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IN FOCUS

What has driven catastrophe bond spreads to record highs?

June 2022

Yield spreads on cat bonds are as wide as they have been since 2009. What are the factors driving the spread widening, and is it good news for investors?

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With spreads on cat bonds at or near record highs and volatility in public markets pronounced, some investors are understandably weighing up if now is a good time to allocate to ILS as an uncorrelated asset class.

We believe that many investors could indeed benefit from incorporating ILS. However, it is worth a closer look at underlying dynamics within the (re)insurance[1] industry, as well as the ILS market, to know what to expect.

Here we explain why spreads have widened as they have, explore the conclusions investors can draw when assessing the opportunity, and outline what they can expect to see in coming months.

Drivers of the spread widening

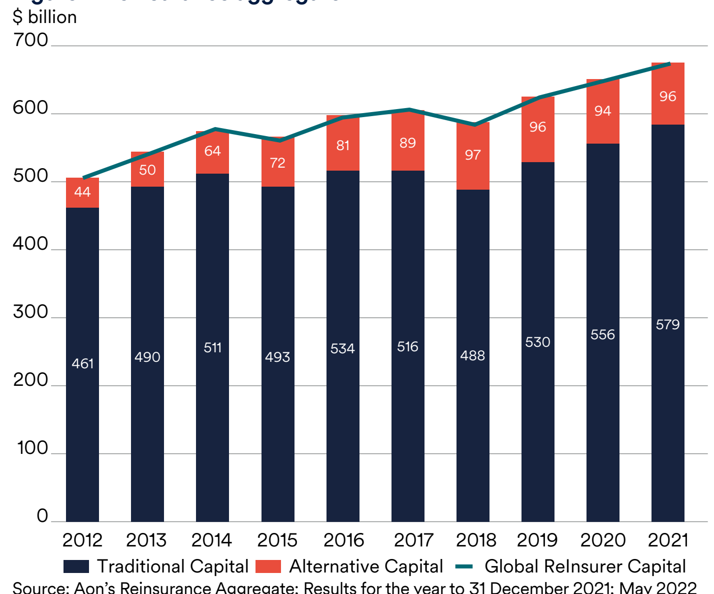
Until the start of 2022, demand broadly matched supply for cat bonds. Elevated natural catastrophe activity weakened traditional reinsurers' reserves and led to the exodus of ILS investors from some high-risk collateralized reinsurance strategies. Even so, higher losses should theoretically translate into higher prices for risk transfer, helping to retain capital in the industry.

1 When referring to both the reinsurance and insurance industries the reader will see (re)insurance

So, while "investor fatigue" caused some allocators to exit the sector or shift out of riskier collateralized strategies, new money came in. Indeed, in aggregate, the level of ILS capital actually increased in 2021 according to leading insurance and reinsurance broker Aon (see chart below[2]).

2 Aon's Reinsurance Aggregate; Results for the year to 31 December 2021; May 2022

Figure 1: Reinsurance aggregate



Source: Aon's Reinsurance Aggregate; Results for the year to 31 December 2021; May 2022

Schroders capital

Traditional capital also increased to the year-end 2021. When it came to the January 1 renewals season – with some exceptions - many market participants were disappointed by risk-adjusted renewal increases on loss-free covers. In summary, one could say that the supply and demand situation for the broader market was in equilibrium.

Then vs now – what changed in supply and demand

From mid-February onwards, things changed significantly. Investors recognized that inflation was becoming a more persistent issue. Previously taken to be a transitionary result of Covid-related supply-chain disruptions, it grew clear it was not going to wash out quickly.

Equity and debt markets corrected as investors began to anticipate – and central bankers to communicate – a prolonged trend of base rate increases. The insurance industry, with its huge holdings in fixed income assets, couldn't have been in a worse situation.

After a protracted decline in investment yields, the industry's ordinary investment return was close to an all-time low. The shift in yield curves resulted in many (re)insurers suffering significant mark-to-market losses on their equity holdings and bond portfolios.

The Strategic & Financial Analytics team at Gallagher Re estimated in their analysis[3] of global (re)insurers' results that shareholder's equity of global reinsurers dropped by 11% in the Q1 2022 compared to Q1 2021. This despite improved underwriting results, thanks to higher premiums and lower catastrophe losses.

Adding to the misery of a market correction in interest rates came the added volatility and uncertainty following the Russian invasion of Ukraine, as well as the lock-down of Shanghai. This has resulted in an increased risk aversion of many investors.

The other thing that changed was reinsurers' appetite for catastrophe risk. On the one hand, this was in response to shareholder disillusionment with the earnings volatility experienced during the last five years. During their Q1 earnings calls, many CEOs of reinsurance companies emphasized their reduced exposure to catastrophe risk.

One particularly dramatic shift was Axis Capital's announced reduction in catastrophe premiums by 45% in the first quarter[4], only to be followed by an announcement on 7 June that it would exit the property reinsurance market entirely dropping over $700m in written premiums[5].

3 Global (re)insurers financial results Q1 2022, May 31 2022 https://www.ajg.com/gallagherre/news-and-insights/2022/may/financial-results-report-for-q1/

4 Axis Capital 1st Quarter Press release, April 27, 2022

5 "Axis pulls out of property reinsurance; Aurora exits in reshuffle" Insurance Insider, June 7, 2022

On the other hand, reinsurers' ability to absorb volatility is reduced. In recent years, the reinsurance industry was able to rely upon releases from prior years' loss reserves to offset some of the earnings impact of current year catastrophe losses. The prospect of higher inflation means that the cost of settling open claims may prove to be more expensive than originally estimated, leading to a loss of this potential buffer.

In addition, the outlook for the remainder of 2022 is for further increases in interest rates and continued pressure on the asset side of the insurance industry's balance sheet. As outlined above, reinsurers' net income (after reflecting the impact of mark-to-market losses) declined sharply in Q1 2022. In the chart below we show that the net income of selected leading Bermudian and European reinsurers declined by 156% and 43% respectively.

This increased volatility on the asset side combined with greater uncertainty of the quality of reserves on the liability side of the balance sheet will make raising additional capital - should the need arise - very challenging. It may only be possible with deeply discounted rights issues. It is not surprising that many reinsurers are seeking to reduce their exposure to volatility on the liability side of their balance sheet by trimming their catastrophe aggregates.

For (re)insurers, reinsurance protection is an alternative source of risk-bearing capital to equity and debt. Reinsurance can be used to manage earnings volatility and exposure to capital-destroying events, thereby protecting the reinsured's all-important credit rating. Faced with reduced financial flexibility in the current environment it is not surprising that demand for reinsurance, both traditional and in ILS form, has increased dramatically.

Echoes of 2009, except that this time is different

The last time that the cat bond market saw similar spreads to those observed today was in the Spring of 2009. Then, as today, reinsurers were faced with a challenge on the asset side of their balance sheet.

However, then it was the uncertainty as to the credit quality of their investments, which resulted in insurers and reinsurers trading at deep discounts to their book value. Today, it is more the prospect of further mark-to-market losses as central banks push up their interest rates to combat inflation. There is also the risk that reserve redundancies could become reserve deficiencies due to high inflation.

In 2009, aggregate supply of capacity for cat bonds was static at a time of growing demand. The previously dominant multi-strat hedge fund managers exited the asset class, replaced by specialist ILS managers. Despite strong inflows in 2021 the cat bond market was more or less fully invested by mid-February 2022. Since then flows have been modest resulting in spread widening as a growing number of sponsors sought additional capacity.

Figure 2: Reinsurer's net income

Company	Q1 22 C/R	Q1 21 C/R	Q1 22 Operating income	Q1 21 Operating income	Δ	Q1 22 Net Income	Q1 21 Net income	Δ
Arch Ins Holdings	78.80%	90.80%	$457.60	$185.90	146%	$185.60	$427.80	-57%
Axis Capital	91.40%	98.90%	$178.90	$82.70	116%	$149.20	$123.30	21%
Everest Re	91.60%	98.10%	$405.80	$260.20	56%	$297.80	$341.90	-13%
Renaissance Re	86.50%	103.10%	$151.90	$4.40	3352%	$-394.40	$-290.90	36%
Partner Re	84.70%	96.70%	$173.90	$41.80	316%	$-539.30	$-65.90	718%
Bermuda Aggregate**	86.71%	97.05%	$1,368.10	$575.00	138%	$-301.10	$536.20	-156%
Swiss Re*	99.30%	96.60%	$-194.00	$555.00	-135%	$85.00	$481.00	-82%
Munich Re*	91.30%	98.90%	$863.30	$883.23	-2%	$672.93	$651.91	3%
Hannover Re*	99.50%	96.20%	$283.70	$345.43	-18%	$176.60	$288.99	-39%
SCOR*	103.70%	97.10%	$-53.13	$112.89	-147%	$-88.54	$49.81	-278%
European Aggregate**	96.66%	97.39%	$899.88	$1,896.55	-53%	$845.99	$1,471.70	-43%

Source: Company 1st Quarter Earnings Reports. EUR / USD @ 31.03.22, 1.1068
* C/R For P&C Reinsurance only
** C/R Premium weighted

As most readers will know, cat bond spreads are subject to a certain degree of seasonality given the strong presence of North American hurricane risk in the market. This means a modest spread widening between February and June as the market enters into the hurricane season. Then, absent a major loss, spreads begin to tighten up towards the end of the hurricane season with September and October being the strongest months.

We anticipate that the current high yields offered in the cat bond market will ultimately begin to attract new inflows. As a consequence, the stage is set for prices to recover from their current levels back to the long-term mean over the next six to nine months.

The period between June 2009 and December 2009 saw the highest six month performance (+9.65% as measured by the Swiss Re Cat Bond Total Return Index SRGLTRR) in the history of the cat bond market since its inception. Interestingly, at the time the floating rate component of the return was declining, as the Federal Reserve (Fed) sought to ease the financial crisis through the first stage of quantitative easing. Then the predominant measure for collateral returns was 3 month LIBOR which fell from 0.56% at June 30 to 0.25% by December 31 2009. Today, most collateral is held in overnight Treasury money market funds where the most recent yields are running at 70 bps with the expectation that these will increase by as much as a further 250 to 300 bps by year-end.

What about the hurricane risk? Is this really the right time to invest?

Some investors may ask whether it is wise to enter the cat bond market just at the inception of the hurricane season, which runs from June 1 to November 30. Admittedly, there is some risk. However, a look at past performance during the six months from June 30 to December 31 will show that there were only four years in the 20+ year history of the cat bond market[6] that produced a negative total return during this performance window. Not surprisingly, these were the years of significant hurricane activity. In the table below we show the six month performance of the Swiss Re Cat Bond Total Return Index for the four years in question.

6 As measured by the Swiss Re Cat Bond Total Return Index incepting 31.12.2001

Year	Performance Jun – Dec SRGLTRR	Major Events During Period	Performance Dec – Mar subsequent year SRGLTRR
2005	-1.54%	Hurricanes Katrina, Rita and Wilma	+ 2.30%
2008	-0.92%	Hurricane Ike, Lehman Brothers default on TRS for 3 bonds, Spread widening due to GFC	+1.24%
2017	-0.94%	Hurricanes Harvey, Irma and Maria	+ 1.76%
2018	-0.40%	Hurricanes Michael, Florence	+1.58%

Unlike the collateralized reinsurance strategies, which attached at lower levels, the cat bond market as a whole came through with only modest losses in the June to December periods demonstrating its more remote risk profile. Interestingly, in all four periods the performance in the subsequent quarter more than compensated that of the previous six months. Indeed, during the 20+ year history of the cat bond market, there is no nine-month period incepting on June 30th that produced a negative total return.

In summary, we believe that now is an attractive time to consider entry or adding to an existing allocation. The issuance window for new bonds will soon be closing as we move closer to the peak hurricane season. From that perspective, little added pressure will be coming from the demand side and the stage is set for prices to gradually recover.

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