

Insurance-Linked Securities Market Insights

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210.24

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Introduction

Swiss Re Capital Markets is pleased to bring you our year-end review of the Insurance-Linked Securities (ILS) market in 2022. At the beginning of the year, macro-economic pressures presented themselves to the capital markets, but within the ILS market, every challenge came with an opportunity.

As sponsors navigated rising inflation and increased claims costs, investors were faced with constrained capacity, especially compared with recent years. Investors renewed focus on inflation and how rising replacement costs and insured values could affect the severity of loss during large natural catastrophe events.

The ILS market began the year with both primary and secondary market spreads at near all-time lows. Moving into the second quarter, the market began to show signs of lower capacity levels driven by the weak performance of other asset classes. With allocations to alternative assets outperforming traditional equity and fixed income markets, end investors found a need to sell alternatives in order to rebalance their portfolios. Simultaneously, Foreign Exchange rates created liquidity pressure for funds denominated in currencies other than the US dollar. With a strengthening dollar, these funds saw their USD equivalent assets under management falling and sold some bonds to maintain liquidity. By June, the spread widening seen as a result of some of these rebalancing efforts created a pause in the new issuance market. Secondary market trading volumes were also observed to be low. With very limited capital returning to investors in the form of maturities during the period it is no surprise that this trend continued throughout the second half of the year.

During the peak of the hurricane season, Hurricane Ian made landfall on the West coast of the Florida peninsula. This event caused the catastrophe bond market to take a further pause as the full extent of the insured losses were unknown until claims data became available for investors to digest. Ian created a liquidity event in the market and some investors sold bonds to avoid taking any material losses. When the dust settled late in Q4 2022, estimated losses from bond sponsors were not as severe as the market initially anticipated and the cat bond market had yet to pay out a loss due to Hurricane Ian.

During Q4 2022, the ILS market showed signs of changes given the new pricing paradigm. Transaction sizes were lower and some new issues from primary market dealers were either delayed or pulled from the market after being announced. As an asset class that has demonstrated low correlation to core financial markets, recent catastrophe bond issuance increased relative value among corporate bonds and low volatility compared to equity markets, making ILS an even more appealing investment for fixed income and multi-strategy portfolios. In this issue, we examine the evolution of the market and recap certain areas of focus. We hope the report brings you insights and generates interest in this asset class and we look forward to another year of resilience in 2023.

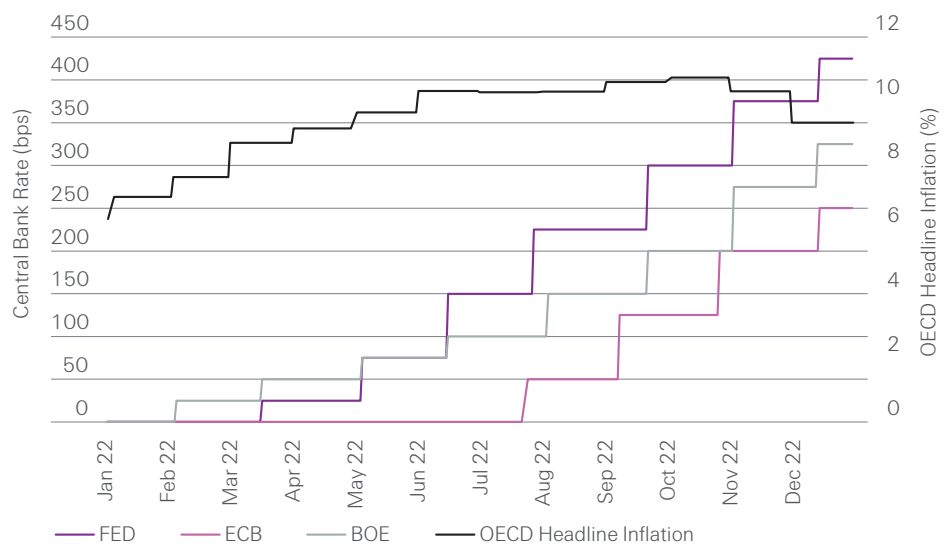
2022 market evolution

Economic backdrop

2022 was a year characterized by increasing inflation, increasing interest rates and both political and economic uncertainties. In this environment, asset valuations fell and the cost of capital increased significantly.

Economic stress caused by the inflation shock and war in Ukraine led to sharp rate hikes around the world. The Federal Reserve (along with many other Central Banks) raised rates and reduced quantitative easing at a brisk pace to combat the inflationary environment. The year ended with a cumulative 425 bps increase to the target federal funds rate – the fastest rate hike cycle in United States history.

Figure 1:
Central Bank Rate Changes



Source: New York Federal Reserve and OECD as of December 31, 2022.

As interest rates rose, asset valuations fell. From January 1 to December 31, 2022, equity markets tumbled with the S&P 500 falling 19.4% and the Nasdaq dropping 33.1%. Furthermore, corporate bond valuations fell with the Bloomberg US Corporate High Yield Index decreasing 11.19% over the same period. The added apprehension of a recession further strained investment performance.

Implications for ILS markets

Given material decreases in valuations, many institutional investors became overweight in alternative investments and sought to rebalance their portfolio allocations. As a result, some ILS funds have faced redemption pressure, forcing them to liquidate bonds on the secondary market at discounted prices.

In conjunction with equity and fixed income market movements, foreign exchange markets have become strained as the dollar continued to strengthen, mostly impacting non-US investors' participation in the catastrophe bond market. Japanese and European investors have been impacted most in the ILS market as the differential of central bank policies leads to weak non-USD currencies; the yen, for example, reached its worst valuation versus the dollar in over 30 years in October 2022. Since the catastrophe bond market is primarily denominated in USD, this has led EUR and JPY denominated funds to indicate lower appetite for new issuance due in part to their relatively reduced purchasing power and increased costs of hedging.

Inflation can also have a more direct impact on insurance markets. Higher inflation implies higher rebuild costs and therefore higher insurance claims. Sponsors have filed and achieved rate increases and limited their exposure growth to improve underwriting profitability, but cat bond investors are wary of the potential increased claims burden and so have demanded additional spread to cover the risks. Within the ILS market, sponsors began to provide investors with information on inflation management to create a common understanding. Investors are reasonably cautious of increased losses without additional compensation as the broader financial market performance deteriorated. To entice investors while capital levels are universally lower, sponsors widened spreads in the second half of the year in anticipation of higher expected losses.

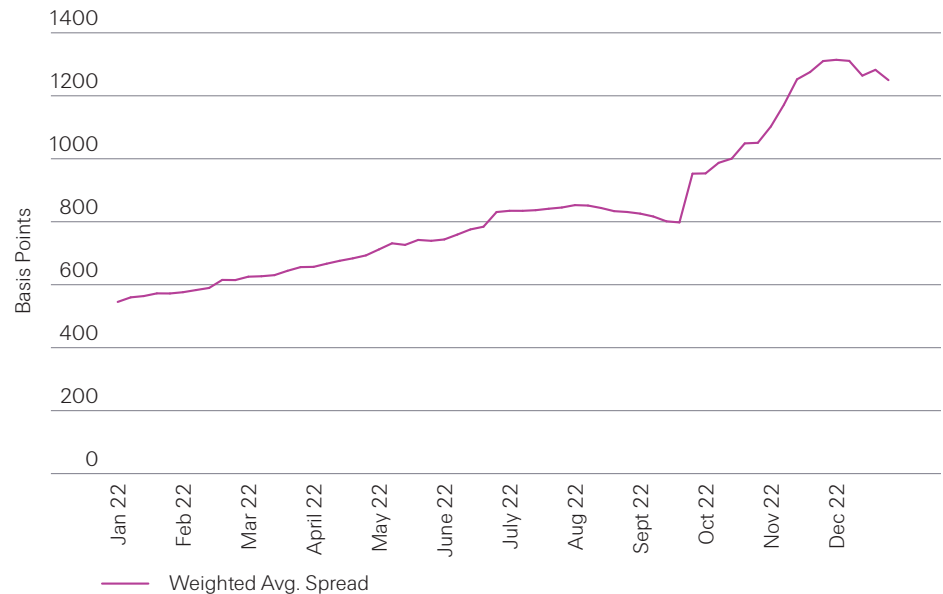
On the traditional (re)insurance side, property cat coverage has undergone significant of change this year as the market hardens from high inflation and increased catastrophe losses in recent years. Reinsurance and retro capacity had been constrained and large rate increases were seen in the January renewals. In particular, the Florida market has faced challenges as investors become fatigued as Assignment of Benefit claims historically increased losses following major cat events. The Florida legislature has taken critical steps, including the creation of a new reinsurance fund, to make the market more attractive to sponsors.

Initially, with traditional rate hikes, the cat bond market looked relatively attractive for additional capacity. However, due to broader market forces, spread levels for catastrophe bonds reached heights not seen in over a decade at a time when the market was less mature. Some sponsors were willing to come to market regardless of spread level to secure capacity as the January renewal season was prolonged and capital was scarce.

Outlook

Uncertainty can bring opportunity and the outlook for the cat bond market today perhaps represents the greatest investment opportunity the market has seen in recent memory. With spread increases and higher interest rates, the average yield on cat bonds ended 2022 at roughly 12.50%, as seen in Figure 2 below. At elevated spread levels, SRCM still expects a strong pipeline of new deal flow to materialize in H1 2023, partly due to increasing reinsurance rates and partly due to sponsors battling inflationary pressures on their subject business further increasing appetite for retro capacity.

Figure 2:
Weighted Average Spread of the Swiss Re Global Cat Bond Total Return Index



Source: Swiss Re Capital Markets, as of December 31, 2022

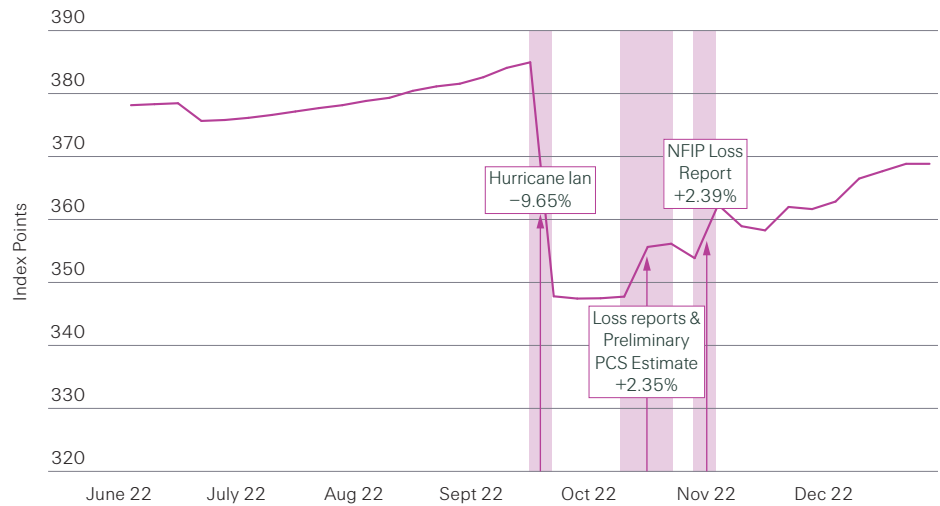
Note: The Swiss Re Global Cat Bond Index Total Return is a market value-weighted basket of natural catastrophe bonds tracked by Swiss Re Capital Markets, calculated on a weekly basis; past performance is no guarantee of future results. Underlying data for Swiss Re Global Cat Bond Index Total Return is based on indicative prices only. Average spread is calculated using the SRCM indicative secondary bid spread of constituent bonds and their corresponding index weight, and impaired bonds are not included in the calculation.

The 2022 hurricane season was generally subdued, with 14 named storms, 8 hurricanes, two major hurricanes, and an Accumulated Cyclone Energy (ACE) Index score of 95.1 which broke the six-year streak of above average hurricane seasons. That said, 2022 was not without its potential loss events. Between major hurricanes Fiona and Ian, the industry still faced over USD 115bn catastrophe loss in 2022 according to Swiss Re Institute¹.

Hurricane Ian is one of the costliest storms to date. The high-end category 4 hurricane made landfall near Cape Coral, FL on September 28, 2022. With peak winds of 155 mph and a minimum central pressure of 937 mb, Ian was the strongest storm to landfall in the United States during the 2022 Atlantic hurricane season. After making landfall on the West coast of Florida, Hurricane Ian traversed across the peninsula, entering the Atlantic Ocean on the East coast as a tropical storm before restrengthening to a Category 1 hurricane and making a second landfall near Myrtle Beach, South Carolina. As a result, on September 30 the Swiss Re Global Cat Bond Performance Total Return Index fell nearly 10%, the largest single week drop in the index's history. This drop was driven by a great deal of uncertainty around the estimates of total insured loss. Various sources cited between USD 30bn to over USD 100bn in the initial days post-Ian. The index slowly recovered as the range narrowed to USD 30bn to USD 60bn as modeling agencies released estimates, ending the year 6% above the initial Hurricane Ian markdown.

¹ <https://www.swissre.com/press-release/Hurricane-Ian-drives-natural-catastrophe-year-to-date-insured-losses-to-USD-115-billion-Swiss-Re-Institute-estimates/2ab3a681-6817-4862-8411-94f4b8385cee>

Figure 3:
Swiss Re Global Cat Bond Total Return Index



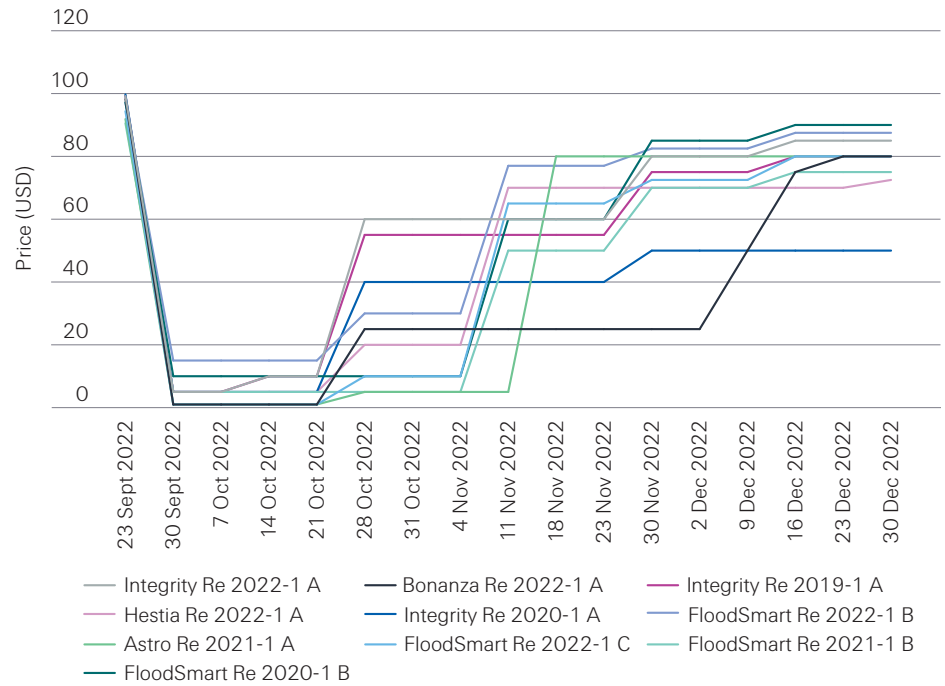
Source: Swiss Re Capital Markets and Bloomberg LP, as of December 31, 2022

Note: The Swiss Re Global Cat Bond Index Total Return is a market value-weighted basket of natural catastrophe bonds tracked by Swiss Re Capital Markets, calculated on a weekly basis; past performance is no guarantee of future results. Underlying data for Swiss Re Global Cat Bond Index Total Return is based on indicative prices only.

Hurricane Ian was originally expected to be a storm surge and flooding event, with extensive wind damage near landfall. The bonds expected to be hit hardest were those overweight in flood and Florida windstorm, especially from sponsors who were unable to secure traditional capacity in June renewals. After the initial markdown, insurers' loss reports were lower than investor expectations, indicating much lower loss potential to the market, even in the historically litigious Florida market.

The National Flood Insurance Program (NFIP) has been a prolific sponsor of catastrophe bonds through its FloodSmart Re program and had USD 1.425bn in outstanding risk capital when Hurricane Ian made landfall. Both before and shortly after landfall, the FloodSmart Re bonds were expected to be among the most impacted by the event. However, as loss estimates have been released, general investor sentiment has been in line with the reports, which likely implies that a triggering event from Ian is in the rear view.

Figure 4:
Markdowns After Hurricane Ian



Source: Swiss Re Capital Markets Indicative Pricing, as of December 31, 2022

Prior to Hurricane Ian, the broad capacity constraints in the ILS market were not ideal for investors and once Ian hit Florida investors were wary of potential losses that could arise from social and economic inflation. Florida Windstorm-exposed catastrophe bonds have come under scrutiny as the litigious environment in the state historically has led to elevated losses. With capital trapped in potentially loss-impacted bonds, investor capacity was reduced further during the fourth quarter. Now, SCRM observed that the financial impact to the cat bond market from Ian alone was not as severe as first feared by sponsors and investors. However, the overall market dislocation already in place and aggravated by Ian will have material impacts to the cat bond market well into 2023.



Primary market performance

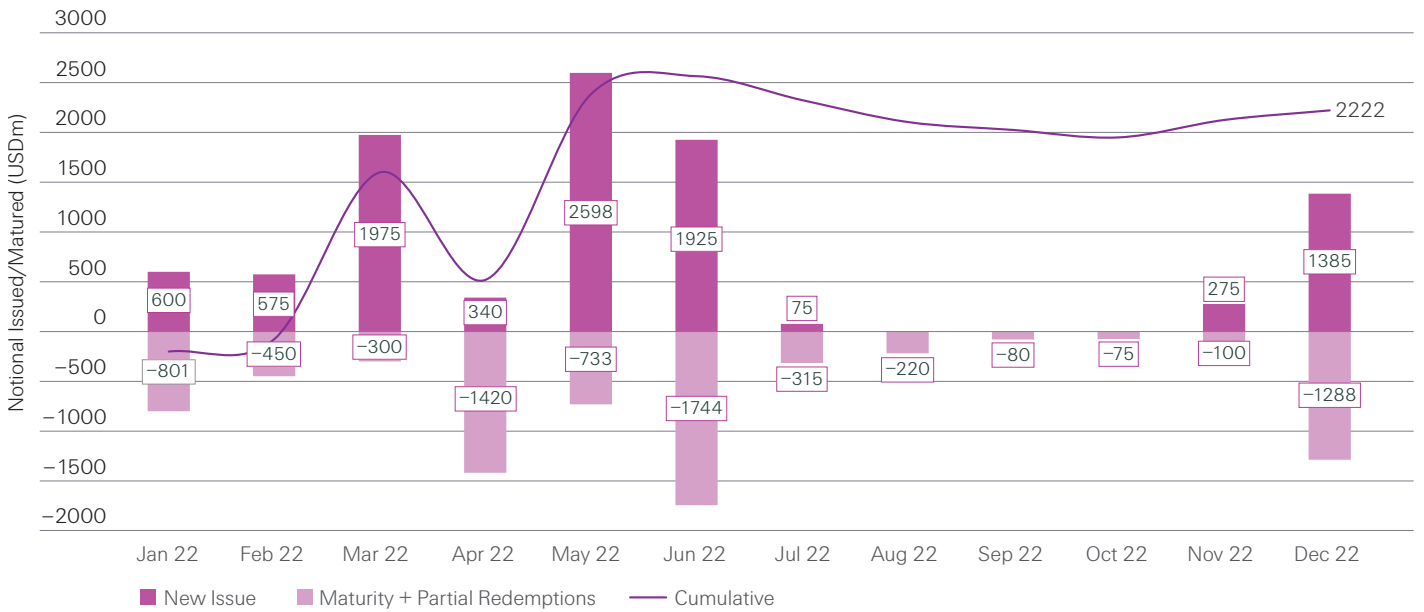
In response to macroeconomic conditions, investors of all asset classes have focused on de-risking their portfolios. ILS allocations have shifted toward more remote layers and higher spreads against this new pricing paradigm. This drove a significant increase in multiples for all new issuance observed in Q4 2022. More specifically, the lowest multiple in Q4 2022 was 3.15x compared to the 5-year average lowest multiple of 1.54x. The mean expected loss was 116 bps lower in the second half of 2022 than in the first half.

The current market has shifted to a return environment that is attractive for investors. Demand for lower risk has led to new issuance at more remote levels with cleaner structures. In addition, investors have moved to address potential trapped capital following a loss event by introducing approaches similar to buffered loss tables.

At the end of the year, the average new issuance spread was 60% higher than the previous year across all peril types, with California Earthquake bonds among the highest impacted as spreads in some cases rose even further. In Q4 2022, this resulted in sponsors pausing potential transactions until the market shifts closer to a perceived equilibrium.

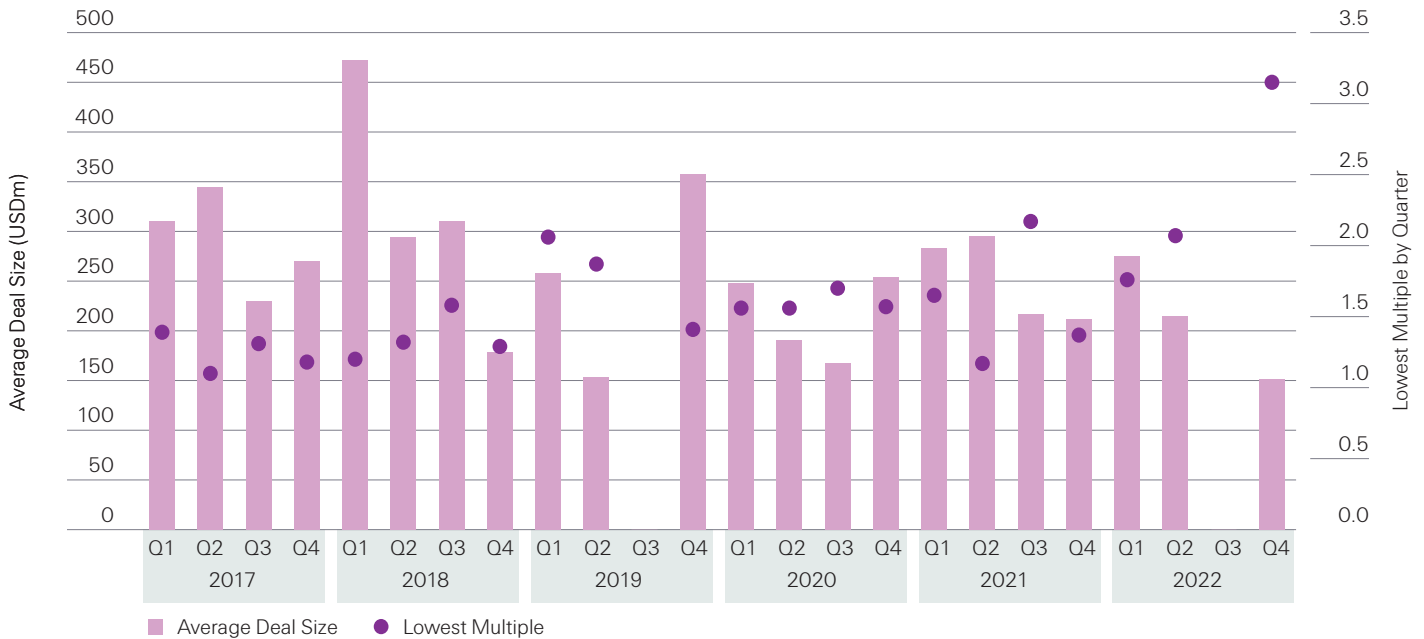
After the third quarter saw only one primary market issuance, the fourth quarter pipeline was expected to be robust. However, with Ian making landfall right at the end of Q3, there was a lot of uncertainty about trapped capital, losses, and if it was possible to even place new issuance. This resulted in the issuance of only USD 1.66bn in catastrophe bonds, less than half of what was expected based on maturities. The level of maturities in December boosted new issuance execution as USD 1.29bn was returned to the market, somewhat easing capital competition for the month. Maturities in the second half of the year totaled USD 1.76bn, closely matching the new issuances pipeline of USD 1.66bn. With low investor capacity and high required spreads, the average notional for deals in the last quarter was USD 151mn, declining nearly 40% from USD 245mn in H1 22 and over 40% from the 5-year Q4 mean of USD 254mn. Despite low capacity, investors were eager to take advantage of the high spread environment and participate in deals.

Figure 5:
2022 Catastrophe Bond Market Inflows and Outflows



Source: Swiss Re Capital Markets Deal Database, as of December 31, 2022.

Figure 6:
Historical New Issuance Analysis



Source: Swiss Re Capital Markets Deal Database, as of December 31, 2022.

From the sponsor perspective, Q4 2022 was a difficult environment with regard to certainty on deployable capacity from the alternative capital market. Multiple deals throughout the year wound up repricing above initial guidance. Only two new sponsors entered the market in the second half of 2022 in part due to market conditions, totaling eight new sponsors in 2022, seen in Figure 7 below.

Figure 7:
New Cat Bond Sponsors in 2022

Sponsor	Bond Name	Perils List	Trigger	Cover	Date	Notional USD mn	Spread	EL
Inigo Insurance (Syndicate 1301)	Montoya Re 2022-1 A	US Wind, US and Canada Earthquakes, Japan Typhoon and Japan Earthquake	PCS	Annual Aggregate	30-Mar	115	675	256
Kin Interinsurance Network	Hestia Re 2022-1 A	US Wind	Indemnity	Occurrence	14-Apr	175	950	226
SureChoice Underwriters Reciprocal Exchange (SURE)	Gateway Re 2022-1 A	US Wind	Indemnity	Occurrence	6-May	150	850	188
Peak Reinsurance Company	Black Kite 2022-1 A	Japan Typhoon	PERILS	Occurrence	2-Jun	150	690	322
Core Specialty (StarStone)	Yosemite Re 2022-1 A	US Wind and North American Earthquakes	Indemnity	Occurrence	3-Jun	65	975	128
The Hanover Insurance Group	Commonwealth Re 2022-1 A	Northeast US Wind	Indemnity	Occurrence	23-Jun	150	350	55
Canopus Group	Finca Re 2022-1 A	US Wind and US Earthquake	PCS	Annual Aggregate	5-Jul	75	775	204
GeoVera Insurance Holdings, Ltd.	Veraison Re 2023-1 A	US Earthquake	Indemnity	Occurrence	20-Dec	75	650	69
	Veraison Re 2023-1 B					75	1200	291

Source: Swiss Re Capital Markets Deal Database, as of December 31, 2022.

In Q4 SRCM observed a flight to quality where investors are giving more credit to seasoned sponsors that consistently return to market, regardless of whether or not conditions were in their favor. This perceived devotion to the market was rewarded in a harsh issuance environment with only one of the four seasoned sponsors failing to upsize their deal in Q4. These repeat issuers tended to receive more credit as their bonds were much less impacted from the volatility present during the quarter.

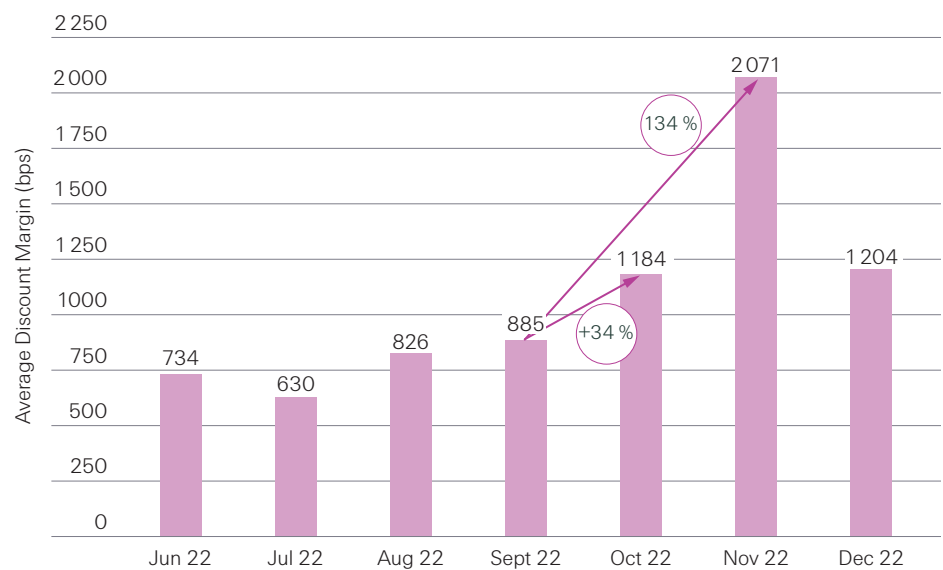


Secondary market summary

Post Hurricane Ian, the secondary market for catastrophe bonds has been attractive. The lower level of capital in 2022 paired with increasing interest rates in a hardening reinsurance market pushed catastrophe bond spreads up dramatically. The fundamental benefit of the asset class was further complemented with the floating rate linked predominantly to USD Treasury Money Market Funds.

As seen in Figure 8 below, the average discount margin of a TRACE reported catastrophe bond trade increased dramatically from October to November in 2022.

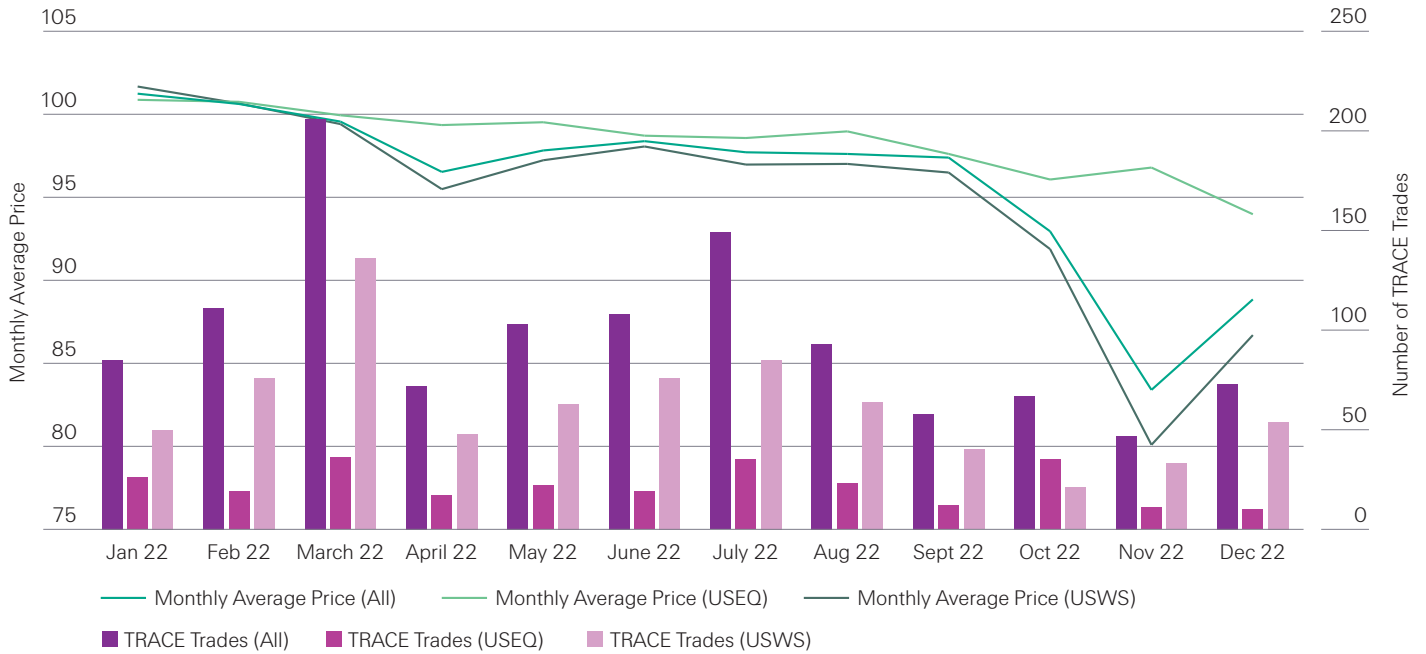
Figure 8:
Average Discount Margin of Trades by Month in 2022



Source: Trade Reporting and Compliance Engine (TRACE), as of December 31, 2022
Note: Trades eligible to be reported to TRACE primarily represent the US market

SRCM expects these elevated spread levels to remain present for most of 2023 as inflows into the market aren't expected to be substantial enough to stabilize spreads in the near term. This, combined with the expected continuation of volatility in equities and mark to market losses in traditional credit as interest rates continue to rise has led to many end investors rebalancing their portfolios due to the relative overperformance of catastrophe bonds to more traditional financial instruments.

Figure 9:
TRACE Activity in 2022



Source: Trade Reporting and Compliance Engine (TRACE), as of December 31, 2022
 Note: Trades eligible to be reported to TRACE primarily represent the US market

From a relative value stance, the market is poised for a very strong value proposition to include in any fixed income portfolio. Cat bonds diversify, represent an alternative investment providing high yield returns, and have maintained stable value during broader capital market volatility. With the floating rate structure, the product has also benefited from its resiliency to interest rate movements.

As seen below in Figure 10, the catastrophe bond market represented as US WS BB has elevated in average spread far more than that of the BAML HY BB index. This sharp increase during a period of stabilization in the bond market was a result of rising global reinsurance risk premium and lower deployment of end investor capital to ILS allocations. As more and more investors have tested the market in Q4, SRCM expects more investors to add ILS to their broader portfolios to benefit from its diversifying nature and attractive return profile.

Figure 10:
Catastrophe Bond Spreads in 2022

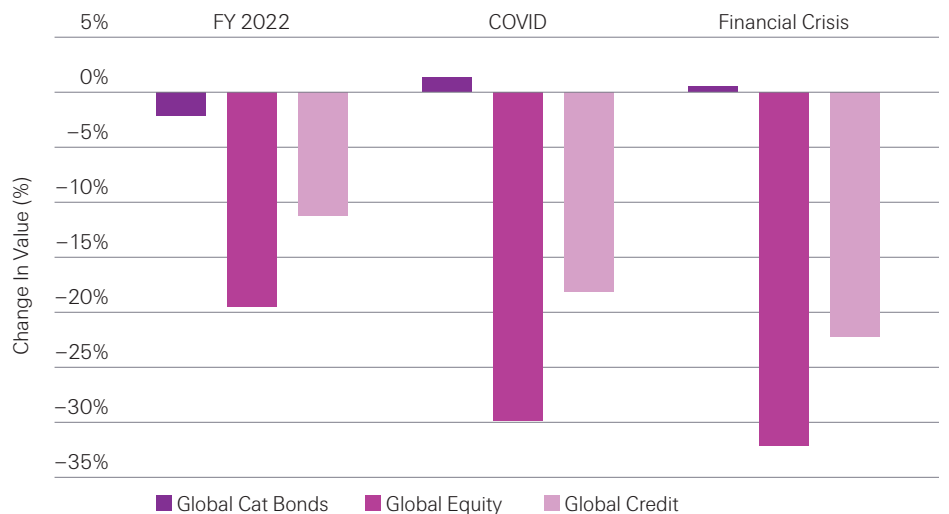


Source: Swiss Re Capital Markets, as of December 31, 2022; Bank of America Merrill Lynch US High Yield BB Index

Notes:

1. All Indices contain cat bonds with at least 1 year to maturity and an EL between 15-180 bps (or with an actual BB rating, regardless of EL). Bonds with an interest spread movement since issuance of more than 100% are excluded. Bonanza Re 2020-2 B, Bonanza Re 2021-1 B, Sanders Re 2018-1 A, Sanders Re 2019-1 B, Sanders Re 2020-1 B, Sanders Re 2021-2 B, Sanders Re 2021-2 B, Sanders Re 2022-1 B, Sanders Re 2022-1 C, Topanga Re 2021-1 B, Herbie Re 2020-1 A are excluded from all indices. Swiss Re Capital Markets pricing indications only. Average seasonally adjusted spread used.
2. US WS Index contains cat bonds that have exposure to US WS.
3. Multiperil Index contains cat bonds with exposure to both US WS and US EQ.
4. BofA Merrill Lynch High Yield Option Adjusted Spread via the Federal Reserve Bank of St. Louis website

Figure 11:
Index Returns During Times of Crisis



Source: Swiss Re Capital Markets Indicative Pricing & Bloomberg LP, as of December 30, 2022
 Note: Swiss Re Global Cat Bond Total Return Index (SRGLTTR), MSCI Developed Equities Index, Bloomberg US Corporate High Yield Bond Index. The financial crisis is defined as April 1, 2008 to October 31, 2008; COVID is defined as December 31, 2019 to March 20, 2020 and 2022 is defined as December 31, 2021 to December 31, 2022.

Spread widening due to capacity constraints experienced in 2022 has resulted in a negative annual return for the first time in the Swiss Re Global Cat Bond Total Return Index. Year-over-year, the index dipped roughly 2.16%. Even though Hurricane Ian presented stress to the ILS market, when compared to fixed income and equities, cat bonds performed with the lowest downside volatility throughout 2022. As seen in Figure 11, the Swiss Re Global Cat Bond Total Return Index has outperformed both Credit and Equity indices, which reaffirms the relative value opportunity for investors to support an increasingly growing market.



Deal spotlight

Figure 12:
Transaction summary of Ursa Re II
2022-2

Issuer	Ursa Re II Ltd.	
Ceding insurer	California Earthquake Authority	
Offering	Series 2022-2 Class AA	Series 2022-2 Class C
Format	144A	
Tenor	3 Years	
Covered events	U.S. Earthquake	
Covered area	State of California	
Trigger	Indemnity, annual aggregate	
Modeling firm	EQECAT, Inc.	
Total size	USD 185mn	USD 120mn
Interest spread	700bps	1025bps

In the fourth quarter, the California Earthquake Authority (CEA) returned to the catastrophe bond market for the second time in 2022 to secure multi-year indemnity aggregate coverage for California earthquake risk. After announcing an initial deal size of USD 200m, the CEA took advantage of investor appetite and positive momentum and managed to upsize 53% while pricing within the initial guidance. The total notional ceded, USD 305m across two classes of notes, represents the largest new issuance post Hurricane Ian and illustrated investors' strong support for recurring sponsors committed to the ILS market over the long term.

Swiss Re Capital Markets acted as sole structurer and bookrunner. Early in the process, SRCM informed the CEA of an extremely challenging ILS market environment and the expectation that multiple competing deals were planning to come to market with the goal of capturing the capacity of expiring earthquake exposed cat bonds. The team designed a timeline to take advantage of the maturity from Ursa Re 2019-1, which would likely help investors support the CEA at a time when their capacity was significantly constrained.

The CEA chose to issue two classes of notes with different risk profiles, providing opportunities for investors with varying risk appetites. The more remote layer, the Class AA notes, attach at USD 8.5bn and support a USD 1bn layer with an annual expected loss of 105bps. Lower in the tower lies the Class C notes with an annual expected loss of 243bps and attaching a USD 500mn layer at USD 4.4bn. The deal was successfully executed in early December, allocating USD 185mn to Class AA and USD 120mn to Class C, the largest upsize seen since Hurricane Ian made landfall.

In a hard market, the CEA has once again demonstrated the strength of its ILS franchise and the considerable demand for its exposure. Even with a turbulent market environment, the CEA wanted to show its commitment to ILS and position as an experienced sponsor while securing a significant contribution to its risk transfer program. With the completion of Ursa Re II 2022-2 classes, the CEA has ceded over USD 8.25bn to capital markets through catastrophe bonds, making it the third largest sponsor of catastrophe bonds and the single largest provider of California earthquake risk in the marketplace today.

For more information

Specialists from Swiss Re Capital Markets are available for consultation on bespoke ILS solutions, and they welcome a dialogue on the subject with sponsors and investors alike. For more information, please contact any of the individuals listed below in your region.

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- Maturities of Insurance-Linked Securities may be extended without the prior consent of the investor.
- Insurance-Linked Securities may be redeemed before their maturity date (including before any extension of such maturity date by the issuer).
- If Insurance-Linked Securities are redeemed before maturity, the interest rate payable to investors under the Insurance-Linked Securities will be reduced.
- Investors have limited recourse to assets of an issuer of Insurance-Linked Securities and no recourse to assets of the counterparties to the underlying risk-transfer agreements to which such Insurance-Linked Securities relate.
- If an issuer of Insurance-Linked Securities becomes insolvent, investors may lose some or all of their investment.
- Investors may be required to consolidate an issuer of Insurance-Linked Securities for accounting purposes under certain circumstances.
- An investment in Insurance-Linked Securities may have adverse tax consequences for investors.
- Any claim you have against an issuer of Insurance-Linked Securities in the event of the issuer's insolvency will be junior to any claim of a counterparty to the underlying risk-transfer agreements to which such Insurance-Linked Securities relate.
- Enforcement of security interests granted to a trustee of Insurance-Linked Securities for the benefit of the investors may be limited.
- A secondary market for Insurance-Linked Securities may have limited liquidity or may not even exist, and the market and market price of Insurance-Linked Securities in any secondary market may be highly volatile.
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