was a fairly typical quarter in the sense it was dominated by approximately \$2.1 billion of indemnity deals, accounting for 60% of total issuance.



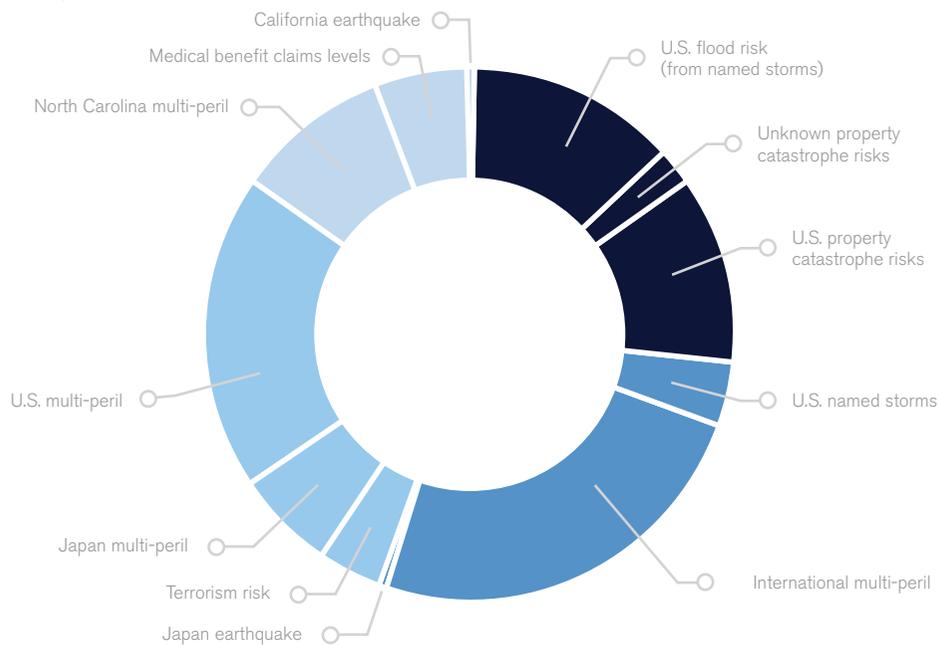
However, the industry loss trigger made a comeback this quarter when compared with the comparable prior year period, with \$990 million of risk capital issued utilising an industry loss index trigger structure in Q1 2022. One private deal issued is the only one so far this year to have leveraged a parametric trigger, while another deal used a medical benefit ratio structure; both of which provide additional trigger diversification.

For 6% of Q1 issuance we do not have trigger information, as these were private cat bond deals.

Q1 2022 ILS issuance by peril

As Artemis' data highlights, investors took advantage of peril and geographical diversification in the first quarter of the year. While deals covering multiple international perils account for just over one-quarter of issuance in Q1, this is the largest slice at \$865 million, with deals from Toa Re Europe, Validus, Swiss Re, and Inigo. Transactions covering multiple U.S. perils from Allianz and Allstate account for 21%, or \$675 million of Q1 2022 issuance.

Also in the U.S., American Strategic brought \$135 million of named storm risk to market, as the North Carolina Insurance Underwriting Association returned with a \$330 million regional multi-peril deal. FEMA transferred a further \$450 million of U.S. flood risk to the capital markets with its latest FloodSmart Re deal, while a private transaction brought \$15 million of California quake risk to market. State Farm also returned in Q1 with a \$300 million U.S. property catastrophe risk deal.

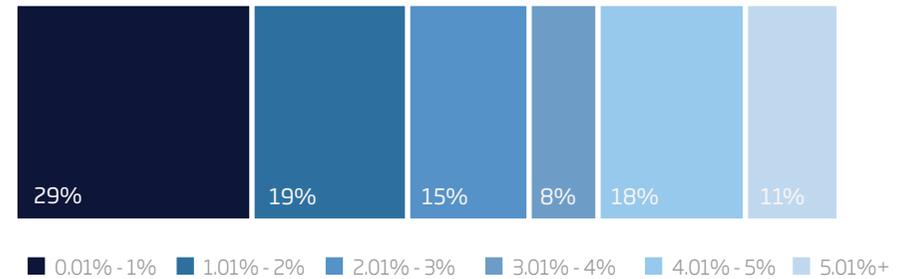


Mitsui Sumitomo Insurance & Aioi Nissay Dowa Insurance issued a \$220 million Japanese multi-peril deal in Q1 2022, while a private transaction brought \$16 million of Japanese earthquake diversification for investors.

As the ILS market continues to expand, non-catastrophe deals, while still rare, are becoming a more common occurrence and this was evident in the first quarter. The UK's Pool Re returned with a \$131 million terrorism risk transaction in the quarter; as prolific sponsor Aetna issued yet another \$200 million healthcare transaction. Completing Q1 issuance, numerous privately placed deals brought a combined \$184 million of U.S. and unknown property catastrophe risks to market.

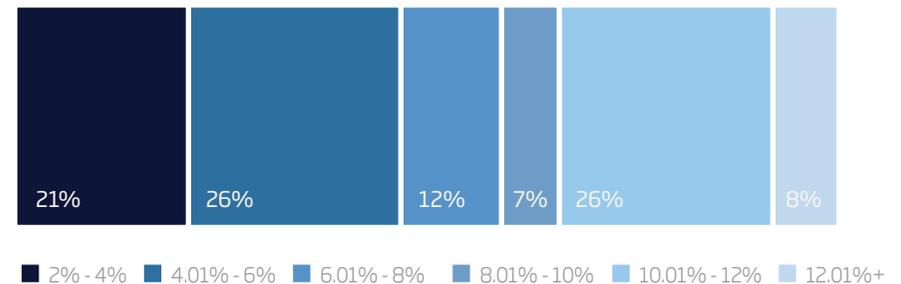
Q1 2022 ILS issuance by expected loss

Like last year, the majority of first quarter 2022 issuance that we have expected loss data for, had an expected loss of below 3%, with most of this having an expected loss of under 1%. However, tranches of notes with an expected loss of more than 3% reached more than \$1.1 billion in Q1 2022 compared with just \$790 million in Q1 2021, which shows that investors are willing to participate in these riskier deals. Typically, the lowest expected loss came from the Class A tranche of Vitality Re XIII notes, at 0.01%. The highest expected loss in the quarter was 7.17% assigned to the Class C tranche of FloodSmart Re notes.



Q1 2022 ILS issuance by coupon pricing

Examining Q1 2022 issuance by coupon pricing shows that, more than half of the tranches of notes on offer, in terms of risk capital, offered a coupon of more than 6%, with the majority of this offering a coupon of above 10%. In contrast, more than 50% of Q1 2021 issuance paid a coupon of less than 5%, which is a reflection of the higher expected losses witnessed this year when compared with last year. The Class A tranche of Vitality Re XIII notes and the Class A-1 tranche of Tomoni Re Pte notes had the lowest coupon in the quarter, at 2%. While the Class C of FloodSmart Re notes paid a coupon of 17.75%, the highest on offer in the quarter.



HOW BERMUDA SPIS CAN MEET ECONOMIC SUBSTANCE REQUIREMENTS

Ocorian Partner, [Louise Charleson](#) breaks down how Bermuda domiciled special purpose insurers (SPIs) can meet their economic substance obligations.

The Bermuda Registrar of Companies (ROC) has moved into the enforcement stage of economic substance (ES).

Therefore, this is a good time to revisit how those SPIs that were set up specifically for the purpose of accommodating an ILS transaction, or a series of ILS transactions, meet the requirements of ES.

While there is no blueprint and no “one size fits all” proposition, the ILS industry is highly commoditised in Bermuda, and there are structural similarities in transactions.

As registered entities carrying on the relevant activity of insurance, ILS SPIs are required to file an Economic Substance Declaration (ESD) annually. It is arguable that ILS related SPIs comply with ES obligations due to the necessity for them to meet certain ES requirements in other legislation governing these entities, such as the Companies Act 1981 and the Insurance Act 1978. Hence, it is important that information on these inherent

features is reflected in the ESD to the greatest extent possible.

SPIs in Bermuda may assert compliance with the five main ES requirements by reflecting that:

CIGA is conducted in Bermuda

The Core Income Generating Activity (CIGA) for the SPI is the underlying insurance contract(s). These contracts are written and administered in Bermuda which means that all the CIGA occurs in Bermuda.

The entity is managed and directed from Bermuda

The SPIs generally have insurance managers that are physically located in Bermuda. They provide the equivalent of full-time employees who are qualified insurance professionals. Therefore, there is a strong argument that the SPIs are managed and directed in Bermuda.

There are adequate full-time employees who are adequately qualified

In addition, the entities have a corporate secretary in Bermuda and most importantly, the entire board is usually located in Bermuda, with board members being insurance professionals provided jointly by the insurance manager and by the corporate service provider.

Adequate premises

All SPIs in Bermuda are required by law to have both a registered office, which is generally the address of its company secretary and a principal office which is typically the address of the Principal Representative. This helps the SPI meet the ES requirement of having adequate premises, applying the proportionality principle.

Adequate operating expenses that relate to the carrying on of the relevant activity (insurance) in Bermuda

After the initial set up of the SPI and the issuance of the ILS notes, most of the ongoing administrative expenses that are directly related to the relevant activity of insurance, are incurred in Bermuda for the life of the transaction. These expenses include regulatory fees, corporate secretarial and directorship

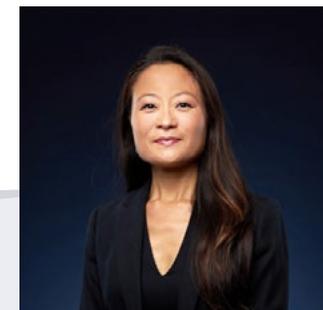
fees, insurance management fees, and some legal fees. These fees while not necessarily significant in value, are significant in proportion to the administration requirements of what may be a single insurance contract.

Risks of non-compliance

Fines of up to \$250,000 can be imposed for non-compliance with the ES Regime. It is therefore essential for SPIs to seek relevant advice when filing their ESD and responding to any warnings issued by the ROC to an entity for non-compliance.

Please watch out for further articles on economic substance; precedents for SPIs to rely on when considering compliance with the ES regime are anticipated to be determined during the next few months.

This article has been based on our understanding and interpretation of the unique features of SPIs; determination of compliance with the ES laws and regulations is within the purview of the Bermuda Registrar of Companies and the Ministry of Finance.



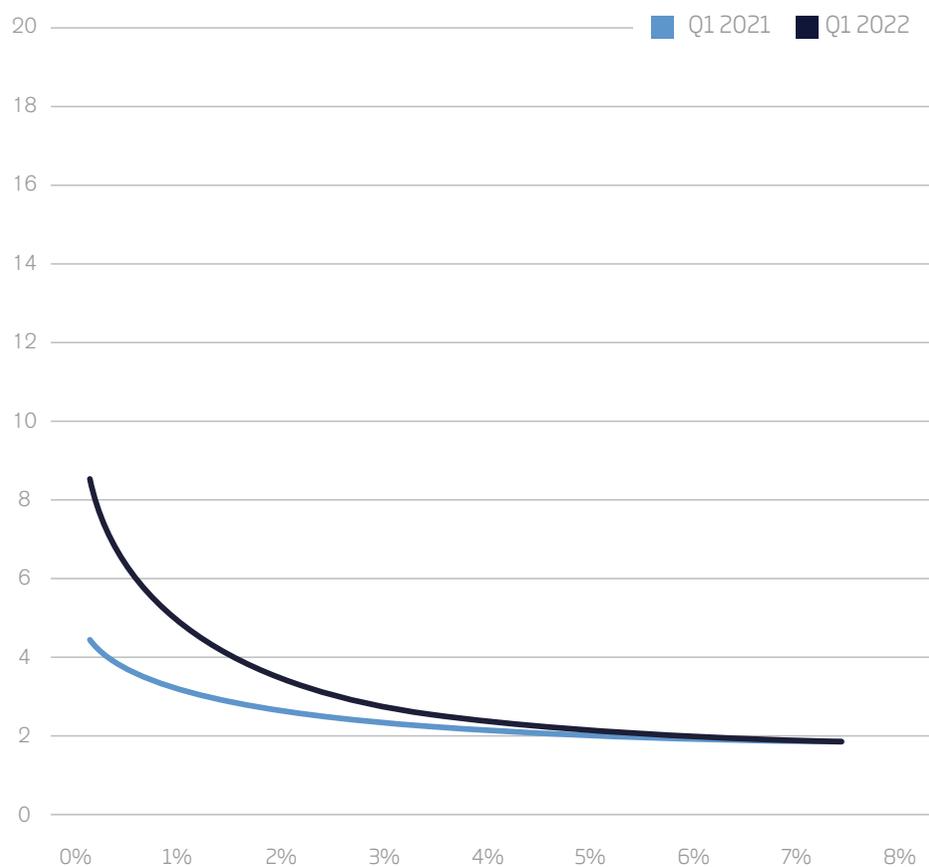
LOUISE CHARLESON

OCORIAN PARTNER,
OCORIAN LAW (BERMUDA) LIMITED

Q1 2022 expected loss & multiple year-on-year

By plotting the expected loss against the multiple (price coupon divided by expected loss), it's clear that, for the most part, the lower the expected loss the higher the multiple of first quarter issuance.

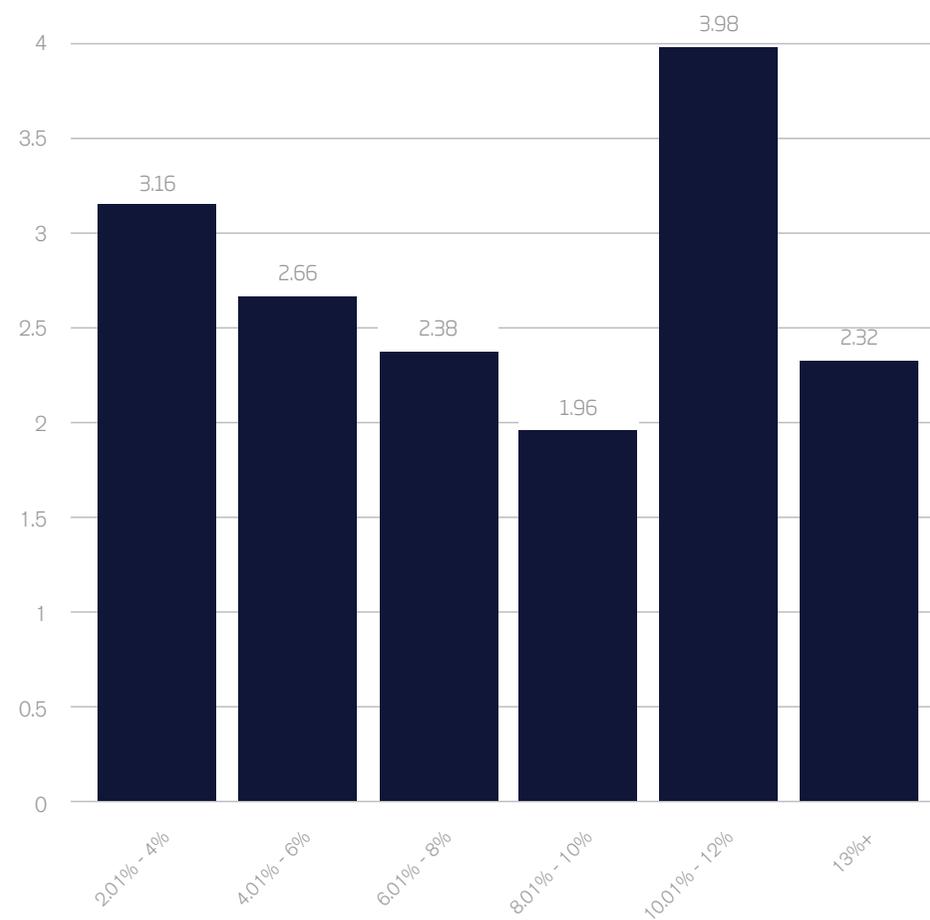
The dark blue line represents Q1 2022 and the light blue line Q1 2021, and shows that the highest multiples across the tranches of notes on offer in both periods, offered the lowest risk / return reward.



Q1 2022 average multiple by coupon pricing

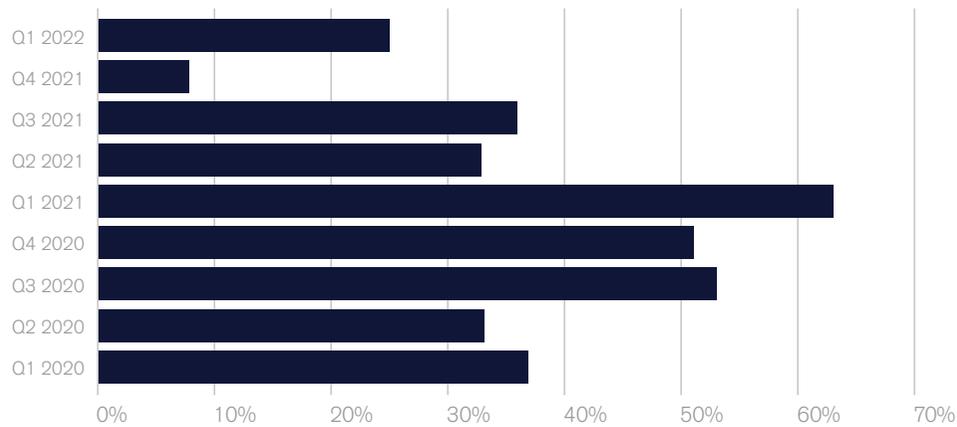
Year-on-year, the average multiple of Q1 2022 issuance increased to 2.64 compared with 2.54 in Q1 2021, and remains above the 2.53 seen at the end of 2021. Between 2012 and 2017, the average multiple of issuance declined from 4.44 to a market low of 1.86, before rising to 2.98 at the end of 2020. While this trend reversed last year with a fall in the average multiple, Artemis' data shows that it has started this year on an upwards trajectory.

Across the 17 tranches of property catastrophe bond notes and the single tranche of terrorism risk-linked notes issued in Q1 2022, it was somewhat of a mixed bag. While generally the lower priced deals provided investors with higher multiples, some of the higher priced tranches of notes went against this trend, as investors appeared to stand their ground on pricing.

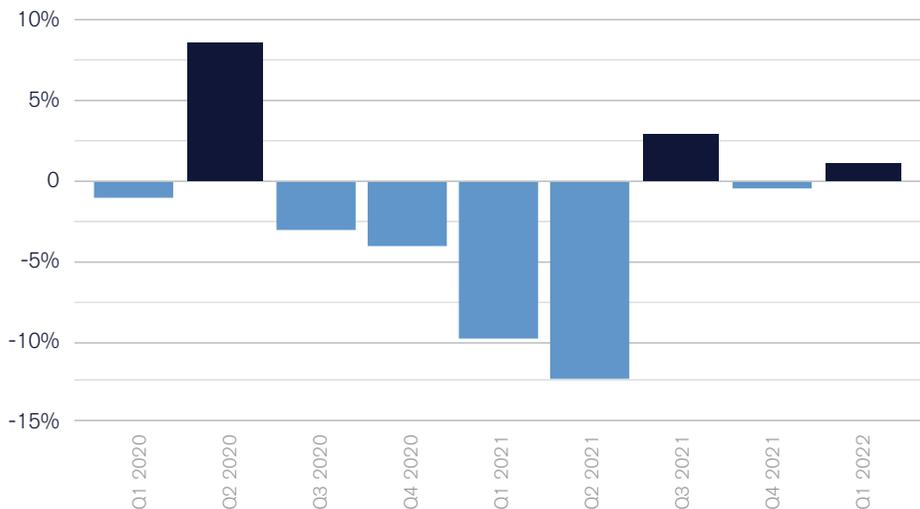


Issuance size and price changes

Property catastrophe bonds issued in the first quarter of 2022 increased in size by an average of 25.1%. Although a steeper increase than seen in the fourth quarter of 2021, it's still somewhat off the high of 63% seen in the first quarter of last year. As the chart shows, this is now the ninth consecutive quarter that has witnessed an average increase in size across all tranches of notes issued, as strong demand from the investor base has enabled growth for sponsors.



In Q1 2022, eight tranches of notes priced above the mid-point of initial guidance, six priced at the mid-point, and four tranches of notes saw pricing complete below the mid-point. Across all tranches of notes issued in the quarter, the average price change was +1.1%, which is only the third, quarterly positive average price change since Q1 2020. During the first quarter of 2022, the most dramatic price change was a 10% increase, while one tranche of notes saw pricing close 7.1% below the mid-point of initial guidance.

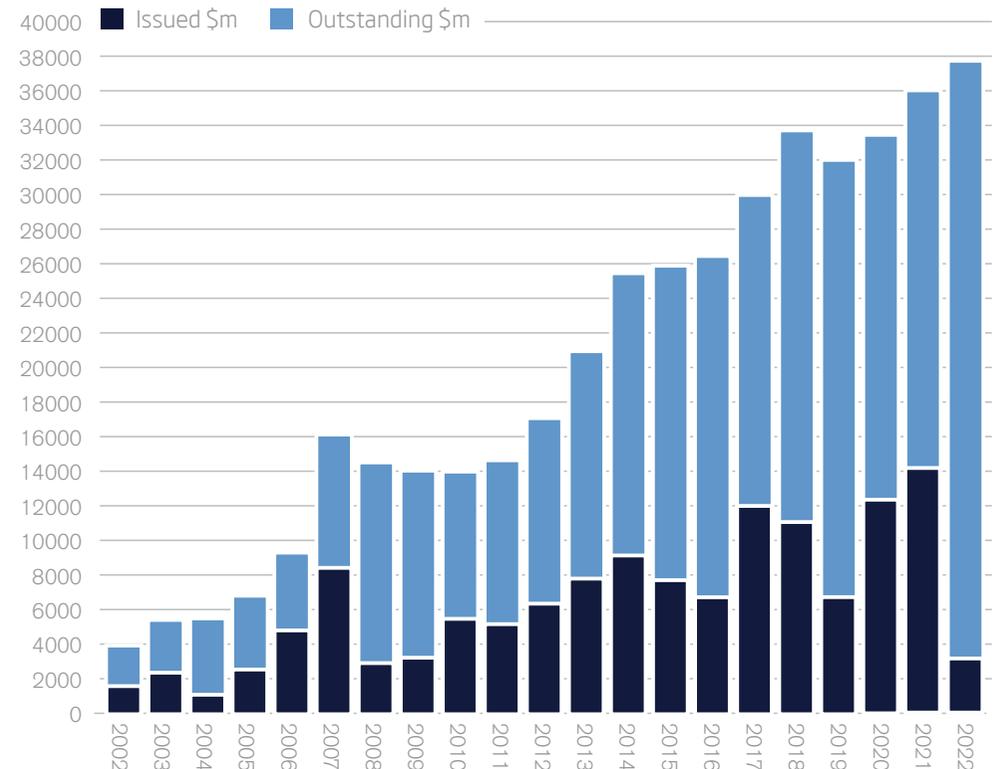


Issued / Outstanding

Despite not breaking any records, Q1 2022 catastrophe bond and related ILS (144a property cat bond, other line-of-business cat bond, and private cat bond) issuance was robust at more than \$3.5 billion. Year-on-year, issuance is up by \$368 million and in terms of risk capital issued, Q1 2022 is the third most active first quarter ever, behind the \$3.8 billion seen in 2018 and the \$4.1 billion in 2020.

The solid level of issuance seen in the opening quarter of the year has resulted in the outstanding market size increasing to a record high of approximately \$37.5 billion, which represents growth of almost 5% from the end of 2021.

Outright market growth was aided by the lack of deal maturities in Q1 2022. However, Artemis' data shows that roughly \$4 billion worth of deals are scheduled to mature in the second quarter, and with the long-term issuance average for the quarter at just under \$4 billion, it's going to take an above-average Q2 to sustain market growth at the half-year.



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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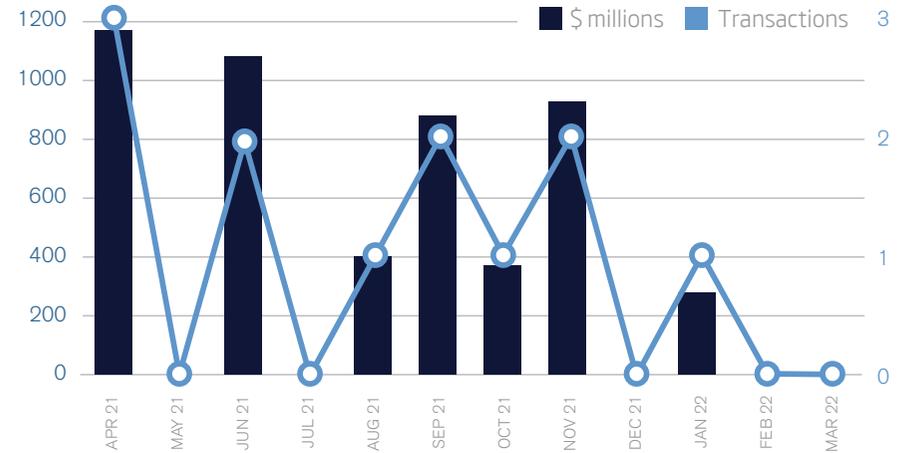
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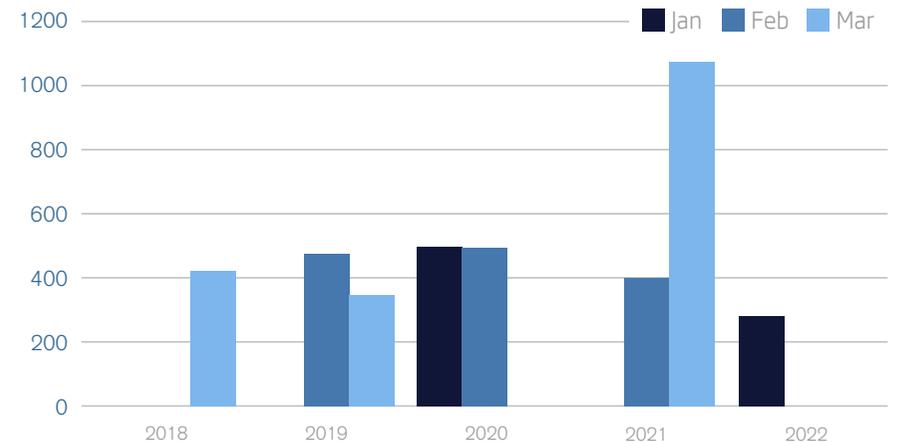
Mortgage transactions and volume issued by month (\$M)

Over the last 12 months, total mortgage ILS issuance has exceeded \$5 billion, although just \$283 million of this came in the first quarter of this year, from prolific mortgage ILS sponsor Arch Capital Group via its Bellemeade Re platform. This is the 18th mortgage ILS transaction sponsored by Arch, taking the total value of all of the firm's transactions to more than \$8.24 billion.



Q1 mortgage issuance by month and year

The Artemis Deal Directory shows that mortgage ILS issuance is always stronger after Q1, and notably picks up in the second half the year. In fact, since the first Q1 mortgage deal appeared in 2018, the average for the quarter, in terms of risk capital issued, is just \$796 million, and has only surpassed \$1 billion once, in 2021 when it neared \$1.5 billion.





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
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