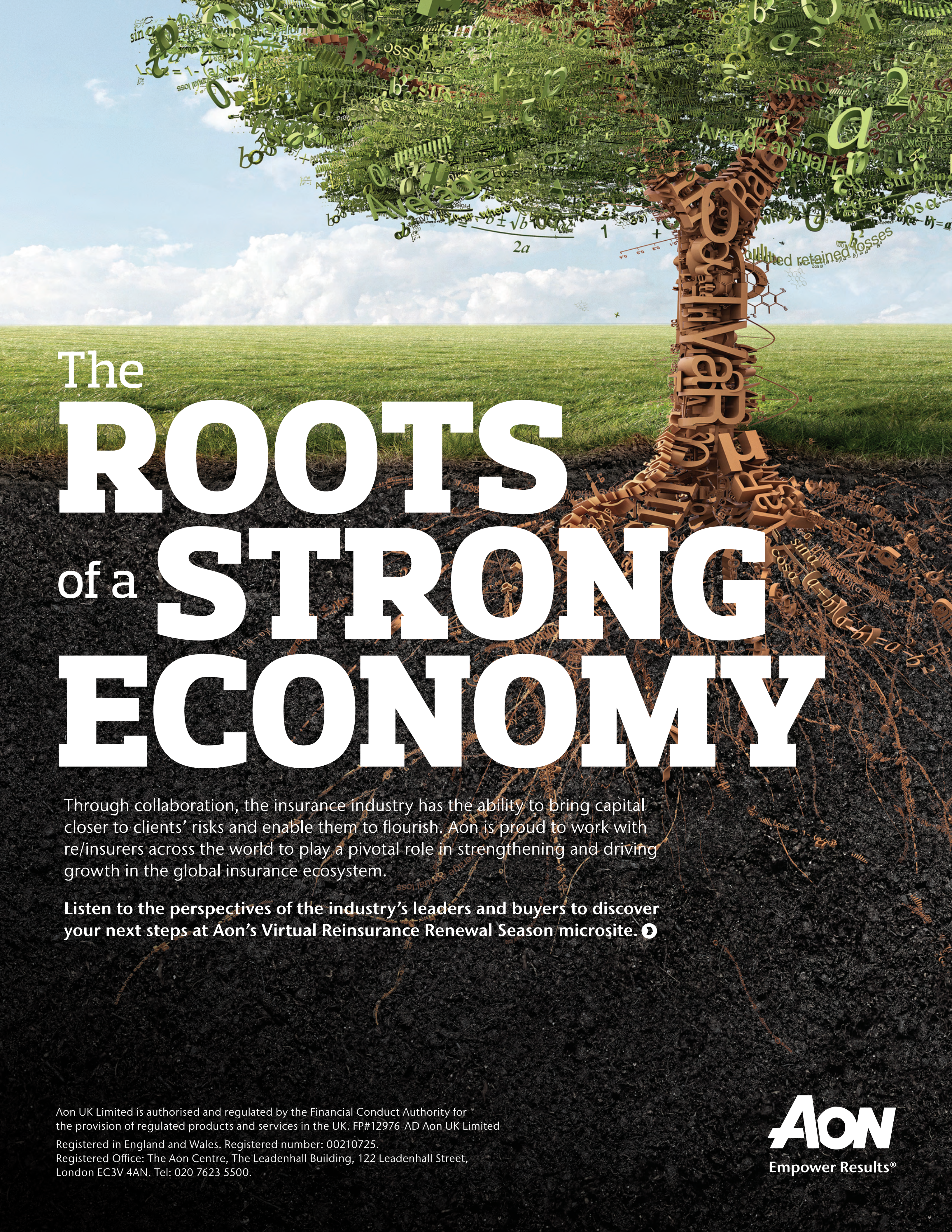
trading risk
ILS INVESTOR GUIDE

H2 2021

LONDON BRIDGE:

ACCESSING LLOYD'S RISK FOR ILS INVESTORS



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MANAGING EDITOR
Fiona Robertson
fiona.robertson@insuranceinsider.com

DEPUTY EDITOR
Liz Bury
liz.bury@insuranceinsider.com

REPORTER
Alex Frampton
alex.frampton@trading-risk.com

MANAGING DIRECTOR
Tim Wakefield
twakefield@euromoneyplc.com

HEAD OF SUBSCRIPTIONS
Tom Fletcher
tom.fletcher@insuranceinsider.com

SENIOR ACCOUNT MANAGER
Georgia Macnamara
georgia.macnamara@insuranceinsider.com

HEAD OF MARKETING & ANALYTICS
Lynette Stewart
lynette.stewart@insuranceinsider.com

PRODUCT MANAGING MANAGER
Aimee Fuller
aimee@insuranceinsider.com

SUB-EDITORS
Simeon Pickup
simeon.pickup@insuranceinsider.com

Steve Godson
steve.godson@insuranceinsider.com

Pablo Gainza
pablo.gainza@insuranceinsider.com

COPY EDITOR
Jamie Gallagher
jamie.gallagher@insuranceinsider.com

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Fax: +44 (0)20 7397 0616
e-mail: info@insuranceinsider.com

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Diversifying the diversifier

One of the ongoing trends within the ILS market over past years has been an increasing demand from existing investors to look for something different within their portfolio.

After starting out in catastrophe risk, and having seen margins in that business fall from their post-Katrina peaks, some early investors are increasingly keen on different types of insurance underwriting risk.

Of course, many are still happy with pure catastrophe risk, and see no need to broaden further a pool of risk that is already a diversifier for their overall portfolios.

But for those that are considering such a move, there is a wild and wonderful range of risks out there – many of which are ultimately covered by Lloyd's of London insurers amongst others, from fine art theft to the political violence underwriters covering riot damage to cyber hacks.

However, before they start weighing up due diligence of partners and potential returns, considering a shift in ILS focus will first require investors to take a step back and consider what they are looking for from their insurance portfolio to assess how and where they want to broaden out.

After all, the reason the ILS market got started in the catastrophe sector is that peak hurricane risk was expensive for existing (re)insurers to take: ratings agencies applied additional capital loadings to these peak risks to ensure carriers did not take on more than they could afford to pay out.

In contrast, niche lines of business can be heavily sought after by (re)insurers as a diversifier to their portfolios because they can be written at a lower cost of capital.

This means competing in a more crowded space, so prepare to be sharp-elbowed to find the right partners.

Structural questions and the cost of best accessing the market will also become increasingly important, particularly if considering taking risks with a longer-term horizon that generally rely on a component of investment return alongside pure underwriting return to get to overall targets.

"Considering a shift in ILS focus will first require investors to take a step back"

Naturally, most investors are looking to their ILS portfolio to provide something different than the market risk they have elsewhere. But they also have existing investment portfolios that could be supporting their ILS portfolio – so you can see the possibility of creating structures that produce underwriting income as an additional source of income on existing asset pots, rather than one that layers on additional financial market strain.

As the ILS market has matured and gets more diverse, it will also become more complex – but the *Trading Risk* ILS Investor Guide aims to help demystify the market and hold it up to investor scrutiny.

Fiona Robertson
Managing Editor,
Trading Risk

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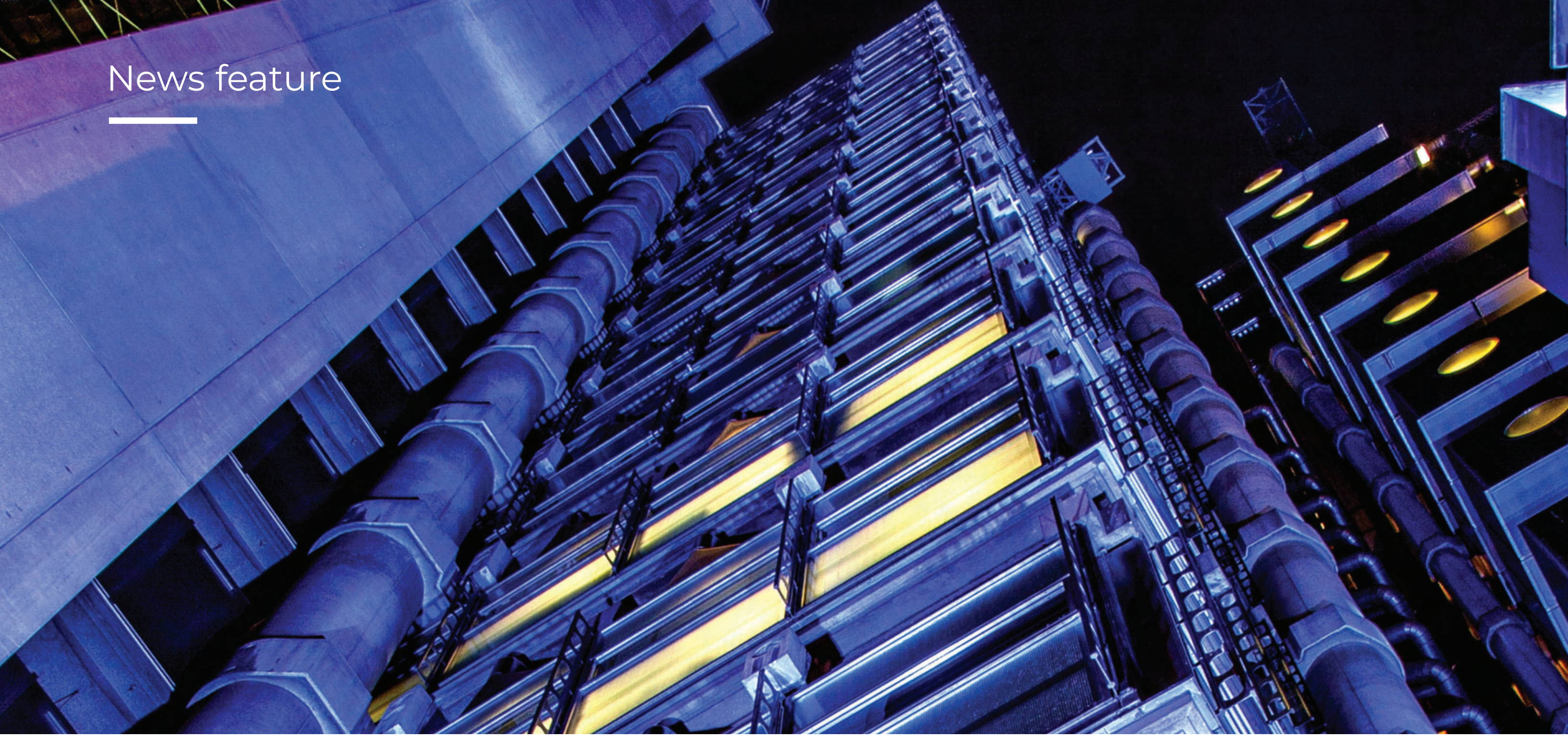

London Bridge Risk opens a door into Lloyd's for ILS investors

ILS investors and Lloyd's of London are evolving into a state of more sophisticated and mutually beneficial understanding as both sides look for ways to bring in efficient capital

Three hundred years ago, accessing Lloyd's insurance market risks meant turning up in the right coffee house to pledge cover for ships journeying around the world.

Today, many quirks of Lloyd's phraseology from its early days remain embedded in the market's way of operating, such as the concept of a policy "slip" listing all the insurers that are backing a deal.

But the marketplace is making a major push to open up more familiar structures to allow in ILS investors through the launch of the new London Bridge Risk PCC.

The structure has been designed to simplify some of the pre-entry requirements and make it easier for investors to deploy capital at Lloyd's.

The London Bridge initiative forms part of the wider Future at Lloyd's programme to modernise and improve the marketplace. The future-proofing project, unveiled in 2019, aims to double the size of the market to £80bn gross written premium by 2030.

Michael Wade, non-executive chairman of TigerRisk Capital Markets & Advisory, said: "This must surely be a great opportunity for UK investment funds and pension funds to participate in that growth. There is plenty of sophisticated capital in the UK. The major pension funds could become experts in the asset class. They've already got the scale, the infrastructure is available by way of the London Bridge initiative."

Part of the London Bridge offer is a new set of documentation that can be taken off the shelf and adjusted to suit specific arrangements.

This contributes to a significantly smoother process and cost savings compared to the traditional route into Lloyd's and makes the market more accessible, particularly for investors with sums of around £20mn to £50mn.

There is also a tax benefit, with London Bridge taking advantage of 2017 regulations that allow for ILS investors to pay no UK corporation tax on profits arising within a cell and no withholding tax on distributions from a cell.

However, this and other aspects of tax treatment depend on a number of factors and cell investors should take advice.

James Mackay, head of Lloyd's relationships at Aon Reinsurance Solutions, said: "The new [London Bridge] structure, built on the 2017 ILS rules, intends to provide investors with a tax neutral transformer on an equal footing with similar structures in major ILS markets like Bermuda, the Cayman Islands and Guernsey."

The new vehicle is effectively a mechanism by which investors can provide capital to a Lloyd's member, which in turn funds the underwriting by syndicates. For a deep dive into the structure and offering, see the box.

Diverse risks

The attractions of Lloyd's for ILS investors include the ability potentially to access different classes of risk written globally, taking things beyond the traditional ILS realms of catastrophe risk.

Underwriting at Lloyd's is done by syndicates on a year-long basis with capital provided by Lloyd's members. Claims relating to the year of underwriting can crystallise over longer periods.

The Lloyd's market writes 60 lines of insurance and reinsurance, covering a breadth of specialty risks from marine to aviation and cyber risk to terrorism as well as property, not to mention the kind of quirky coverages that typically bring Lloyd's into the news – such as covering sports stars' reputations.

Speciality risks such as marine, aviation, cyber and terrorism are seen as a logical progression for ILS investors who may be looking for new risks that diversify their exposure away from catastrophe.

Adam Beatty, managing director at Nephila Advisors, explained: "The ILS market needed to reach a state of maturity where it has achieved a certain size and depth of understating of the asset class. This has led to investors' interest in specialty risk, which is diversifying from and complementary to cat risk."

The second Lloyd's syndicate from the ILS manager, Nephila 2358, is in the process of setting up. This will underwrite specialty risk and follows its established catastrophe Syndicate 2357.

However, one challenge for ILS investors is that some of these more niche specialty lines of business are much smaller in potential scope than the property market – and hence in the past have been oversubscribed by (re)insurers and sometimes struggled to make profits on a standalone basis.

Lloyd's has a central core of staff who oversee the business plans of individual syndicates and hold them to account on delivering realistic plans.

This group has in the past couple of years been on a major remediation drive to address poorer-performing lines of business such as motor insurance.

However, while this central planning process can be seen as an advantage to investors in helping to drive underwriting discipline, it also means that capacity to take risks at Lloyd's is heavily controlled and syndicates must apply for permission to grow their premium base.

Investors need to find syndicate partners who are looking for capital support from external parties, and demand for this support fluctuates from year to year.

This potential "bottleneck" limiting entry to the market was highlighted by Lloyd's CFO Burkhard Keese in comments to *Trading Risk* when the initiative was released in January this year.

"The bottleneck is not the investor side, it is how much capital is needed in the market," Keese pointed out. "We are not using [the London Bridge initiative] to inflate Lloyd's capital."

Aon's Mackay agreed that demand on the underwriter side can at times be a stumbling block for would-be investors, but he explained the market has been shifting lately.

He said: "Appetite from investors in Lloyd's has steadily increased as trading conditions improved, Covid fears receded, and a prolonged soft market came to an end. The challenge for the market's capital brokers has been to find investors sufficiently large scale, attractive underwriting opportunities, at a time when Lloyd's has been controlling premium growth to improve overall market performance."

"Pension funds, for example, will typically only look to enter Lloyd's to underwrite £50mn to £100m-plus tickets on syndicates, and such opportunities have been scarce in a tightly-controlled market," he added.

"As we head towards the 2022 account, investor sentiment and optimism are improving.

It looks likely that syndicate business plans will be granted more growth than in recent years and this could generate some real opportunity for potential new investors to secure attractive participations by way of their own vehicles or [London Bridge]," Mackay explained.

Some syndicates can produce enviable combined operating ratios. The top performer in 2020, Chaucer's Syndicate 1176 for nuclear risks, generated a combined ratio of 38.8%, meaning for each dollar of income it spent 38.8c on paying claims and expenses, and made 61.2c of underwriting profit.

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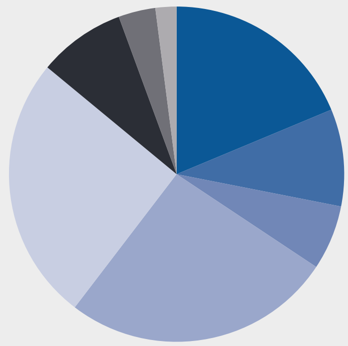
Lloyd's 2020 mix of premiums



Source: Trading Risk

James Mackay, Head of Lloyd's relationships at Aon Reinsurance Solutions

> *"It looks likely that syndicate business plans will be granted more growth than in recent years and this could generate some real opportunity for potential new investors"*

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Continued from page 05

Among the best performers of the year were syndicates writing lines less impacted by Covid-19, such as the Medical Protection Society Syndicate 1892, liability-focused DL Dale 2525 and QBE Casualty Syndicate 386.

The Lloyd's market overall achieved a 2020 combined ratio of 97% excluding the impact of Covid-19 and 110.3% including pandemic losses.

Structural advantages

Beyond providing access to specific underwriting risks, Lloyd's offers a couple of other major advantages for ILS investors. Its strong credit rating means corporate members do not have to fully collateralise the insurance limits of the syndicates they are backing.

The amount of Funds at Lloyd's (FAL) needed is determined by a Lloyd's model and varies depending on diversification of investments – although London Bridge structures themselves do not offer leverage (see boxout).

FAL can also be provided in different forms, rather than cash equivalents. Pledging some of a highly rated fixed-income portfolio, for example, would enable investors to work that portfolio twice by earning an insurance income stream against it.

Another notable feature of Lloyd's is the reinsurance-to-close model, by which business is written for a single year with profits closing out after three years. The ongoing risk of further claims emerging after that point is taken on by the syndicate from the next year of account – in other words, the final close for the 2018 year would have been backed by reinsurance from investors in the 2021 portfolio. Unlike some ILS structures, this means that capital does not become trapped for longer periods in anticipation that more claims could crystallise later.

In the London Bridge world, investors might typically look invest for three years of underwriting, as a starting point, meaning the arrangement would run for and close out over five years.

The next step is for an increasingly sophisticated investor community to choose when and how to deploy additional capital at Lloyd's. The opportunity is opening up for responsive, opportunistic investors that want to get involved with Lloyd's and have the flexibility to ebb and flow in tune with syndicates' demand.

London Bridge: The infrastructure

The new London Bridge Risk PCC, a protected cell company structure, has been established with the aim to make entry to Lloyd's simpler for capital providers.

The possible ways to invest in Lloyd's, until now, have been to buy shares in an insurer operating there or to set up as a Lloyd's corporate member. The second route is the most direct. But it can be costly and time-consuming because there is a full regulatory approval process to step through.

The PCC opens a third way into Lloyd's that comes with lighter administrative asks compared to corporate membership. It also lets investors take out profits free of UK corporation tax.

Lower minimum investment levels, tax advantages

Investors establish a cell within London Bridge. The regulator need only be notified that a new cell has been created. There is no minimum commitment, although several market commentators noted £10mn as a ball-park minimum figure, with £20mn-£50mn also a guide range. A management fee and facility fee also apply, with these sums varying substantially depending on the nature of each arrangement. The fee for setting up a corporate member is typically £52,000.

Whole-account underwriting support, without investment risk

The onboarding process is relatively quick and simple, and the new offering also provides a set of standard documents including a quota share reinsurance agreement and bank and custody account agreements. These are made available to investors, meaning that much of the hard work has already been done for them.

Through the cell, investors transact a quota share reinsurance agreement with an existing corporate member at Lloyd's. This means that, at least for the present, investors cannot cherry pick which lines of business they want to back.

A London Bridge quota share reinsurance deal means the investment is focused on pure insurance risk. This differs from investors setting up a corporate member, in which case they must take on the investment risk tied to a Lloyd's syndicate, as well as the underwriting risk.

Administrative support and documentation

Paul Eaton, commercial director at Horseshoe Group, which is the company managing London Bridge Risk, said: "Investors would use a protected cell to enter a transaction with a member – a fully collateralised reinsurance treaty, where the full liability of the reinsurance is collateralised by cash or other assets accepted as FAL. It's a vehicle for risk transformation. The investment goes from the cell to a member to potentially multiple syndicates."

The London Bridge cell funds its liabilities to the corporate member by depositing FAL. In the absence of any separate agreement between the investor and the corporate member, the investors' limit of liability within the PCC is strictly limited to the investment they have made in the cell.

Leadenhall: Rated ILS launch Nectaris will sweeten risk profile

Leadenhall Capital Partners head of non-life portfolio management Ben Adolph explains that the firm will vary its use of rated Bermuda balance sheet Nectaris depending on market conditions

When ILS managers started up in business, cash collateral was king as these nimble asset managers struck away from the business dominated by traditional rated balance sheets.

But in the past few years, as disaster events have highlighted the operational challenges of dealing with cash collateral lock-ups and releases, more ILS managers have set up their own points of access to rated platforms.

This enables them to supplement service providers who lend out their balance sheets – known as fronting carriers in industry parlance – and build portfolios that contain more lower-yielding (re)insurance risk. Crucially, this next generation of ILS rated vehicles look different to their traditional counterparts – they typically run much lower levels of leverage, and have a narrower business focus and equity base, as well as a low-cost operational footprint with higher levels of administrative outsourcing.

Ben Adolph, Leadenhall Capital Partners head of non-life portfolio management

Leadenhall became the latest ILS manager to back a rated vehicle in May through the launch of Bermuda-domiciled Nectaris. Ben Adolph, the firm's head of non-life portfolio management and director of Nectaris underwriting, walks through how the firm will invest through the vehicle to reshape its portfolios.

What led Leadenhall to launch Nectaris, when it also has access to rated paper through its ownership by Mitsui Sumitomo Insurance via Lloyd's subsidiary MS Amlin?

There are a few key benefits for the ultimate investor. We're getting a lot more efficiencies on the back end – rather than having a lot of collateralised structures either facing MS Amlin or open market cedants, most investments will face Nectaris. We don't have to go through a collateral release exercise with third parties at the end of a contract in order to conclude any ongoing liabilities. Nectaris is also a third party, but we can be more pragmatic about the collateral release and commutation decisions [than an external party]. Even when you're using a fronting provider, you need to agree a release at the back end anyway.

This wasn't a problem in benign years but in 2017-2019 the series of catastrophe events meant that commutation and release agreements have been challenged by a wide range of different behaviours, some managed efficiently in line with the letter and the spirit of the arrangement and others being far from acceptable.

The second main efficiency is that rather than having to collateralise at the individual deal level, we can pool that risk and get all the benefit of diversification. That's not a new approach for the traditional reinsurance market but the ILS market is starting to converge on this approach now.

> *"There is no incentive to load the tail for the sake of it"*

The tail of a collateralised portfolio is fairly inefficient. You can unlock that collateral and manage reinstatement risk – it gives us an additional tool.

We also want to provide counterparties another point of contact and the ability to transfer risk in the way in which they choose. Some brokers and counterparties have a desire to access this new relationship for various reasons.

Does this mean you expect to write more diversified cat risk in the future or change your underwriting strategy?

I don't think it will necessarily change the original business but it gives us the ability to change how we structure it for the investors. We have always taken some diversifying risk but there is no interest from us to over-diversify the portfolios.

The cost of capital to run this type of risk is potentially lower – but there is no incentive to load the tail for the sake of it.

The individual deals and the overall portfolio have to make sense, just because it's available doesn't mean you have to use it. We don't want to face a huge draw-down for a risk we're getting a low margin for.

What difference could using leverage from Nectaris make to returns?

The efficiency of pooling risk means we can either give more return to investors, or maintain return and make the portfolio less risky. You have both those levers available and that's a key benefit.

The right answer is different for each investor – some funds will want to maximise return, whereas others want to minimise risk for a given return level.

You may also have a different answer in different stages of the pricing cycle – the traditional model is you take more risk when rates are good and deleverage when rates soften. We would anticipate following the strategy that is most efficient in the market that is in front of us.

We think the structural benefits could boost returns in a material way on a risk-adjusted basis.

What are the cost implications for investors?

First, it's a relatively low-cost development – a lot of the infrastructure behind Nectaris already existed. We're just using the infrastructure in a different way.

The ongoing costs are relatively small. We have staffed the business with myself as director of underwriting, and a second employee on a part-time basis, with our service provider Horseshoe managing and administering operations.

The AM Best costs are additional but this has replaced a rating fee on our prior structure which used an S&P rated note for some of our funds.

Key points about Nectaris

- A Excellent (Stable) rating from AM Best
- Based in Bermuda
- Collateral provided up to either a 1-in-1000-year (if sourced via MS Amlin) or 1-in-2000-year level (if written directly)
- Nectaris takes tail risk on directly written business after the 1-in-2000-year point, and retains no risk on MS Amlin-fronted business
- Currently ramping up after writing its first risk in May 2021
- $200mn of permanent equity, plus collateral of more than $370mn

What led to the decision to have Leadenhall's funds provide the equity for Nectaris?

The structure makes it easy to bring in new investors or funds. It doesn't matter how small a new fund might be, the fund or any new investor can easily buy in and get the benefits of Nectaris, whilst sharing the costs with the existing Nectaris investors.

The equity allocation is proportionate to the size of overall assets, based on usage of the vehicle. We do regular true-ups to check equity split is in line with usage.

> *"Some funds will want [to use leverage] to maximise return, whereas others want to minimise risk. You may have a different answer in different stages of the cycle"*

Getting their equity out shouldn't be a problem, because it sits senior to their other holdings. It's the underwriting capital that is generally more subject to trapping. We have assessed the use of third-party capital in the vehicle but due to minimum return issues third-party capital would have created a cost leakage for our investors by providing very limited risk transfer, so we opted for keeping the economics to investors in our existing funds. In addition, this approach also affords the greatest alignment of interest and ensures investors using the structure are not adversely impacted by changes in risk appetite of a third party who may wish to trade out of their position due to other outside factors – this is important for creating credibility in the market as it provides the best chance of continuity for counterparties facing Nectaris Re.

What other differences will it make to the firm?

There's some other benefits in terms of origination, we're adding a string to the bow. We're agnostic to form, whether we're investing in traditional reinsurance, cat bond, derivative or other products.

But the ease of execution is a real attraction [for traditional reinsurance buyers], making it easier for cedants and brokers to access the capital.

This factor will become more important if the market starts to transition back to a more orderly stage in the pricing cycle, where capacity is less constrained and other factors such as ease of execution become increasingly more important.

The greater opportunity set we have, the greater opportunity to select the risks that work best for investors.

Finally, what's behind the name Nectaris?

Nectaris is a lunar sea which sits between the seas of tranquillity and fecundity.

ILS managers continue post-Covid rebuild

ILS specialist managers continued to post steady growth in assets under management (AuM) in the first half of 2021, gaining 4% to reach $76bn, according to *Trading Risk* data.

Including reinsurer-owned platforms, total AuM was up 4% to $103bn. First-half growth was slightly more subdued than the 6% recorded in the second half of 2020, but rebounded from a 5% reduction in H1 2020 amid the pandemic outbreak.

Gains over the past year have now more than offset the impact of the initial Covid-19 downturn in H1 2020, showing that – to some extent – the industry's hopes of capitalising on its appeal as a diversifying asset class after last year's widespread market panic have come to fruition.

However, the recovery remains unevenly distributed, as ongoing reductions in AuM at several managers reflect 'investor fatigue' with recent years of cat loss activity.

Cat bond specialists were once again among the fastest-growing funds, benefitting from a shift in investor demand towards remote-risk liquid strategies.

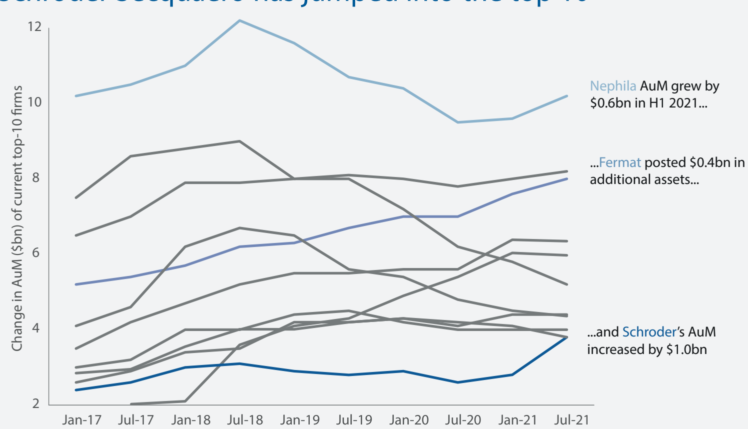
Notably, Zurich-based Schroder Secquaero was up nearly $1bn to $3.8bn, with Twelve Capital gaining $600mn and Fermat Capital up $400mn.

Specific UCITS strategies covering European cat bond funds rose 21% to $6.4bn, from $5.3bn in January, led by an uplift at Schroders. Smaller player Plenum grew UCITs vehicles by more than $200mn, and other cat bond managers also registered inflows.

Key trends

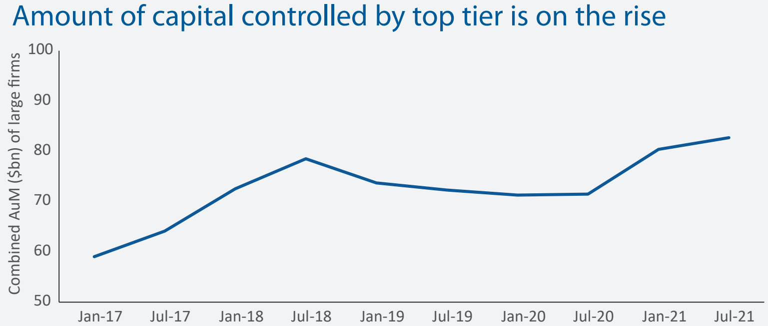
- Growth at market leader Nephila Capital offsets most of its pandemic downturn, matching broader trend
- Cat bond shops still experiencing strong growth – led by Schroder Secquaero, Twelve and Fermat
- Non-cat capital also still in evidence – HSCM up $400mn
- Incremental gains for 2021 start-ups
- Some declines still evident at firms such as Stone Ridge and Credit Suisse
- PartnerRe sidecar launches push it up the reinsurer ILS platform rankings

Schroder Secquaero has jumped into the top 10



Note: Data for 11 firms plotted as Schroder and AlphaCat ranked equal in 10th position
Source: Trading Risk

Amount of capital controlled by top tier is on the rise



Source: Trading Risk

Outside the bond specialists, smaller ILS managers that have experienced significant growth in the post-Hurricane Irma years, such as Neuberger Berman and Pillar Capital, also continued to post gains in H1, as did Hudson Structured Capital Management – a beneficiary of the trend for existing investors to seek non-cat forms of ILS holdings.

Market leader Nephila Capital gained $600mn to once more surpass $10bn of AuM, and the top tier of $2bn+ managers rose 2.4% to $80.4bn.

Among in-house reinsurer-managers, AuM was up 5% to $24.5bn. This figure excludes formerly independent managers acquired by reinsurers.

In this grouping, the most notable change was at PartnerRe, reflecting the launch of its major retro sidecar LaPlace in January, along with another fresh sidecar Fourier to the existing Lorenz Re vehicle. The reinsurer said its cessions covered retro, specialty and catastrophe risks.

Scor also posted big growth, up $500mn, and Swiss Re added $185mn after setting up its 1863 Fund towards the end of last year.

Finally, the recent class of 2021 ILS start-ups – Integral and Gildenbrook – made some incremental gains.

For the full listings, please see pp 30-31.

Cat bond market set to 'power through' H2: Aon Securities

The cat bond market should continue to "power through" the second half of 2021 after taking on a pricing leadership role in a busy first half, Aon Securities predicts.

The broker estimates that pricing levels on the secondary market have now brought ILS rates down to levels around 2018.

But Aon Securities CEO Paul Schultz says that it remains a question over whether the markets will move closer in lockstep as 2022 approaches, or whether the ILS market will retain its competitive edge in pricing over the traditional reinsurance market.

An upcoming $3.7bn of cat bond maturities, on top of existing cash positions and a positive fundraising outlook, will help the cat bond market keep up its record pace, the broker forecast.

"Furthermore," it said, "we expect additional capital to be reallocated from other areas of ILS into the cat bond space as investors continue to emphasize liquidity and a reduced risk tolerance, further building on the strength witnessed in the first two quarters."

Paul Schultz
CEO of Aon Securities

It put new issuance volumes at $8.5bn in the first half, $181mn more than the previous record set in H1 2017. Early on in 2021, maturing cat bonds outpaced new issuances but by the half-year point, the volumes of new deals had caught up.

"We expect additional capital to be reallocated from other areas of ILS into the cat bond space as investors continue to emphasize liquidity and a reduced risk tolerance"

Of the 35 reinsurance layers brought to market, 32 priced at the low end of forecasts or better, and about 70% were able to expand the deal size while pricing at these levels.

Sponsors of new cat bonds were frequently able to upsize and tighten pricing on their transactions in the first half.

Rates dropped by about 15%-20% year on year, Aon estimated, and secondary market pricing has consolidated around levels last seen in 2018.

The secondary market produced consistent trading from mid-April as the new issuance pipeline led investors to rebalance their portfolio, after a slow first quarter.

Bonds that were facing losses had clawed back some value during the quarter as sponsors reported lower losses from Hurricane Michael, Hurricane Florence and Winter Storm Uri, the firm added.

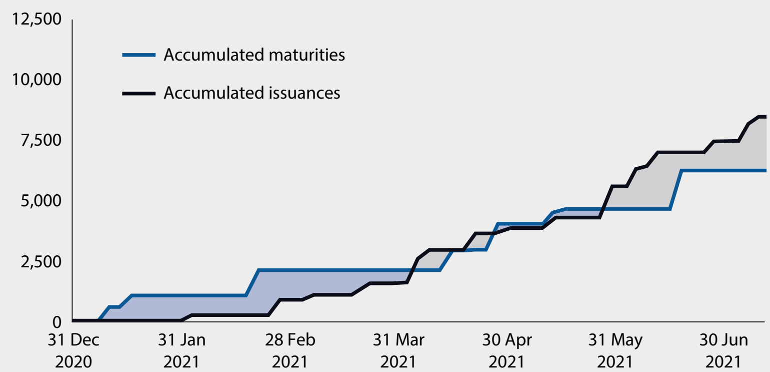
Meanwhile, industry loss-based cat bonds that provide retrocession cover have been increasingly popular with new cedants in the past couple of years.

In the past few months, a new Herbie Re deal for Bermudian reinsurer Fidelis set a benchmark for the widest coverage of perils and geographies for any index-based retro cat bond.

"The transaction tripled in size during marketing and priced below initial guidance, highlighting investors' appetite to provide global retrocessional cover at lower return periods than normally seen in the cat bond market," Aon noted.

The deal offered investors an insurance coupon of 17.25%, or 2.1x the modelled expected loss level.

P&C issuances vs maturities



Source: Aon Securities

Cat bonds may hit record issuance levels in 2021

Cat bond issuances could hit record levels this year, after a fast-paced second quarter in which a new green cat bond was brought to market, and sponsors were able to source competitively priced cover.

Second-quarter issuance volumes hit a four-year high of $5.8bn, which ranked second only to 2017 figures of $6.4bn.

Several ILS managers told *Trading Risk* it was likely that high volumes would continue through the rest of the year, suggesting 2020's record $11.8bn annual new issuance tally could be beaten so long as there is a busy final quarter.

The boom reflects an ongoing shift in investor demand towards more remote-risk, liquid strategies, with forecasters having predicted an upswing in cat bond growth since last year.

Strong investor demand reflects the results of the Eurekahedge ILS Advisers Index, which has consistently reported pure cat bond funds performing better than strategies that include private ILS instruments in the past few years, as remote-risk cat bond funds have avoided major claims from a string of mid-level cat losses that have struck since 2017.

As of May 2021, year-to-date returns were 0.76% for cat bond funds, compared with 0.25% for private ILS strategies. For 2017-2020, the cat bond segment returned a cumulative 7.8% gain versus a 9.3% downturn among private ILS funds.

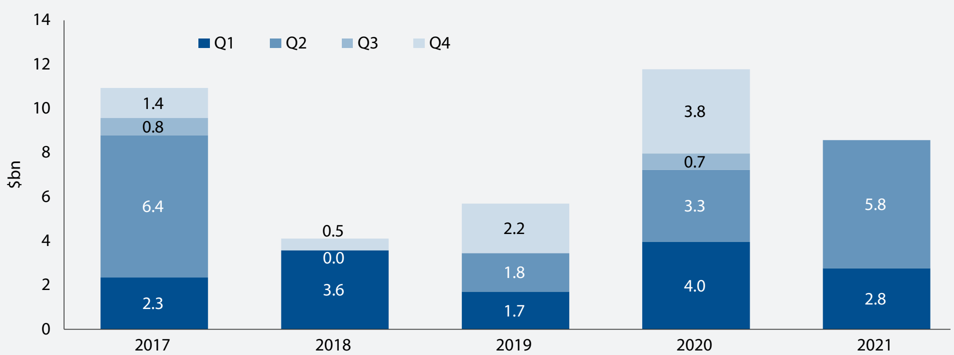
Florian Steiger, executive director and strategy head cat bond portfolio management at Twelve Capital, suggested that cat bond popularity also reflected the industry's ESG credentials and ability to help "communities to increase their climate resilience".

This came to fruition in Q2 as Generali launched a hallmark green Lion Re cat bond, which used freed-up capital to support eligible projects under the firm's green ILS framework and highlighted the sustainable credentials of IBRD collateral.

However, sources have told *Trading Risk* that they would like to see future green cat bonds look to put more focus on underwriting disclosures.

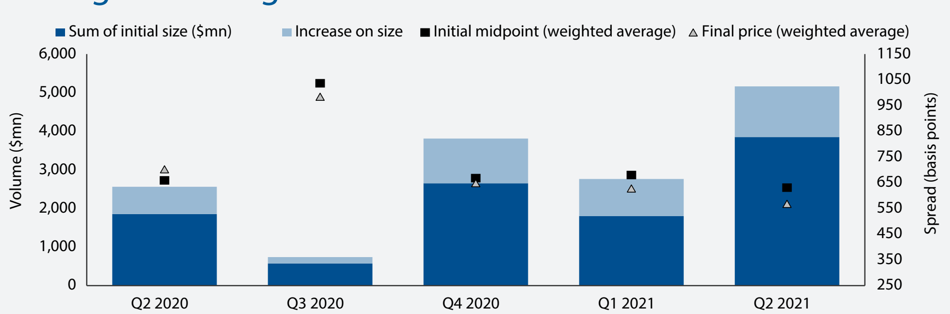
Nonetheless, at final pricing, the spread offered on the Generali bond fell 18% from the original forecast of 4%-4.5% to 3.5%, reflecting another of Q2's dominant trends – notable pressure on pricing amid high demand.

Q2 volumes steamroll ahead to second-highest volumes



Source: Trading Risk

Sponsors capitalise on demand to push prices down 10% during marketing



Source: Trading Risk, excluding private deals such as Merna for which initial targets not known

Pricing pressure

In 2021, cat bond premiums have been scaled back significantly from the levels initially marketed to investors, in a major turnaround from 2020.

According to *Trading Risk* data premiums on Q2, cat bonds tumbled 10% from a weighted average initial midpoint of 631 basis points (bps) down to 568 bps, after declining 7.6% during the marketing process in Q1. This was the biggest drop in forecast-to-final spreads since Q1 2018, when there was an average decline of 13.6%.

By contrast, a year earlier in Q2 2020 the average spread offered on cat bonds rose as they progressed through the marketing process, largely thanks to lowered demand amid the initial pandemic crisis.

Strong demand meant margins were compressed. Rates on Q2 cat bonds offered an average multiple of 2.2x the modelled expected losses, down from 3x a year earlier and 2.4x in Q1.

Q&A: Dr Ben Fox

The Hiscox principal and portfolio manager says ILS managers need to "walk the ESG walk"

How do you think the Lloyd's market can interact more with ILS capacity?
Lloyd's has a longstanding tradition of handling third-party capital and there are a number of Lloyd's syndicates that already benefit from some level of support from ILS capital. At Hiscox ILS, complementary to our Bermuda platform, a significant portion of the catastrophe risks assumed by our strategies are sourced through our Lloyd's syndicates. This way our investors are benefitting directly from the expertise and access to risk synonymous with the Lloyd's market.

More broadly, readers may be aware that Lloyd's has recently launched its 'London Bridge' initiative to help ILS investors access a wider range of exposures than purely property catastrophe risk. Historically it has been challenging for institutional investors to allocate capital to Lloyd's for many reasons, such as ease of structuring, and the intention is that London Bridge can provide a more efficient conduit for investor participation in the Lloyd's ecosystem.

What should ILS investors know before considering getting access to Lloyd's risk?
The underlying risk/return profiles of specialty risks sourced through Lloyd's may look markedly different to those of catastrophe risk that ILS investors are likely to be much more familiar with.

Firstly, performance in some of these more esoteric asset classes may not be driven by CNN-type events, and therefore the likelihood of 'surprises' for investors may be higher. Secondly, some of these lines of business can exhibit much longer claim-development patterns than catastrophe risk and, typically, capital commitments will need to be for several years – for some ILS investors that are used to more liquid products, this can be a challenge.

However, at Hiscox ILS we've found that long-term sophisticated investors are generally comfortable with the relative illiquidity if it can be determined that they are being adequately compensated for the risk they are taking on. Information is not always readily available so partnering with a trusted ILS manager that is well versed in the Lloyd's market is of utmost importance for ILS investors.

What kinds of risks traded at Lloyd's would be particularly suitable for ILS investors?
Lloyd's is the centre of complex risks, and through our Lloyd's platform we have sourced esoteric risks in the past for more specialty-tilted portfolios and we continue to see strong investor interest in strategies that provide exposures beyond catastrophe risk.

In addition to some catastrophe risk which is also available at Lloyd's, these specialty portfolios have afforded investors exposure to lines of business as diverse as fine art, satellite launch, terrorism, crop, cyber, nuclear and personal accident.

Where do you think the big challenges ahead for ILS managers are with regards to ESG?
For me, a big challenge is for ILS managers to demonstrate they can walk the ESG walk, especially against the backdrop of some scepticism across the wider investor base around the practice of 'greenwashing'. However, to be successful, ESG has to be an industry-wide effort (managers, cedants, brokers, reinsurers).

At Hiscox our ESG committee drives day-to-day progress and reporting to ensure our underwriting function is acting as a steward of nature and encouraging the transition to a low-carbon economy and sustainable future.

Once ILS managers have defined an appropriate ESG framework, the next step is execution and an important element of this is granular disclosure of information from underlying cedants.

We have found that the stronger the relationships between transacting parties, the higher the likelihood of useful information flow occurring. This is certainly an area where we believe our investors can benefit from our broader affiliation with Hiscox and its historic trading relationships.

What other steps has Hiscox ILS taken so far on ESG?
ILS managers and their affiliates need to be bold and do more than just talk the talk with respect to ESG matters. I'm proud that at Hiscox we recently published our 2021 climate report, which shows another year of progress in how we consider and look to limit our environmental impact – the 'E' in ESG.

More broadly on ESG, Hiscox has committed to reduce, and eventually eliminate, our exposure to thermal coal, oil sands, Arctic energy exploration and controversial weapons. In addition, we have signed up to the UN-convened Principles for Responsible Investment, demonstrating our commitment to responsible investing.

I believe these sorts of actions are viewed as meaningful by the investment community and we look forward to continuing taking positive steps in this area.

To that point, at Hiscox ILS we have recently developed a climate change dashboard, embedded in our investment process to help us best identify, quantify, monitor and manage the impact of climate change on our strategies' natural catastrophe exposures, which we believe is an essential approach to achieving long-term sustainable returns.

Average ILS returns reach 0.96% in H1

Winter Storm Uri was a handbrake on ILS returns in H1 2021, as the gain on the Eurekahedge ILS Advisers index reached 0.96%.

The H1 return came in slightly ahead of the 0.86% recorded at the same point last year, as the index made a positive return in five of the first six months of 2021.

However, Uri dragged the index to an 0.6% loss in February.

Performance diverged widely amongst the 28 funds tracked by the index in spring in particular, with June producing a 13-point spread from the top-performing fund to the lowest.

> *"Performance diverged widely amongst the 28 funds tracked by the index in spring"*

Private ILS strategies gained 0.79% on average in H1, but the pure cat bond funds tracked within the index remain ahead of their counterparts with a 1.08% gain. Despite being of a generally lower risk-return profile, the cat bond segment outperformed the private ILS segment in 2019 and came close to matching its gains in 2020.

Cat bond strategies also took a loss this past February after Uri, but were less steeply impacted than their counterparts that invest in private ILS instruments. However, private ILS funds began gaining ground faster as hurricane season approached, as their typical seasonal earnings pattern sped up.

It is likely that ongoing loss development from European insurers' Covid-19 business interruption claims have hit some firms, while July returns may also be stung for some by the floods that struck Germany and Belgium.

Key metrics

	%
Annualised return	4.17
Return since inception (2006)	89.05
Sharpe Ratio	0.68
% of positive months	86.1

Source: Eurekahedge ILS Advisers

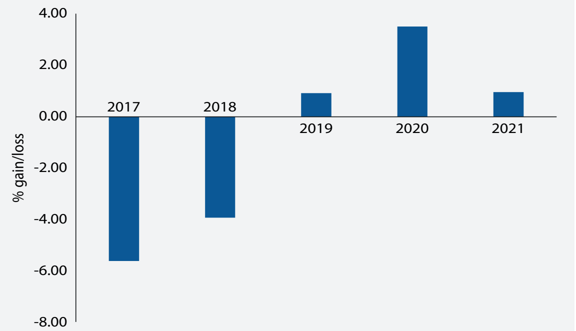
Major European insurers such as Allianz and Axa have indicated they will share significant claims with their reinsurers, as industry sources suggested that Storm Bernd's flooding claims will surpass EUR5bn, making it one of the most expensive such events for the continent.

Australian flooding would also have pushed some claims to the ILS market around the turn of Q1/Q2.

But on the US side, after the devastating Uri, many (re)insurers suggested Q2 was a relatively benign period for tornado and severe weather activity during their results-reporting season.

Nonetheless, Swiss Re put natural catastrophe losses at $40bn for the first half, up 13% year on year and above the $33bn 10-year average for the first half.

ILS returns, 2017-2021 YTD

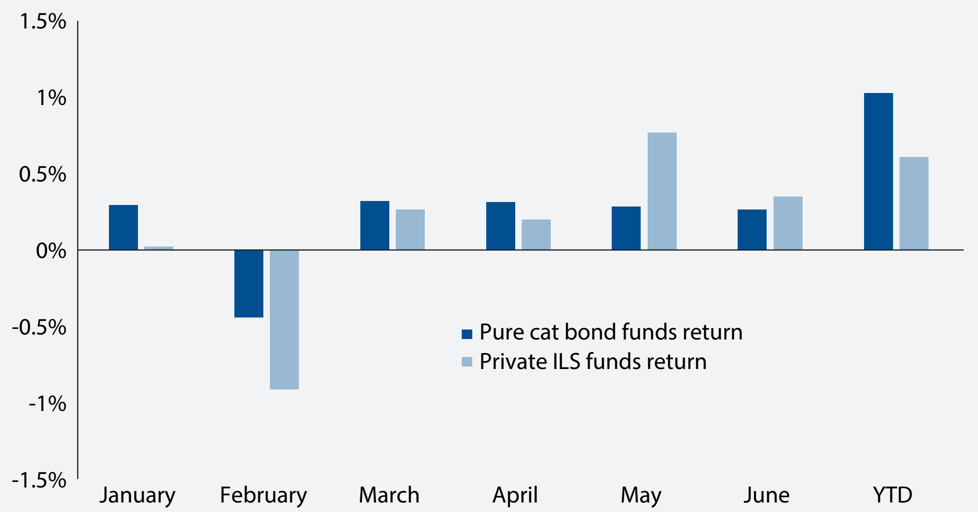


Source: Eurekahedge ILS Advisers

It put Uri at $15bn of industry losses, with European storms in June at $4.5bn. Uri was the costliest winter storm on record for the US, and came in far ahead of modelled loss expectations as widespread fatal power failures exacerbated claims (see p23 for more on winter-storm modelling).

More fortunately for the industry, as of mid-August, California wildfire activity was not expected to drive major insured losses despite immense blazes. To date, the Dixie Fire has destroyed mostly brushland and forests, with a modest level of properties destroyed relative to its size.

Cat bond funds vs private ILS strategies



Source: Trading Risk

Q&A: Dr Jamie Rodney

Dr Jamie Rodney, executive director, ILS at Twelve Capital, says a reshuffle within the ILS market is being driven by defensive tactics

Do you think increased cat bond volumes in 2020-2021 signal a structural shift within the ILS market?

I am not sure if it is structural, but there's been a reshuffle. In part, reallocation has been driven by investor demand for performance and liquidity, as well as cat bonds being the most defensive area of the ILS space.

From 2011 to 2017, ILS expansion was primarily driven by collateralised reinsurance.

However, the increase in 2020 cat bond volumes was mainly driven by reinsurance fundamentals. For example, uncertainty over retro capacity and a spike in rates brought a number of reinsurers to the cat bond market for the first time.

We are seeing a broader range of retro style products now, and a widening to broader worldwide coverage. That is one driver in the short term.

In 2021, we are seeing investor demand resulting in a normalisation of cat bond pricing compared to last year's record levels, thus also supporting new issuance volumes.

Has this year's demand-led trend left rates at a sustainable level?

Cat bond rates have normalised compared to the record levels seen in 2020, back to where we were in 2019. This is at a market level – for some specific deals, it might vary. But relative to other investment classes, cat bonds still look very attractive.

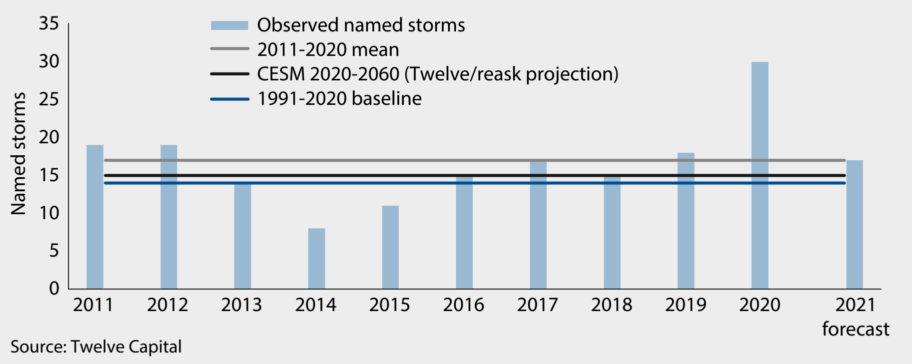
Discipline in the cat bond market has evolved over the past few years. The market uses risk-based pricing and modelled losses to support this level of discipline.

What is your firm's take on what climate change models show us about future ILS risk?

Since late 2017 we have partnered with climate tech company Reask, using artificial intelligence to study climate signals and how climate variability is impacting North Atlantic Hurricane risk. We try to understand how the activity observed in recent years stacks up against different simulated variations of history.

We concluded that under extreme climate scenarios we're likely already living close to the future expected climate frequency.

Projected named storm activity in line with experience



Source: Twelve Capital

We might have been a little more unlucky in recent years. Of all possible simulated climates, the one we observed was somewhat more extreme than expected – what we could be moving into, over the next 20 years or so, is simulated to be very much in line with what we've observed in the past few active years (as illustrated in the chart). As long as we know the downside, we can adjust and reprice risk. We just need to make sure we understand the limitations of models.

How easy will it be for the cat bond market to do more green deals?

That boils down to how you define green. One of the most challenging aspects of working in an ESG framework is how to define the targets. For example, the idea of using cat bond investment proceeds for green purposes is a concept that is simple to grasp and implement.

But if you shift to thinking about what the asset is covering, that question becomes a lot more challenging and convoluted. If you focus on what cat bond pay-outs are being used for, you could get a large dispersion in results from deal sponsors – some provide limited transparency on this.

But the (re)insurance market is very aware of these challenges, and recently launched a new insurance net zero group.

From Twelve's point of view, we are looking at ESG issues at a corporate level. For cat bonds our ESG assessment aims to evaluate both the issuer and the instrument from a sustainability perspective. In addition, we are actively developing our engagement and stewardship strategy to help drive transparency throughout the risk-transfer chain, from issuer, instrument all the way through to final pay-out.

Florida: a divided market

After a disrupted 2020, Florida reinsurance renewals ran smoother this year with more subdued rate increases – but this concealed some pockets of severe disruption

Reinsurers and ILS risk-takers were hoping to push for further significant increases to premium rates in this year's renewal, after charging major hikes last year amid a general clean-up of contract terms and conditions.

However, average rate increases only reached the mid-to-high single-digit level, sources told this publication.

This revealed a growing gulf in risk-takers' appetite for Florida risk – with less interest in taking the lower layers of programmes, and over-subscribed demand for remote-risk top layers covering major disasters.

Indeed, some sources suggested rates were "flattish" at the top of programmes compared to 2020 levels, with the average increases driven by more significant 15%-20% hikes on lower layers.

First reinsurance layers have previously priced around a 40% rate on line, but have now often escalated to 60% or higher.

Whereas historically some carriers would effectively take a punt on the chance of Florida avoiding a landfall – which paid off in the initial post-Hurricane Katrina years of the landfalling hurricane drought – the past couple of years have resulted in repeated hits to these layers especially as some domestic insurers expanded along the southeast coast.

A theme echoed by carriers is that the lowest-layer Florida risk is now no longer seen as catastrophe risk but pure attritional risk, with even minor weather events causing losses to those working layers.

In broker HX's view, the overall outcome put the reinsurance market back to around 2013 levels of return.

ILS re-invigoration

The renewal trends were not heavily influenced by the overall ILS market, with actions of traditional lead reinsurers seen as more decisive.

Nonetheless, ILS capacity was described as thawing out after last year being impacted by Covid-19 headwinds.

Sunshine State reinsurance

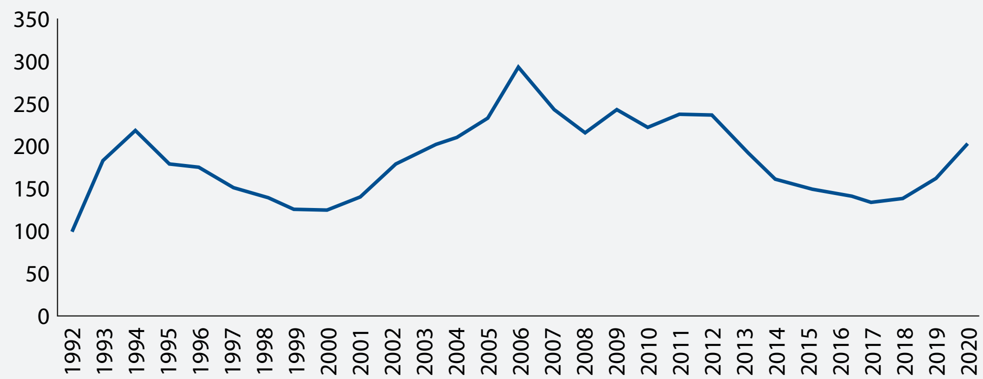
- The 1 June renewals are a key date for ILS funds and reinsurers, as Florida insurers are heavily reliant on reinsurance
- ILS providers took about a 16% share of premiums ceded by the state's top 10 insurers in 2020 – roughly $620mn of a $4bn premium pot – according to *Trading Risk* analysis

But rather than major collateralised/fronted writers, it was the cat bond market that was seen as having the biggest role from the ILS side on the renewals.

Rates on the Florida cat bonds did not fall as low as on a couple of US nationwide or non-Florida deals where coupons have fallen back near historic lows of under 3%.

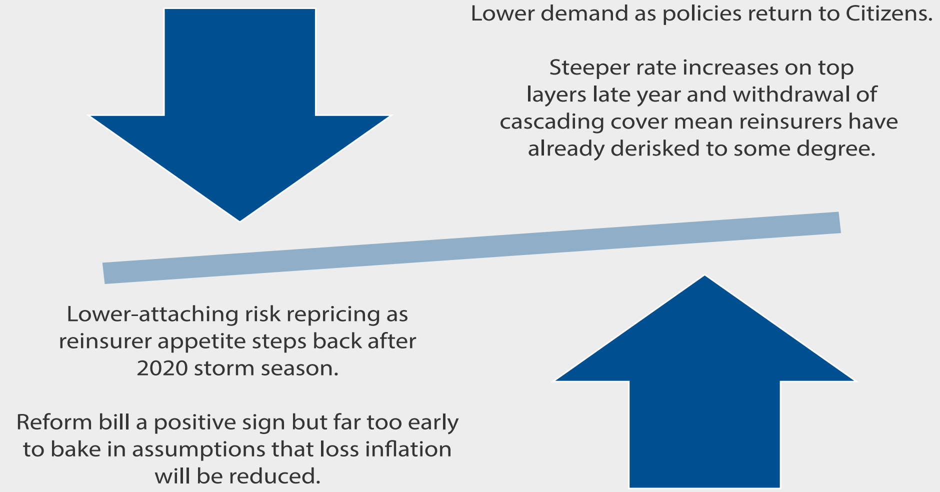
But the surge in volume helped certain carriers displace need

Second climb for Florida rates puts business back to ~2013 levels



Source: Hyperion X Analytics

Push-pull factors behind Florida rate change



Source: Trading Risk

for private cover and played a particularly big role for the growing Citizens, which did its largest deal since the $1.5bn 2014 Everglades Re bond.

Across four insurers, nearly $1.5bn of cat bond capacity was raised. Last year only $325mn of cat bond limit was sponsored by Florida domestics.

Two carriers also completed their first cat bonds this year – Universal and St. Johns.

Reform pressure

In 2020, reinsurers brought in more restrictive conditions for many reinsurers, such as cutting back multi-event "cascading" coverage.

But this year, the focus of reform was squarely on Florida state lawmakers, as local legislature pushed through a major bill designed to help local insurers deal with surging reinsurance costs and high levels of expensive litigation.

Financial pressures have led private insurers to shrink their portfolios, with state-backed operator Florida Citizens currently experiencing a boom in growth as many homeowners struggle to source private cover.

The key initiatives included:

1) Reducing the timeframe to file a catastrophe loss by a year to two years

This is a clear win for the industry. Reinsurers can assume some level of reduced tail-risk exposure, although how to quantify it is difficult.

Local insurer HCI told analysts that cutting back the tail can be an exponential advantage in terms of legal costs.

Of the carrier's year-one Hurricane Irma claims, only 9% were taken to court.

However, 34% of claims filed in the second year after Irma ended up in a lawsuit, and more than 50% of the year-three late-reported claims resulted in lawsuits.

2) Setting a higher bar for insurers to pay litigants' attorney fees

Opinions seemed more divided on the potential impact of this change.

With the new system, insureds must win more than 20% of the settlement offered by their insurer to be eligible to have a portion of their attorney fees covered and must win by a 50% margin to have all their fees picked up by the insurer.

American Integrity Insurance CEO Bob Ritchie, who said the bill would have some positive impact but described it as "watered down", argued that even with the higher bar on one-way attorney fee awards, the contingency fee multiplier was a major incentive for law firms to take cases to court.

Insurers paid $15.3bn in connection to insurance lawsuits from 2013 to 2020, of which 71% funded plaintiff attorney fees, 21% represented defence costs and only 8% went to insureds, a report from insurance analyst Guy Fraker sponsored by the James Madison Institute found.

3) Limits on the ability of repair contractors to tout for business and offer incentives to drive homeowners to file claims

Roof-repair costs have soared after Irma as homeowners have secured full roof replacements for partially damaged properties.

Some sources were sceptical whether contractors would find ways around these restrictions – which seems justified given that one firm has already obtained a temporary injunction against enforcement of the law.

The outcome of reforms were generally cautiously welcomed by underwriters as a way of reducing some of the uncertainties of operating in the state.

However, until the results of the reforms became apparent, it was too early to think of pricing in any potential change in assumptions.

"The only thing we can really rely on is rate," one said.

With homeowners facing rising rates, the pressure for insurance reform will be back on the state's agenda in an election year next year. For reinsurers facing this market, it is a chance to see multiple issues that have made the market an unpredictable place to do business since Irma addressed.

‘How much of my ILS portfolio should be held in liquid investments?’

Trading Risk examines the question of how much of an ILS portfolio should be allocated to assets which can easily be converted into cash, and what liquidity can be expected within the sector

In a balanced ILS strategy, around a third of an ILS portfolio is allocated to liquid instruments, according to Siglo partner Michael Knecht, who suggested that on average 30%-40% should be in cat bonds with 40%-50% in collateralised non-life reinsurance and the rest in private life instruments.

He said the variation in allocation was dependent on how comfortable investors were with tail risk, and there was a fundamental trade-off in ILS between return, tail and liquidity.

“The biggest mistake investors make is not putting together a strategy which does not account for this,” he said.

Key points

- There is a fundamental trade-off in ILS between return, tail risk and liquidity
- Cat bonds can generally be traded within a 30-day period while reinsurance contracts run for 12 months and ILWs for three to 12 months
- The costs associated with extracting capital and loss uncertainties mean liquidity in ILS can be limited

“If you want to have full liquidity you have to accept tail risk because it’s only the cat bond market that can provide this but if you want diversification you can’t get around collateralised reinsurance.”

Within the cat bond market, some factors can hinder maximum liquidity, Cambridge Associates’ Mark Wilgar noted.

“A higher proportion of less-remote risk layers, aggregate loss triggers and indemnity loss triggers we’d consider to have less reliable liquidity,” he said.

“Portfolios that have more parametric and industry loss triggers exposed to remote catastrophe risk on a single-peril excess loss basis will likely be able to offer the most reliable liquidity on average.”

Lower risk-return cat bonds, even bigger volumes, can generally be traded within a 30-day period without having a major market impact, said Knecht.

But many cat-bond-only strategies can offer investors more frequent weekly liquidity options, including European UCITS regulated funds.

In contrast, most ILS managers offering commingled funds that mix various instruments offer annual or semi-annual liquidity.

This is because direct reinsurance contracts run almost invariably on 12-month terms and the length for industry loss warranty products can vary from three to 12 months.

But Wilgar said investors should bear in mind that the annual or semi-annual liquidity options were a “best case scenario” and could be compromised by collateral trapping after catastrophe events.

“Transaction costs, fund level notice periods and anti-dilution adjustments plus the ever-present risk of natural catastrophe losses and similar could lead to significant proportions of clients’ ILS portfolios being unavailable,” he explained.

“This is even once the assets are expected to have matured due to trapped collateral or valuation uncertainties.”

He also advised “conservatism” in thinking about the liquidity that could be achieved with an ILS portfolio at all, because of the costs associated with extracting capital and loss uncertainties.

“We do not advise any investors use ILS or even cat bonds as a reliable source of liquidity, though we do believe there is a benefit in holding cat bonds,” he said.

Wilgar said that, in some extreme cases, a number of moderate losses could present more of a challenge for liquidity than a large single event like a hurricane.

This is because multiple losses would make it “near impossible” to quickly and accurately estimate the value of some ILS instruments and release capital back to redeeming investors.

“In a worst-case scenario could be several years for redeeming investors to receive their very last dollar back,” he said.

Cambridge Associates investment director **Mark Wilgar**

How to boost the S of ESG in ILS

Despite the growing importance of ESG concerns to the ILS market, it can sometimes feel as if social factors take a back seat in importance when compared with environmental.

This is largely because of the nature of ILS, which ultimately comes down to responding to disasters and which links weather risks to investor profit margins, meaning it is important for them to understand the risks of climate change.

This being said, it has long been argued that the function of catastrophe insurance positions the asset class as inherently socially compliant.

"ILS builds social and financial resilience in communities because it helps people to rebuild after disasters and difficult times," said Jillian Williams, CUO and head of ESG at Leadenhall Capital Partners.

Even so, the ILS asset class needs to do more to build on this base, and one source argued that firms could not label themselves as S-compliant for carrying on in activities they have always been doing.

"Managers should have a dedicated mandate, committing to social goals to be considered compliant," they said. "Simply providing the capital to rebuild after a disaster isn't enough especially when there is such a gaping wide global protection gap."

Closing the protection gap

This rift refers to the difference between total losses from an event and insured losses.

Closing this gap was one way that sources agreed ILS firms could improve their standing on the social scale. The issue is particularly acute, given the divide rose by 6.3% to reach a record high of $1.4tn in 2020, according to figures from the Swiss Re Institute.

Although the increase was predominantly caused by health coverage falling short in the year of the pandemic, the Institute's natural cat resilience index figure showing the degree of coverage for catastrophe risks was a meagre 24%, showing that much of the world is not properly equipped to rebuild after a disaster.

"Taking on risks which would contribute to bridging this gap is one way that ILS can make positive social change," a source explained. "The problem is that it often involves writing business which is much less likely to return a profit and bottom line is ultimately key."

"There is a reason why a lot of these areas are not insured and that is because the risk is really high."

This can be seen in the latest Swiss Re Institute study which awarded EMEA a resilience index score of 44% compared to 3.6% for the Asia-Pacific region, meaning that 96% of potential catastrophe losses in the area are unprotected.

More transparency

Several industry participants said that if ILS firms adopted a more transparent approach, not just in underwriting but in their businesses as a whole, social standing could be improved in the eyes of investors.

Translating this visibility into the social arena by providing disclosure on workplace diversity, help for the developing world and efforts to close the protection gap, would be a quick win in the ongoing mission to improve the industry's credentials, they added.

Twelve Capital noted that firms needed to have better disclosure surrounding their objectives as well as of underwriting standards and wider processes.

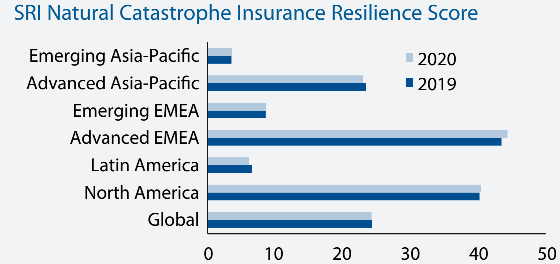
"Managers should have a dedicated mandate, committing to social goals to be considered compliant"

"Clients, as well as reinsurers or cat bond investors, need to be able to fully understand the firm's processes, underwriting criteria and how they approach claims handling," it stated.

While not as all-encompassing as what has been described here, Generali's recent green Lion Re cat bond offered a commitment to greater transparency and arguably achieved a tighter margin because of it.

The deal invested collateral into European Bank for Reconstruction and Development bonds which funded projects under its green framework and there was reporting offered to investors on the progress of said projects.

SRI Natural Catastrophe Insurance Resilience Score



Source: Swiss Re Institute 2021

It had the lowest spread margin over multiple to expected loss in the history of the ILS market and ultimately illustrated the value investors placed not just in "green" bonds but in transparency to prove the positive impact they could have.

Generali told *Trading Risk* that the bond could be a first step to integrate ESG elements into ILS transactions.

"Of course, the potential integration of social features would require further efforts by ILS players," it said.

Greater diversity

Sources were broadly in agreement that ILS managers needed to build teams with greater diversity to bump up their social standing.

There was also a shared sentiment that recruiting employees from different backgrounds would produce better results as there would be more diversity of thought.

"Having a diverse workforce – now that is something every ILS manager should be able to do," said Nephila Climate CEO Maria Rapin.

"At the moment insurance is not a very diverse industry and this can be a real source of weakness because we're not seeing issues through enough perspectives."

While there are few market-wide sources of data on diversity within the insurance sector, the London insurance market at Lloyd's has begun a major effort to track various aspects of inclusivity through regular culture surveys.

These highlighted that black and minority ethnic professionals in the market were less likely to raise concerns relating to discrimination and had a higher level of distrust in senior leaders according to the 2020 survey.

"At the moment insurance is not a very diverse industry and this a real source of weakness because we're not seeing issues through enough perspectives"

For example, 74% of respondents believed senior leaders created opportunities for everyone, but the figure was only 46% for people who identified as black or black British, and 63% for people of Asian heritage.

Some gains had been made in the past year, as 65% of women were positive about how their organisation dealt with inappropriate behaviour, up from 51%.

Insiders suggested that, by building a more diverse workforce, insurance companies would have a greater incentive to close the global protection gap as firms would be comprised of more individuals from a heritage likely to suffer from a lack of coverage.

Circles of influence

Sources were also asked how ILS managers and investors could become more socially compliant given how far removed they are from the assets they are insuring.

Twelve Capital said the industry needed to be more "proactive" in asking for additional information and better disclosure from primary insurers.

"There needs to be enough pressure from market participants that a cedant who refuses to provide complete and accurate disclosure will either not be able to access the ILS market at all or only at a substantially increased premium," it said.

Rapin suggested it may be difficult for managers to have significant influence on the management composition of primary insurers because ILS is not the same as debt or equity where investors actually own a stake in companies.

"Because it is a more indirect relationship there is less ability to apply pressure on insurers to change their practises than a board or equity stakeholder can. We do, however, have the ability to reflect our views of better-run, better-performing companies in our pricing and/or capacity," she said.

From a different angle, there are other ways of building connections.

Leadenhall's Williams suggested that ILS could make a difference because it has several touch points with the financial sector.

"The product is based in insurance but we also have institutional investors, thus interacting with a wide range of financial sectors. This means that there is an opportunity to be a corner stone influencer on a number of different sectors."

Work to be done

Ultimately, insiders said the ILS industry had to do more to advance social ESG goals, with closing the global protection gap and the implementation of more transparency and disclosure some key ways this could be achieved.

More diversity in high-ranking positions was something that respondents agreed was essential to the industry's development on social factors, and it seems this could benefit businesses with greater variety of opinions and perspectives, potentially leading to better results.

To achieve this the industry will no doubt have to make a concerted commitment to change and perhaps break out of a thought process which affirms it as doing enough by virtue of its function.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What would it cost if a winter storm hit New York City?

Winter Storm Uri in Texas started off 2021 with a major surprise insured loss for the (re)insurance industry. The freak nature of the fatal storm could end up generating a hit to insurers in the range of $10bn to $15bn. However, many in the industry point out that it was not the nature of the winter storm itself that drove so much destruction and cost, but the infrastructure failures that led to prolonged power outages: a manmade catastrophe, as some term it.

This is illustrated by the fact that cat-modelling firms do not expect major winter storm losses to be nearly so severe in northern urban centres, reflecting their better preparedness for icy weather.

Trading Risk asked modelling firms to share their best estimate of losses if a similar storm would hit New York City.

The estimates ranged from sub-$2bn up to $5bn for a 1-in-100-year event, although each firm approached the issue in a slightly different way.

Freeze: the pricier aspect

Modeller KCC characterised winter storms as large-scale weather systems on average 10 times larger than hurricanes. KCC's senior atmospheric scientist, Sara Sienkiewicz, explained they may form as extratropical cyclones (low-pressure systems) or manifest as high-pressure artic air outbreaks.

Winter storm damage results from snow loading on structures, high sustained wind speeds which can fell trees, and the most destructive component, freezing temperatures, she noted.

High winds are generally localised but the worst element is freezing temperatures because pipe bursts resulting in extensive water damage to buildings can be widespread and costly to repair.

Harry White, manager, securities at AIR, explained that a Nor'easter or winter storm along the Atlantic coast originates in the Gulf of Mexico and often redevelops and intensifies as it moves off the mid-Atlantic coastline. The storms pick up moisture from the Atlantic and produce heavy snowfall across wide areas of the east coast. This means that while a Nor'easter may not reach the high wind speeds of a tropical cyclone, they can affect tens of thousands of square miles.

Loss estimate variations for a Nor'easter hitting New York City

	CoreLogic	KCC	AIR Worldwide (annual aggregate)
1-in-50 (2% exceedance probability)	$2.5bn	$3.5bn	City centre: $108mn; $1.3bn total
1-in-100 (1% exceedance probability)	$3.4bn	$5bn	City centre: $150mn; $1.2bn total

Source: Trading Risk

The numbers

KCC's figures came in at the higher end. It pegged the insured loss of a 1-in-50-year winter storm event hitting New York City at $3.5bn, while for the 1-in-100-year event it would be $5bn.

The agency added that loss potential from winter storm is higher in Texas compared to New York City because preparedness for cold weather is better in New York. The agency said a $10bn insured loss event in Texas would be about a 1-in-100-year loss, while in New York, a winter storm loss event of the same magnitude would be more like a 1-in-1,000-year event.

AIR Worldwide's approach was to explore two simulated stochastic years, each with multiple loss-causing events. The selected years generated winter storm losses in New York City aligning to 1-in-50 and 1-in-100 return periods, on an aggregate basis.

For the 1-in-50 event encompassing four different storms, insured modelled losses reached $108.4mn for the urban centre and $1.3bn for New York State.

For the 1-in-100 event, the year's losses comprised two events. Looking purely at insured properties, the loss estimate for New York City is $149.8mn, and $1.2bn for New York State. They pointed out that the events chosen reflected a 1-in-50/100-year loss for the urban city centre only, rather than across the state.

Modeller CoreLogic described its analysed scenario as an infrequent costly event, characterised by precipitation in freezing temperatures such as snow, mixed snow and rain or freezing rain. It looked at private properties with the five counties of New York City: the Bronx, Brooklyn, Manhattan, Queens and Staten Island.

The loss for the 1-in-50 winter storm event was pegged at $2.5bn and for the 1-in-100 event it rose to $3.4bn. But CoreLogic believed an event causing loss of this severity would also impact surrounding areas of New York City and produce a much larger, single-event loss for the industry.

ILS market primer: from disaster frontline to pension portfolio

What is the insurance-linked securities (ILS) market? As the name suggests, it consists of financial instruments that provide insurance cover.

But don't conflate this industry with a standard burglary or fire insurance product. If you're investing in the ILS market, your risk antennae instead need to be tuned to the kind of natural disaster that might take over CNN screens – US hurricanes or Japanese earthquakes, for example.

The ILS market first emerged in the mid-1990s but it wasn't until after the 2008 financial crisis that it began to take off.

This surge was driven by its major selling point as a source of diversifying, or non-correlating risk – acts of God that won't be triggered by financial market turmoil.

The ILS market has largely made its home within the reinsurance sector – a wholesale industry that provides insurance to insurers to help them bear claims when disasters produce a spike in losses.

The ILS sector is sometimes labelled the "alternative" reinsurance market, and contrasted with the so-called "traditional" reinsurance market, which refers to rated balance sheet companies such as Swiss Re or Munich Re, to cite

Why ILS?

- Diversification from financial market risks
- Catastrophe models provide a framework for analysing risk and quantifying exposures
- Purer access to insurance risks – avoiding investment exposure on the balance sheets of major (re)insurers
- Cushions against inflation risks, as premiums include a floating rate return from cash pledged against insurance liabilities
- Short-term liabilities (largely one- to three-year contracts, some tradeable)

ILS primer: Market timeline

1996 – George Town Re, widely cited as the market's first cat bond, is launched by St Paul Re, followed a year later by the first Residential Re deal from USAA and a Swiss Re deal

1997 – Nephila Capital, which is now the industry's largest asset manager, is founded

2005 – The hurricane season of Katrina, Rita and Wilma sets off a spike in reinsurance rates and a spate of new start-ups

2008 – Lehman Brothers collapses – it had managed collateral for four cat bonds that defaulted – cat bond structures shift to invest collateral largely in Treasury money market funds

2011 – A heavy international loss year produces three full cat bond defaults due to the Japanese earthquake and US tornadoes

2017-18 – Hurricanes, wildfires and typhoon make 2017-18 the ILS market's biggest loss years to date two of the longest-standing industry brands.

That's because the emergence of ILS market asset managers has given investors an alternative entry route into reinsurance risk, instead of just buying equity.

However, since its early days, any simplistic distinction between the two segments has eroded as the ILS segment has broadened and melded into the wider reinsurance markets.

For one, many traditional reinsurers have set up asset management platforms to compete with ILS managers, while a number of ILS managers have set up or are closely tied to rated reinsurance vehicles, giving them more freedom to take on a broader range of underwriting risks.

In recent years, the ILS market has expanded into segments such as marine and energy and aviation reinsurance. It has also delved into catastrophe-exposed property insurance, a step down the business chain. And for a select group of managers, life (re)insurance risk is a major part of their business.

Despite its blurring boundaries, ILS still offers investors a distinct route into taking reinsurance risk while skirting the equities market.

Perils: US risks dominate

The ILS market portfolio is heavily skewed towards the US, led by tropical storm/hurricane risks. Other major perils are US earthquake and Japanese earthquake, with small elements of European wind or Australian catastrophe.

That's because, historically, these are the most lucrative products for reinsurers. Florida, in particular, is their peak zone of exposure, meaning more capital must be held against these potential liabilities, attracting higher rates in turn.

They are also the most well-studied risks, with third-party statistical models available to help quantify hurricane exposures.

This combination of higher rates and strong data laid the foundation for ILS managers to target catastrophe risks in their early days, since for their pension fund capital providers, hurricane risk was a minor source of diversifying income to their own peak peril of equity market risk.

As ILS managers grabbed more market share in the property catastrophe market, the ensuing competition eroded much of the premium previously attached to hurricane risk.

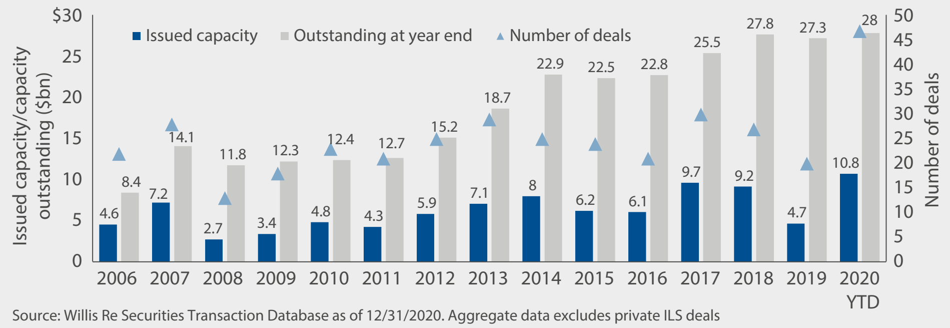
However, it remains the market's peak exposure with a corresponding price advantage compared to the types of catastrophe business that diversify a reinsurer's portfolio.

Continental European catastrophe margins are often said to be little better than break-even, which is one of the reasons why ILS market participation in this sector is relatively limited – cash collateralising limit for such margins would be highly inefficient.

Outside the catastrophe bond market, however, ILS managers are likely to be exposed to a wide range of catastrophe risks beyond the specific perils that are discussed here.

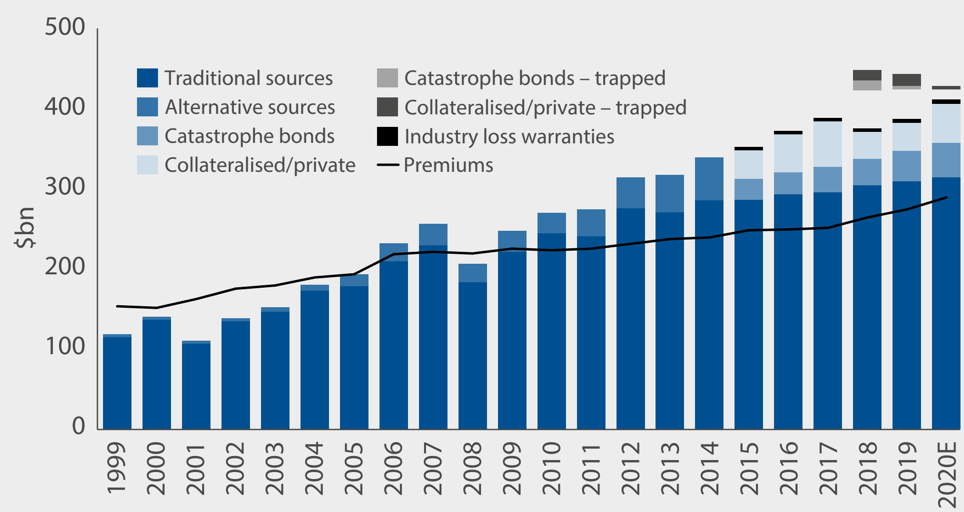
They typically offer "all natural peril" catastrophe cover, which may involve exposures that are unmodelled or less well-modelled – such as wildfires or floods.

Non-life catastrophe bond capacity issued and outstanding by year

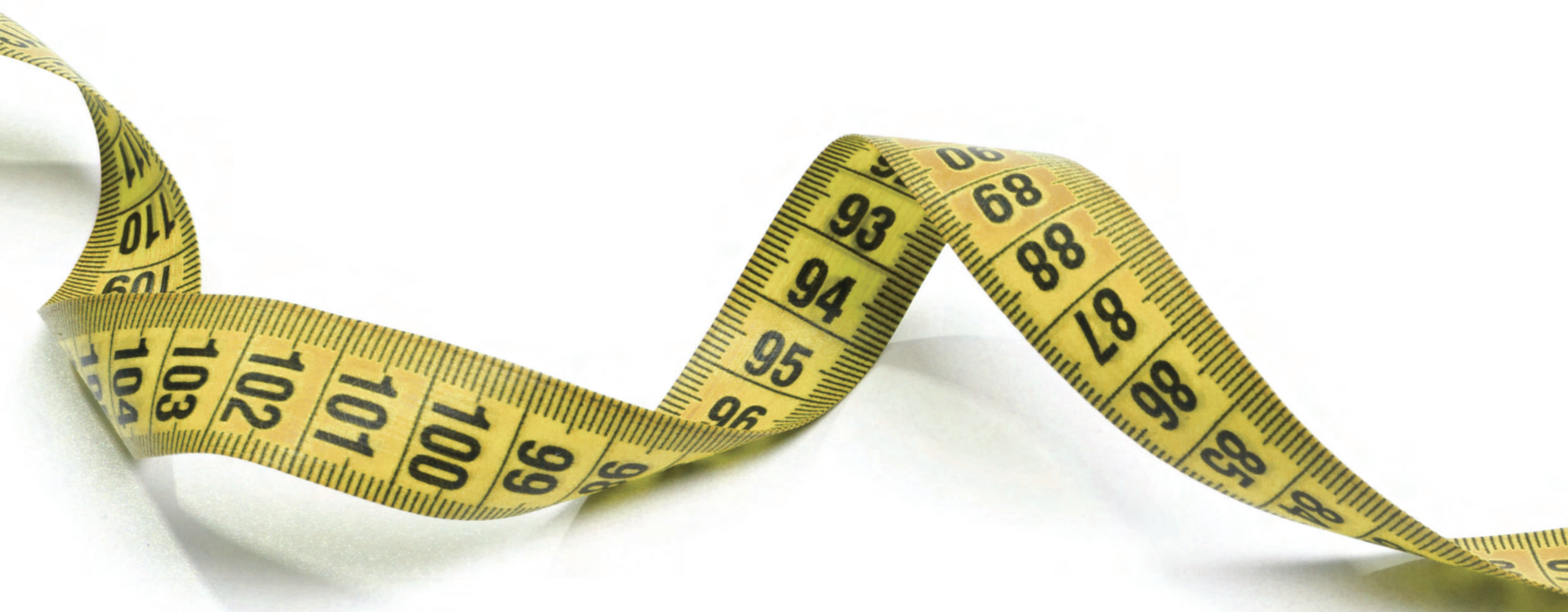


Source: Willis Re Securities Transaction Database as of 12/31/2020. Aggregate data excludes private ILS deals

Dedicated reinsurance capital and global gross premiums (all lines) – 1999 to 2020



Source: HX Nova Portal, Swiss Re



Sizing up the market

Estimates vary, but ILS makes up around 15% of overall reinsurance capital at $93bn, according to figures from Aon.

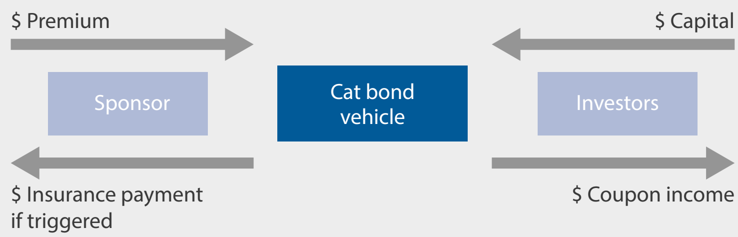
But what exactly does the ILS market's of capacity represent? There are several distinct segments within this total.

The catastrophe bond market attracts a wide range of investors looking for liquidity, although it typically presents a lower risk, lower return opportunity within the ILS world.

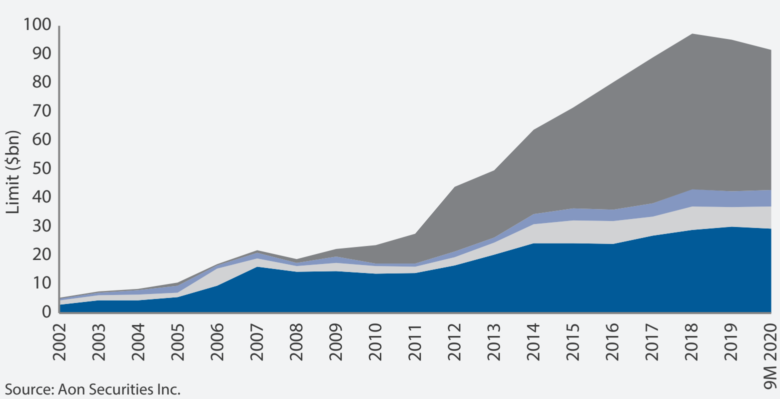
The niche industry loss warranty market is also relatively commoditised and easier to access, with a variety of risk-return options.

What is a cat bond?

A cat bond transaction involves a sponsoring insurer paying investors a premium for reinsurance cover against defined catastrophe losses. If a cat bond triggers, investors' capital is used to reimburse a sponsor's losses. There is no requirement for insurers to later repay such sums to investors. However, if no qualifying event occurs, then investors recoup their capital at the end of the transaction (typically three to four years).



ILS market components



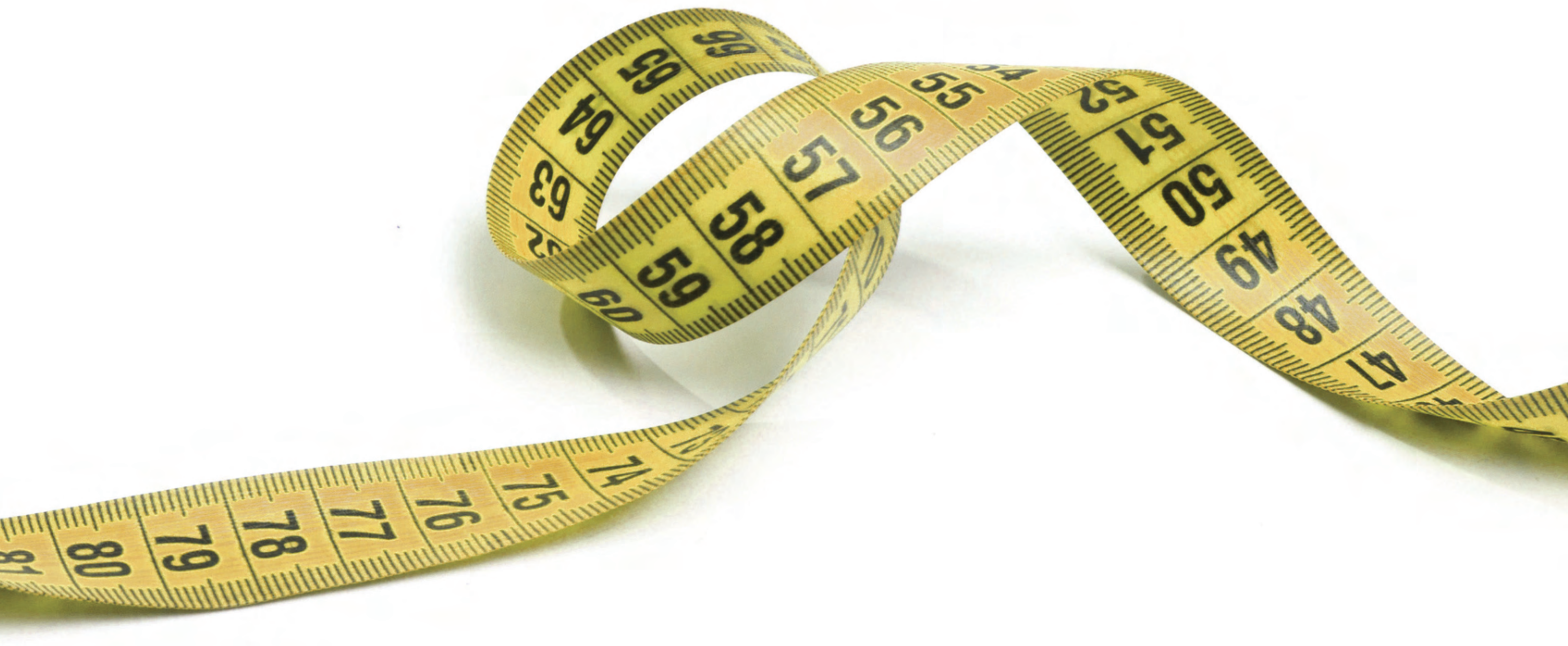
Source: Aon Securities Inc.

Catastrophe bonds
The most liquid section of the ILS market. Reinsurance in tradeable form, typically providing slightly narrower terms of cover for specified perils.

Collateralised re
Effectively just traditional reinsurance contracts, providing indemnity cover for a buyer's losses, across a broad range of perils. ILS managers pledge cash collateral to back their liabilities, hence the name.

Industry loss warranty
Contracts that trigger not on a buyer's actual losses, but on the insurance industry's overall loss from specified disasters, e.g. a $5bn Florida hurricane.

Sidecar
Vehicles run by reinsurers in parallel to their balance sheets. Typically involve a reinsurer ceding a share of a set portfolio of risks to investors (via "quota share" reinsurance). Some are "market-facing", akin to a fund, where a reinsurer writes a specific portfolio for the vehicle.



In contrast, the collateralised reinsurance segment is more specialised and difficult to access, but also provides a range of risk-return targets.

Finally, other small niches such as retro business can provide higher-octane strategies, while sidecars offer the chance to leverage off rated balance sheets and may introduce a range of diversifying risks.

Weighing up returns

So far during its short history the ILS market has delivered strong returns for investors, although margins have softened significantly in recent years.

Before 2017-18, the market's most difficult years had been 2011 and 2005, as a result of the Tohoku earthquake in Japan and Hurricane Katrina, respectively.

These were both testing, but by no means worst-case, catastrophe scenarios for the largely Florida-exposed market.

Even 2017, with its trio of hurricanes, could have been much worse had Irma taken a less favourable track over Florida.

There are a couple of benchmarks of returns that are often cited within the industry.

However, neither is without its limitations.

The Eurekahedge ILS Advisers tracks the performance of 34 ILS funds all equally weighted, which cover a wide range of strategies from high risk-return retro vehicles down to low-risk cat bond-only funds. Its worst year to date was 2017, when it lost 5.60%.

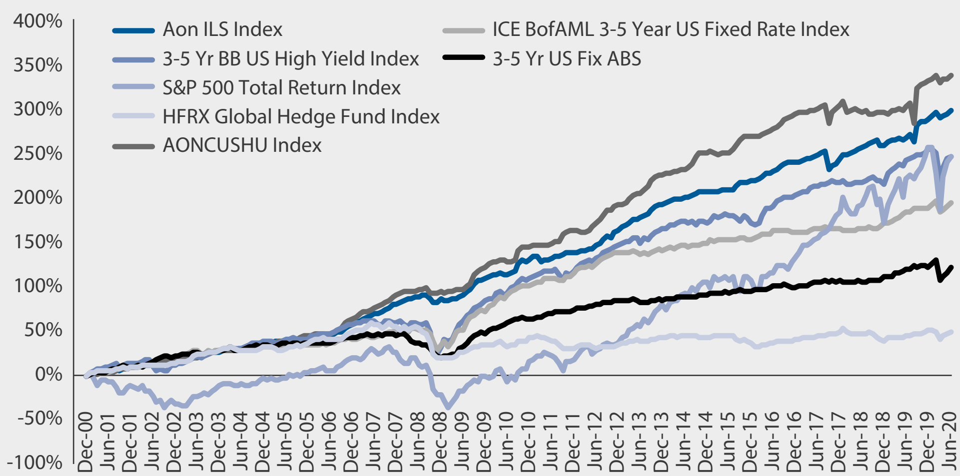
Meanwhile, the Swiss Re Cat Bond Total Return index solely tracks performance of the cat bond segment.

Quantifying risks

Cat bond investors are typically given the "expected loss" of a deal to measure their risk levels, a figure that expresses the likelihood of capital loss in any given year. For example, a 1% expected loss means investors could lose that amount of their principal in any year – or looked at another way, is roughly similar to the prospect that a 1-in-100-year disaster would wipe out all their capital.

Cat bond spreads are often cited as a multiple of the deal's expected loss, which is an easy way of referencing the margin of premium earned in relation to potential losses. Typically, cat bonds in the 1-2% expected loss range now offer investors around a 2x multiple (or spreads of 2-4%), depending on the risk profile.

Aon All Bond index versus financial benchmarks



Source: Aon

Manager list

Manager by type	Total AuM in ILS $mn (estimated)	Notes	ILS strategies	Established in ILS	Base
Specialist ILS manager					
Nephila Capital	10200	Acquired by Markel in Q4 2018	Various multi-instrument funds and single-investor mandates, also invests in weather	1998	Bermuda
LGT Insurance-Linked Partners	8200	Former Clariden Leu ILS team moved to Swiss alternatives manager in 2012. Team of 50 (24 portfolio managers; 35 support staff). Manages own rated reinsurance carrier Lumen Re.	Various funds and bespoke mandates	2005	Switzerland
Fermat Capital Management	8000	Independent ILS manager	Cat bond focus	2001	US
Leadenhall Capital Partners	6350	Now majority-owned by MS&AD - group took over ownership from MS Amlin subsidiary in Dec 2018	Non-life and mortality funds, life/non-life mandates	2008	UK
RenaissanceRe Capital Partners	5973	Q1 21 figs, excluding RenRe capital . DaVinci Re rated sidecar; Medici cat bond fund; Upsilon fund; Langhorne life reinsurer; Vermeer Re PGGM JV.	Medici cat bond fund; Upsilon funds write collateralised reinsurance/retro including aggregate; DaVinci takes quota share focused on cat reinsurance book and new PGGM joint venture Vermeer writes high layer US business.	1999	Bermuda
Credit Suisse Asset Management	5200	Trailing quarterly figures for end March 2021	Various funds with different risk levels; two associated rated platforms	2003	Switzerland
Elementum Advisors	4400	Independent manager; sold 30% stake to White Mountains in May 2019	Multi-instrument funds	2009	US
Securis Investment Partners	4361	Northill Capital owns majority stake. Data as of 1 June 2021	Life, non-life and mixed strategy funds	2005	UK
Aeolus Capital Management	4000+	Began as private reinsurer; transformed into fund manager in 2011. Now majority-owned by Elliott Management	Retro and collateralised re	2006	Bermuda
Schroders Capital ILS	3800	Fully owned by Schroders since July 2019; figures on trailing quarterly basis Q1 2021	Six funds: two cat bond; three multi-instrument of which two include life risk, one life fund. 4 segregated mandates	2008	Switzerland
AlphaCat Managers	3800	Affiliate of AIG's Validus reinsurance business, AuM excludes $100mn from parent; from end Q1 disclosure	Runs a lower-risk and higher-risk fund, BetaCat cat bond tracker fund, and direct mandates	2008	Bermuda
Stone Ridge Asset Management	3393	AuM cited for public funds at 30.4.21 as current size of private funds not disclosed	Cat bond and sidecar funds	2013	US
Hudson Structured Capital Management	3000	Independent manager led by Michael Millette	Reinsurance AuM listed; transport fund not included. Firm AUM $3.3bn. Flagship ILS strategy invests across catastrophe, life/health, casualty, insurance distribution/services & other risks via ILS & debt/equity instruments. Catastrophe opportunities fund; InsurTech venture fund	2016	US/Bermuda
Scor Investment Partners	2892	Asset management affiliate of reinsurer	AuM per 31 May 2021; now includes Coriolis funds after 2019 acquisition and integration	2011	France
Pillar Capital Management	2500	Management-controlled; part-owned by TransRe	Collateralised re focus but invests across retro, ILWs, cat bonds. Runs two co-mingled funds and multiple fund-of-one mandates	2008	Bermuda
Twelve Capital	2440	Spun out from Horizon21; team in ILS since 2007	Cat bond and multi-instrument ILS funds (insurance debt fund not tracked)	2010	Switzerland
Neuberger Berman Insurance-Linked Strategies	2200	Acquired by Neuberger Berman from Cartesian Capital in Nov 2018	Focus on natural catastrophe risk via ILWs, cat bonds & other ILS.	2009	Bermuda
Amundi Pioneer Investments	~2000	Amundi subsidiary offers one ILS vehicle and invests multi-strategy funds in ILS	Pioneer ILS Interval fund & others; invests in cat bonds, sidecars & other instruments	2007	US
Swiss Re	1885	Reinsurer offering quota share sidecars and funds	Internal ILS portfolio of +$1bn (not tracked). Sector Re/Viaduct sidecars and 1863 Core Nat Cat Fund		Switzerland
New Ocean Capital Management	1300	Subsidiary of reinsurer Axa-XL which bought out minority partners in Nov 2018	Pantheon Re quota share cat sidecar; Daedalus algorithmic strategy and one JPY cat bond fund alongside managed accounts.	2014	Bermuda
PartnerRe	1100	Reinsurer offering quota share sidecars	Lorenz, Fourier and Laplace sidecars writing cat, retro and specialty risk		US
Axa Investment Managers	1066	Affiliate of insurer; invests third-party funds only	Various funds and mandates	2007	France
Gildenbrook	1000	New launch from Dan Brookman, ex Axa XL manager	Assets under advisory, not management, in private reinsurer quota share deals	2021	Bermuda
Hiscox Insurance-Linked Strategies	1000	Deployable capital as of Q3 2020. Hiscox-owned asset manager; Hiscox capital $55mn	Two co-mingled diversified funds; single-investor funds; one insurance sidecar	2014	Bermuda
Axis Ventures	>1000	Reinsurer subsidiary; also oversees $600mn Harrington Re joint venture not tracked here	$1.0bn for property cat support; largely private sidecars	2014	Bermuda
Mt Logan (Everest Re sidecar)	877	AUM fig from Q1 2021. Includes some Everest Re capital.	Quota share of Everest Re book	2013	Bermuda
Aspen Capital Markets	800	Reinsurer subsidiary	Runs managed accounts, commingled funds and sidecars including Peregrine		Bermuda
Kinesis Capital Management	750	Lancashire subsidiary established mid-2013	Kinesis Re I vehicle writes multi-class reinsurance and retro. Wrote $340mn limit	2013	Bermuda
Tokio Marine Asset Management	725	Asset management arm of Tokio Marine Group.	Largely ILS/cat bonds		Japan
Integral ILS	675	Start-up led by ex AlphaCat/Hiscox ILS execs Richard Lowther and Lixin Zeng; collaborating with TransRe and Amwins	Nat cat specialist across insurance, reinsurance, retro	2020	Bermuda

Manager by type	Total AuM in ILS $mn (estimated)	Notes	ILS strategies	Established in ILS	Base
Munich Re	635	Significant internal cat bond fund - not disclosed	Eden & Leo Re sidecars	2006	Germany
Plenum Investments	630	Independent asset manager	Main focus on catastrophe bonds, manages also insurance bonds and life settlements, long only strategies. Cat bond fund $380mn; $160mn Insurance Capital fund	2010	Switzerland
Arch Underwriters	600	Underwrites for rated $1.13bn casualty-focused Watford Re, not tracked here	Also manages $500mn third-party capital	2014	Bermuda
TransRe Capital Markets	500	Reinsurer subsidiary	Pangaea Re and other sidecars		
Peak Capital (formerly Lutece)	>500	Peak Re acquired May 2020 from BTG Pactual Asset Management.	Initially a focus on retrocession	2018	Bermuda
PG3	450	Family office; largely family funds, may take third-party capital	Non-life and life reinsurance; legacy, life settlements, and other insurance finance strategies	2008	Switzerland
Tangency Capital	415	Independent manager launched by trio of reinsurance execs	Bespoke quota share portfolio	2018	London
Invesco	375	Mutual fund manager; runs ILS vehicle and invests via multi-strategy funds	OFI Global Cat Bond Strategy open to external investors	1997	US
ILS Capital Management	350	Independent ILS manager	Insurance and specialty strategies	2014	Bermuda
Brit (Sussex)	300	Brit Insurance sidecars.	Sussex market-facing, Versutus quota share	2018	UK
Azimut Investments	275	Luxembourg affiliate of Italian asset management Azimut Group.	One cat bond fund plus one multistrategy fund including small longevity exposure	2008	Luxembourg
Agile Risk Partners	250	Hedge fund seeded D&F strategy led by Agile consultancy	Direct & facultative reinsurance strategy	2021	London
Leine Investments	200	Reinsurer Hannover Re has seeded the fund with $200mn	Cat bonds and collateralised re	2013	Germany
Merion Square	150	Joint venture between Rewire Holdings and life settlements investor Vida Capital		2019	US
PIMCO	150	Mutual fund		1971	US
Sumitomo Mitsui DS Asset Management (Tokyo)	105	Advised by Mitsui Sumitomo Insurance	also manages $500mn third-party capital	2014	Japan
Lodgepine Capital Management	100	Markel subsidiary; insurer allocated up to $100mn seed funds	Retro initially; may expand into specialty non-cat risk later	2020	Bermuda
Tenax Capital	58	Fosun bought majority stake in equities/ILS manager Tenax in July	Cat bond funds	2017	London
Aizawa Asset Management	50	Formerly Eastpoint, backed by Japanese manager Asuka Asset Management	Cat bond focus	2012	Bermuda
Entropics Asset Management	25	Independent ILS manager	Cat bond focus	2015	Sweden
Chard Re	not disclosed			2021	UK
Solidum Partners	not disclosed	Independent ILS manager	Cat bond and multi-instrument funds	2004	Switzerland
TOTAL	**101005**				
Select multi-strategy investors active in ILS; but not offering external ILS strategies					
Challenger Life	850	Around 1% of $85bn total assets	Invests in funds and sidecars		Australia
Quantedge	400	Hedge fund with $3000mn overall AuM	Invests in cat bonds, collateralised re, sidecars, ILWs	2013	US
One William Street	300	$4bn alternatives manager	Hired Al Selius to build ILS portfolio	2020	US
Baillie Gifford	55	Diversified Growth Fund invests in ILS	Buys ILS directly. Also held stake in listed ILS funds Catco/DCG Iris		UK
Aberdeen Asset Management	25	8% of £427.5mn Diversified Growth fund at end Q1 18; reinvested $33mn in Catco post-loss			
DE Shaw	not disclosed	Has $40bn+ total AUM; ILS holdings not disclosed	Writes collateralised re/retro	2007	US
Tiaa-cref	not disclosed	Manages $800bn overall AuM	Buys cat bonds directly		US
TOTAL	**1630**				
ILS fund of funds					
K2 Advisors	915	Hedge fund of funds manager; $11.6bn AUM	Invests with multiple ILS funds; buys cat bonds directly	2003	US
ILS Advisers	200	Part of Hong Kong based investment manager HSZ	Fund of funds; index tracker fund tracking ILS Advisers index	2014	Bermuda
City National Rochdale	141	City National Bank-owned advisor targeting HNW clients	Allocates to NB Re and Stone Ridge (Select Strategies ILS fund)	2017	US
Altair Reinsurance Fund	78	Operated by wealth advisor First Republic Securities	Feeds into Hudson Structured ILS funds	2018	US
AIM Capital	20	Finnish fund of funds manager	AIM Insurance Strategies fund	2011	Finland
GT ILS fund	in runoff	Texas based advisory firm offering ILS fund of funds solution	Securis and others		US
TOTAL	**1176**				

Source: *Trading Risk*

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GLOSSARY OF TERMS

Key phrase	Definition
Aggregate exceedance probability (AEP)	Probability of total annual losses of a particular amount or greater
Alternative risk transfer	Transferring risk through methods other than traditional insurance or reinsurance, for example utilising capital markets capacity through the issuance of insurance-linked securities
Attachment point	The point at which excess insurance or reinsurance protection becomes operative; the retention under an excess reinsurance contract
Attachment probability	Likelihood of losses exceeding the attachment point over the course of a one-year term
Administrator	Assumes all operating and reporting protocols for a special purpose insurer/entity
Basis risk	Risk that losses in a non-indemnity trigger differ from indemnity losses
Capacity	The largest amount accepted on a given risk or, sometimes, the maximum volume of business a company is prepared to accept
Catastrophe bond	Securities that transfer catastrophe risks from sponsors to investors
Cedant	Party to an insurance or reinsurance contract that passes financial obligation for potential losses to another party
Collateralised reinsurance	Reinsurance contract that is fully collateralised to the limit
Earned premium	The portion of premium (paid and receivable) that has been allocated to the (re)insurance company's loss experience, expenses and revenue
Excess of loss	System whereby a (re)insured pays the amount of each claim for each risk up to a limit determined in advance, while the (re)insurer pays the amount of the claim above that limit up to a specified sum
Exhaustion probability	Likelihood of losses exceeding the exhaustion point, causing a full loss on a reinsurance layer
Expected loss	The expected loss is the modelled loss within the layer divided by the layer size
Extension period	Time period after the scheduled maturity used to calculate losses for events which took place during the risk period
Extension spread	Spread paid during the extension period (typically a reduced rate from the initial risk spread)
Gross premiums	Premium before subtracting direct costs
Indemnity trigger	Type of trigger that most closely resembles the traditional market ultimate net loss cover, and offers ceding insurers (a.k.a. sponsors) the ability to recover based on actual losses
Industry loss index trigger	Type of trigger where payouts are determined by a third party estimate of industry losses
Industry loss warranty (ILW)	Form of reinsurance or derivative contract that covers losses arising from the entire insurance industry rather than a company's own losses from a specified event
Incurred losses	The total amount of paid claims and loss reserves associated with events from a particular time period
Insurance-linked security (ILS)	Financial instruments whose value is affected by an insured loss event
Limit	The maximum amount of (re)insurance coverage available under a contract
Loss ratio	Incurred losses divided by earned premiums (earned premiums include reinstatement premiums)

Key phrase	Definition
Modelled loss trigger	Type of trigger where payouts are determined by inputting event parameters into a predetermined and fixed catastrophe model to calculate losses
Net premiums	Premium less direct costs
Quota share	Reinsurance where the cedant transfers a given percentage of every risk within a defined category of business
Occurrence exceedance probability (OEP)	Probability that any single event within a defined period will be of a particular loss size or greater
Parametric trigger	Type of trigger where recoveries are triggered by a formula that uses measured or calculated parameters of an actual catastrophe event (e.g. wind speed, magnitude of an earthquake)
Peril	A specific risk or cause of loss covered by an insurance policy
Probable maximum loss (PML)	The anticipated maximum loss expected on a policy
Profit commission	A provision that provides the cedant a share of the profit from business ceded
Proportional reinsurance	System whereby the reinsurer shares losses in the same proportion as it shares premium and limit
Rate on line	Reinsurance premium divided by reinsurance limit
Reinsurance	A transaction whereby the reinsurer, for a consideration, agrees to indemnify the ceding insurer against all or part of the loss which the insurer may sustain under a policy or policies that it has issued
Reinsurer	Company that provides financial protection to an insurance company
Reset	Adjusting a layer of a multi-year catastrophe bond to maintain a bond's probability of loss at the level defined at issuance
Retention	The net amount of risk the ceding company keeps for its own account
Retrocession	A transaction whereby a reinsurer cedes to another reinsurer all or part of the reinsurance it has previously assumed
Risk period	Time period for which a reinsurance agreement covers events taking place
Sidecar	A structure to allow investors to share in the profits and losses of an insurance or reinsurance book of business
Special purpose insurer/entity (SPI/SPE)	A company created by (but not owned by) a (re)insurer for the purpose of raising capital for a specified programme
Treaty	An agreement between a cedant and a reinsurer stating the types or classes of businesses that the reinsurer will accept from the cedant
Underwriting profit	Earned premium minus incurred losses and incurred commissions (earned premiums include reinstatement premiums)
Variable reset	Adjusting a layer of a multi-year catastrophe bond up or down within a pre-defined range of probability of loss, with a corresponding update in risk spread
Vendor models	Software that estimates expected loss and probability of occurrence for specified exposure sets and predefined peril scenarios. The three largest vendors by market share are AIR Worldwide, Risk Management Services and Eqecat
Written premiums	Premium registered on the books of an insurer or a reinsurer at the time a policy is issued