The Frontier Line

Thought leadership and insights from Frontier

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Insurance linked securities – market update

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About us

Frontier has been at the forefront of institutional investment advice in Australia for over 25 years and provides advice over more than $500 billion of assets across the superannuation, charity, public sector, insurance and university sectors.

Frontier's purpose is to empower our clients to advance prosperity for their beneficiaries through knowledge sharing, customisation, technology solutions and an alignment and focus unconstrained by product or manager conflict.

Donna Davis

Consultant

Donna joined Frontier as an Associate in 2019 and was promoted to Consultant in 2021. She works with the Alternatives and Derivatives and Debt and Currency teams, specialising in less liquid investment strategies such as insurance linked securities and opportunistic credit along with derivative structure and strategy modelling and assessment. Donna also has a particular interest in data analysis techniques and has completed research into cluster analysis and how it can be applied in client portfolios.

Prior to joining Frontier, Donna worked for AustralianSuper in their Options Management Team. She also has almost 10 years banking experience with the CommonwealthBank and ANZ in Corporate and Commercial banking across relationship management, complex lending and transactional banking. Donna holds a Bachelor of Quantitative Finance from the University of South Australia and is currently completing the CFA program.

Introduction

Investing in insurance linked securities (ILS) has been challenging in recent years with performance below expectations. Despite these challenges, ILS can still play a role for investors looking to add a diversified return stream to their portfolio.

This paper reviews recent performance in the sector, examines emerging trends and shares how investors allocate to and think about this asset class.

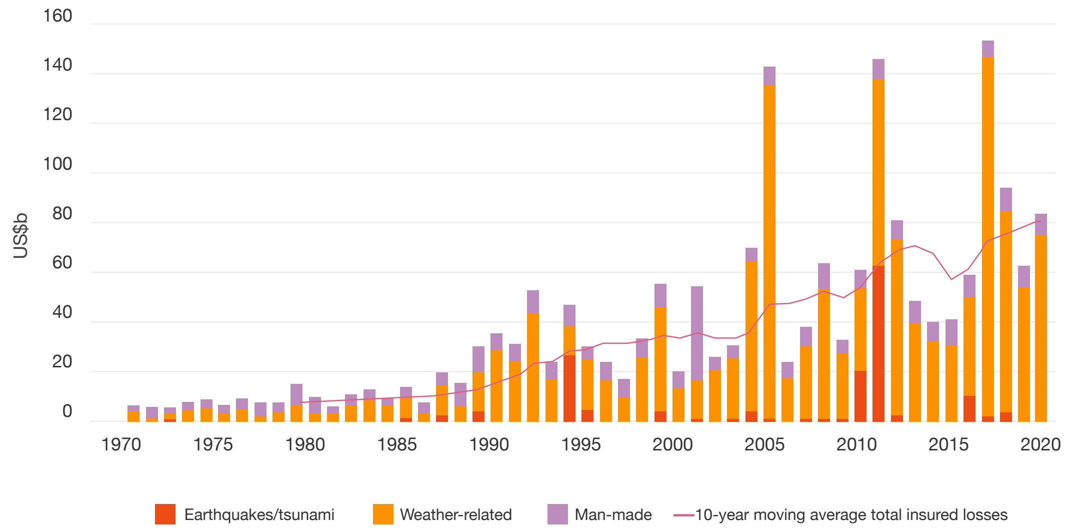
Typically, the impact of a global pandemic is first and foremost in mind when reflecting on the 2020 year. However, aside from COVID-19, for the insurance sector specifically, at the time 2020 was the fifth largest loss year on record, with approximately US$80 billion in losses from natural catastrophes and a further US$7 billion from man-made events.

Insurance industry loss summary

To the end of 2020, the year had the fifth largest insurance industry losses on record, with around US$80 billion lost due to natural catastrophes and a further US$7 billion from man-made events.

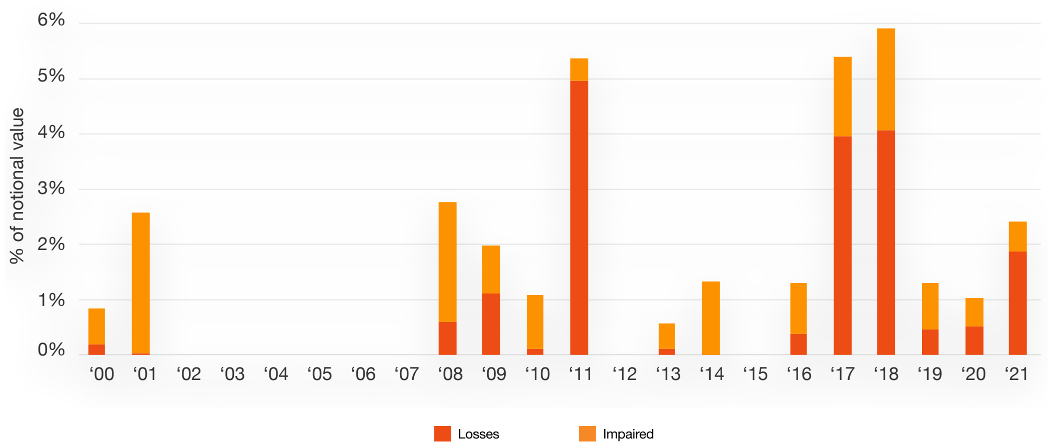
Key loss events in 2020 were hurricanes Laura, Isaias and Sally. An increase in severe convective storms throughout the US was also a significant loss driver, especially in aggregate contracts. Losses from COVID-19 have not been included as the majority of these have not yet been crystalised or claims submitted/finalised as the pandemic, sadly, remains ongoing.

Chart 1: Historic insured losses (US$b)



Source: Swiss Re Institute, indexed to 2020 prices.

Chart 2: Catastrophe bond impairments and losses



Source: Artemis, Frontier. Data to November 2021.

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Despite this large level of loss, catastrophe (cat) bond impairment and losses were well below historic average levels. This was partially due to a larger volume of smaller events and the location of where larger events hit i.e., occurring in less populated areas.

2020 was a record-breaking year in terms of the number of hurricanes, with 30 'named' storms. Fourteen storms became hurricanes and seven were classified as major (category 3 or above). The total losses from hurricanes across the period were around US$20 billon, or 25% of all natural catastrophe losses.

Of the three bonds which experienced impairment during 2020, two were the World Bank pandemic bonds and the third was an Australian bushfire bond, triggered by the catastrophic bushfires in Australia during the 2019/2020 summer season.

The 2021 year has seen a historically high number of losses early in the year with the majority in secondary perils such as the US polar vortex winter storm Uri in February.

This has seen more cat bonds impaired in 2021 year to date than in the full years of 2020 and 2019 combined.

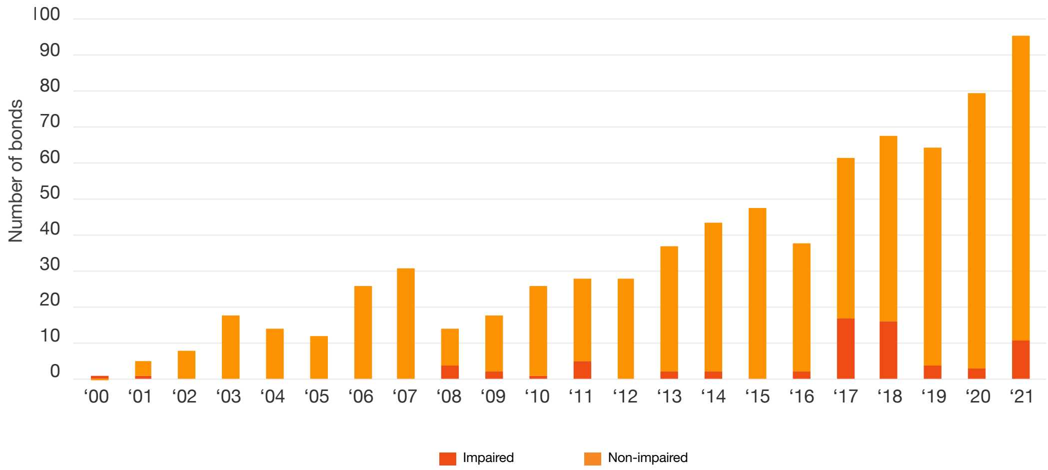
The 2021 Atlantic hurricane season was the third most active on record, with 21 named tropical storms, including seven hurricanes, four of which were major. Estimates indicate losses from hurricanes will make up a larger proportion of total insurance losses in 2021, potentially to levels similar to 2018. Hurricane Ida loss estimates alone range from $30-40 billion, with this hurricane impacting higher up in the US than is typically evident.

Table 1: Historic material losses

Year	Event	Overall losses US$b	Insured losses US$b
2020	Hurricane Laura	13	10
	California wildfires (agg)	11	7.5
	Severe convective storms (agg)	6.8	5
	Hurricane Isaias	5.4	4.1
	Hurricane Sally	6.3	3.5
2021*	Winter storm Uri / US polar vortex	22	15
	Fukushima earthquake	Multi-billion	2-3
	European winter storms	Multi-billion	12
	Hurricane Ida	40-60+	30-40

Source: Insurance Information Institute, Swiss Re, AON.
*In 2021, these are less accurate estimates due to less time for loss development to occur/valuation calculations.

Chart 3: Catastrophe bond issuance



Source: Artemis, Frontier. Data to December 2021.

Climate change and changing investor appetite

The 2020 calendar year saw an increase in higher frequency and lower severity perils, which at the time saw industry losses the fifth costliest in recorded insurance loss history. This highlighted how a significant number of smaller to mid-sized events can erode deductibles.

Secondary perils accounted for more than 70% of insured losses from natural catastrophes in 2020. The main secondary perils driving losses were severe convective storms and wildfires in the US and Australia.

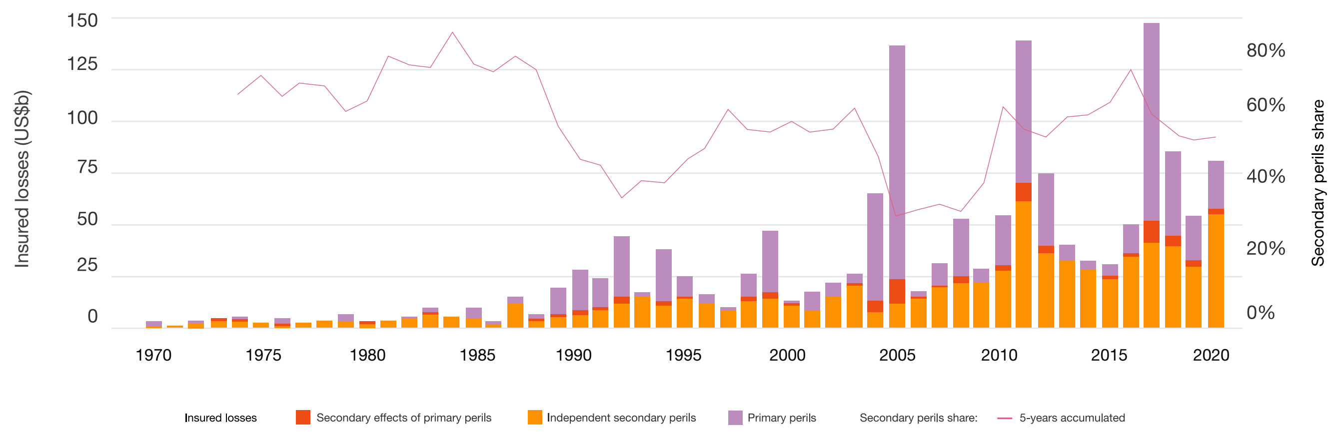
Peak perils refer to large scale catastrophes which occur less frequently, but which can generate extreme losses.

Secondary perils are low to medium magnitude loss events which occur more frequently.

2020 also saw an increase in conviction by the majority of ILS managers that climate change was increasing both the frequency and severity of secondary perils. There are mixed views on whether these increased risks are appropriately priced within all segments of the market.

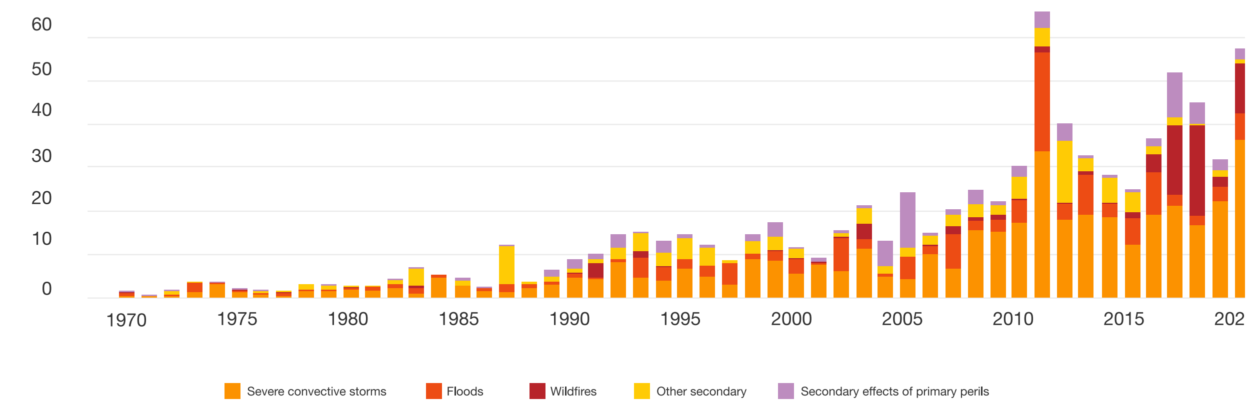
Debate also remains among managers regarding the extent and timeframe to which climate change is impacting the frequency and severity of peak perils. The market more broadly does agree modelling and market pricing better captures currently evident risks within peak perils more so than secondary perils. This has seen a trend toward decreasing portfolio diversification in some managers and a focus on peak perils.

Chart 4: Insured losses



Source: Swiss Re Institute.

Chart 5: Global insured losses from secondary perils



Source: Swiss Re Institute.

ILS market evolution 2020-21

Across the last financial year pricing improvements were evident in most instruments and markets, but were more muted in the more remote risk layers. The strongest price increases were in more riskier layers.

In Florida, legislation changes and changing investor appetite has made it harder for insurers to obtain capital and this has driven an increase in demand for insurance from the state-run insurer Florida Citizens. Many managers view this as part of a more challenging insurance market, with Florida Citizens market share tracking closely to the broader insurance industry market cycles.

Table 2: ILS forward looking statistics

High-risk	No loss yield	Expected return	Expected loss	95th percentile	99th percentile
Jul-21	17.2%	8.0%	9.2%	-18.5%	-44.6%
Jan-21	16.2%	7.4%	8.8%	-15.7%	-38.8%
Jul-20	15.5%	7.2%	8.4%	-17.9%	-41.7%

Mid-risk	No loss yield	Expected return	Expected loss	95th percentile	99th percentile
Jul-21	8.7%	4.3%	4.3%	-10.1%	-33.7%
Jan-21	8.7%	4.2%	4.4%	-9.8%	-34.4%
Jul-20	8.1%	4.4%	3.8%	-8.7%	-32.1%

Source: Frontier, Managers. Data to July 2021.

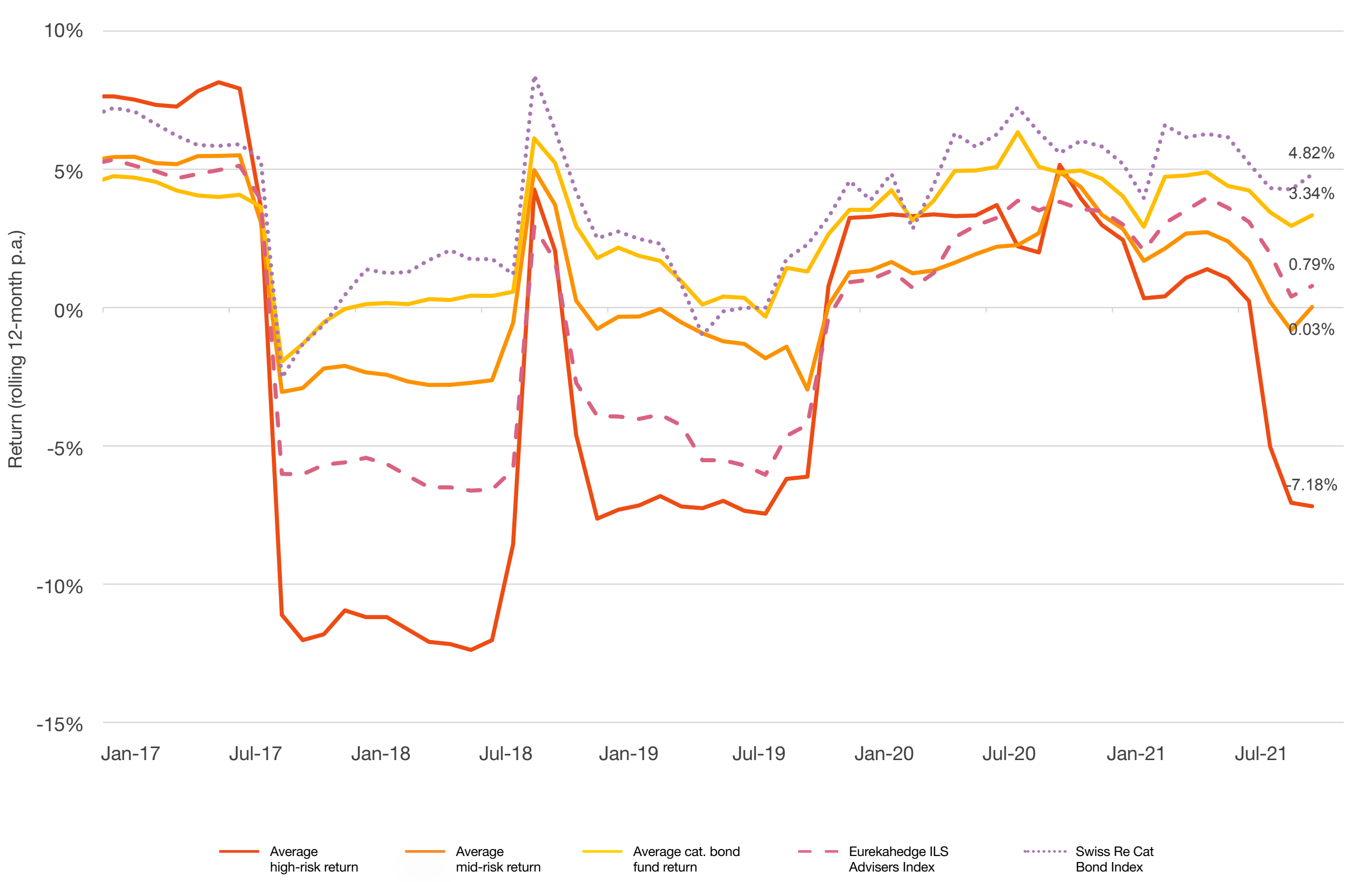
Historic and projected ILS fund performance

Catastrophe bond funds have historically outperformed private ILS funds since the significant insurance loss event years of 2017 and 2018. There are a number of factors driving this outcome, however two appear to have had a particularly strong bearing.

Private ILS funds tend to hold more risky layers in the capital structure. Additionally, private ILS funds tend to hold higher aggregate and diversified geographic and peril exposure.

Loss creep from 2017 and 2018 has continued. Even though no new claims from these periods are able to be submitted, existing claims can be increased if damage is assessed to have 'increased' since the initial notification or assessment of the claim.

Chart 6: Historic rolling 12-month performance



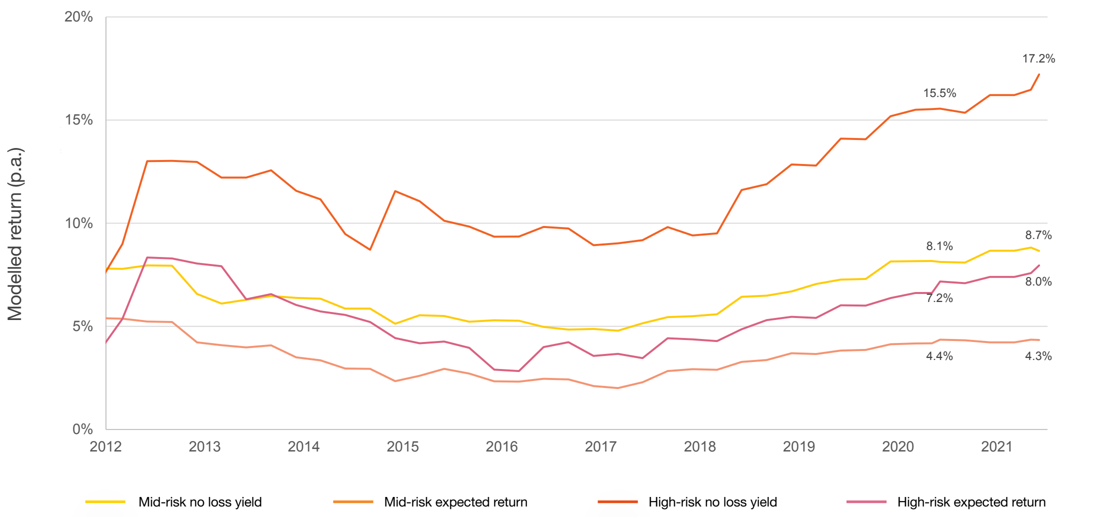
Source: Frontier, Managers, Bloomberg, Eurekahedge. Data to October 2021.

Looking ahead, Frontier has observed a rotation away from aggregate and diversified portfolio structures to more concentrated portfolios focused on peak peril risks such as hurricane and earthquake. Some managers have maintained conviction for diversified, aggregate portfolios and we note no loss returns in these portfolios have experienced solid increases.

Higher risk portfolios have experienced a greater increase in expected and mean returns as no loss returns in higher risk layers and structures has increased more significantly year on year. This is the result of several years of losses within these contracts.

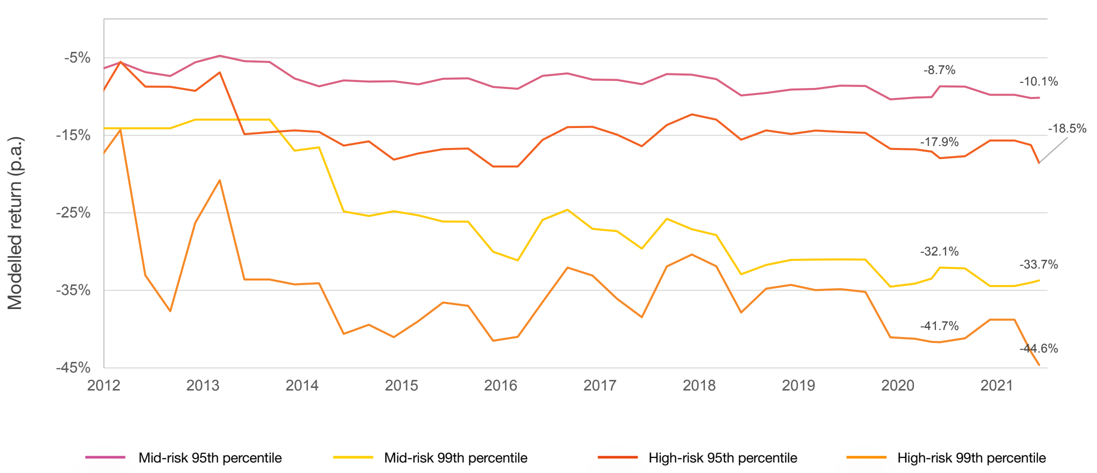
Mid-risk portfolio returns have remained relatively flat year on year.

Chart 7: Portfolio return metrics



Source: Frontier, Managers. Data to July 2021 and all returns are net of cash. Data labels highlight July 2020 v July 2021 data points.

Chart 8: Portfolio risk metrics



Source: Frontier, Managers. Data to July 2021 and all returns are net of cash. Data labels highlight July 2020 v July 2021 data points.

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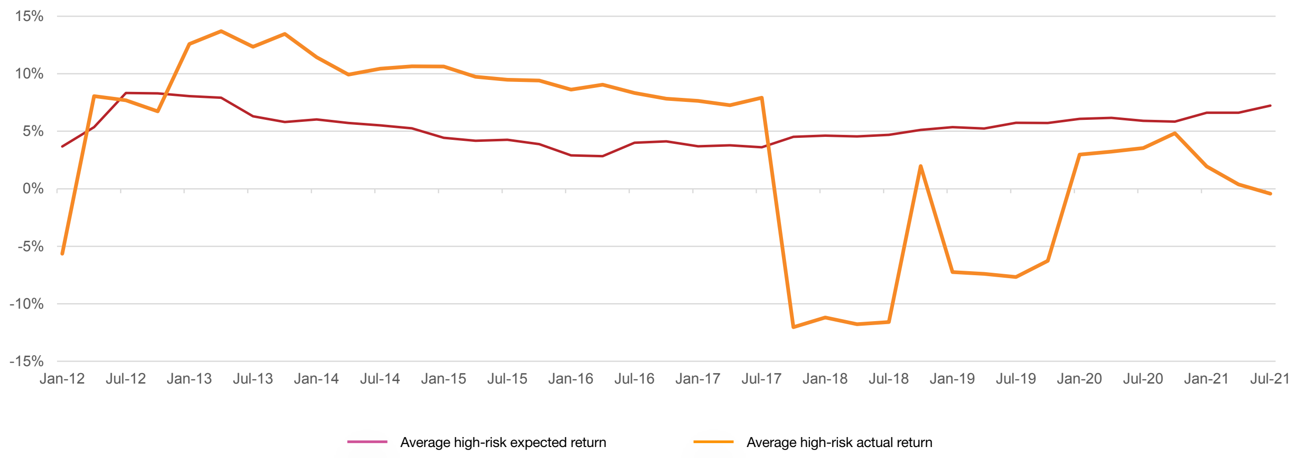
Performance against modelled returns

Past experience tells us that mid-risk managers have outperformed forward looking expected portfolio returns more frequently than high-risk managers.

However, post the significant losses in 2017 and 2018, high-risk managers were able to recoup these losses at a quicker rate than mid-risk managers.

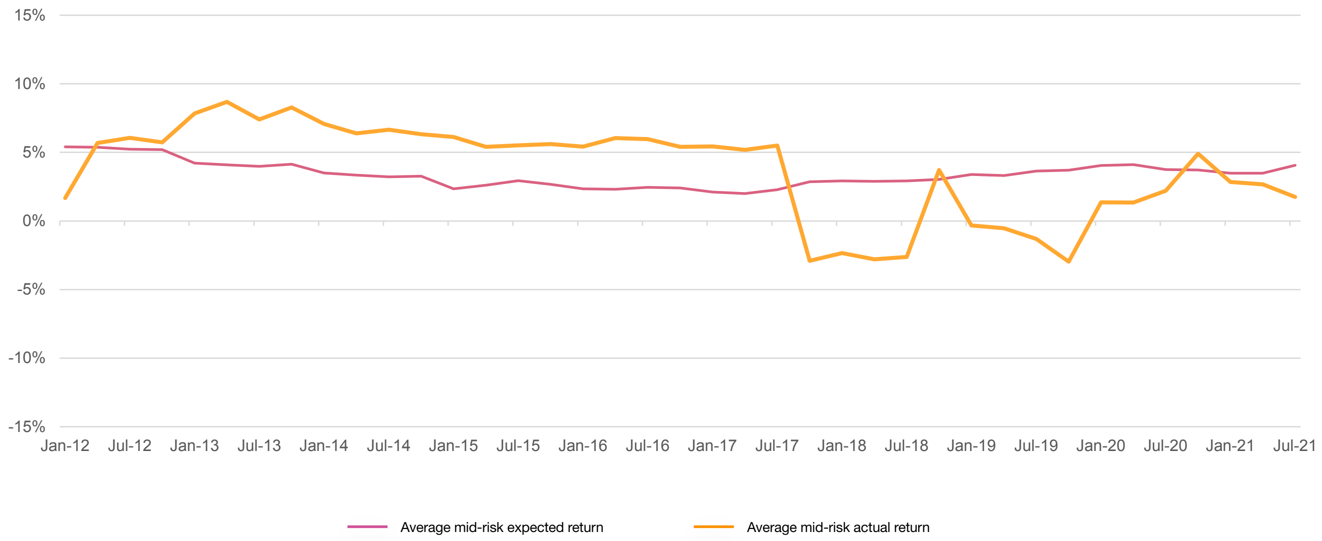
It is worth noting however, that high-risk managers have also given back more of these gains in 2021, as losses have again increased in both severity and frequency.

Chart 9: High-risk expected to actual return



Source: Frontier, Managers. Actual returns are historic rolling one year returns.

Chart 10: Mid-risk expected to actual return



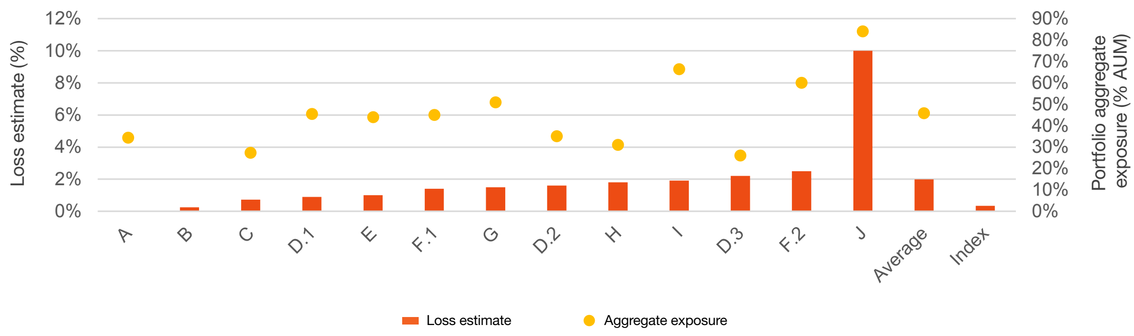
Source: Frontier, Managers. Actual returns are historic rolling one year returns.

In terms of loss event peer comparison, there was a high positive correlation between the level of loss associated with winter storm Uri and the level of aggregate exposure in the portfolio. In general, the larger the aggregate exposure, the larger the loss impact.

Initial loss estimates for Hurricane Ida show significant dispersion. The loss level from this event was highly dependent on the position an individual manager held within the insurance capital structure. Portfolios with predominate cat bond and more remote risk layers experienced little to no impact from Hurricane Ida. Whereas, portfolios with a larger retro exposure, or a greater proportion of higher risk contracts, experienced significant portfolio impacts in some instances.

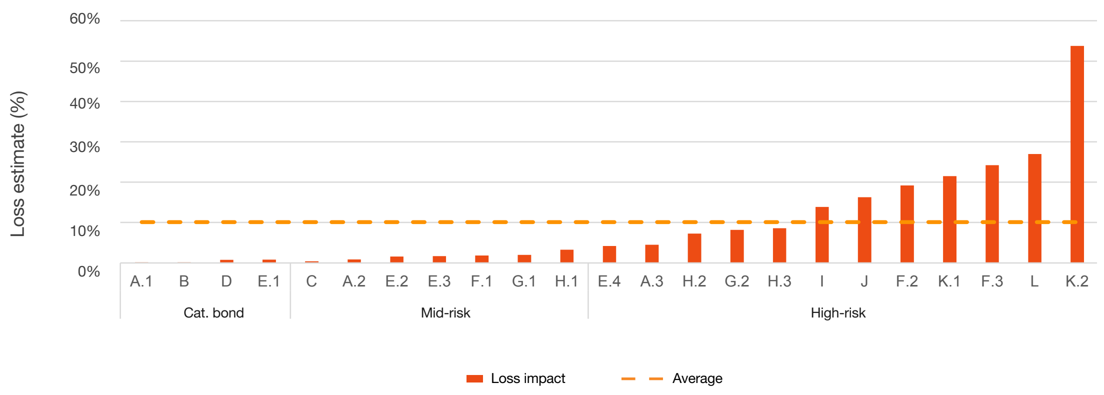
Interestingly, a number of managers have chosen to split losses over two months, allocating the loss from the initial hurricane which hit late August and the resulting flooding and impact to higher US states in September.

Chart 11: Winter storm Uri loss



Source: Frontier, Managers, Bloomberg. Index refers to the Swiss Re Cat Bond Index.

Chart 12: Hurricane Ida loss



Source: Managers, Frontier.

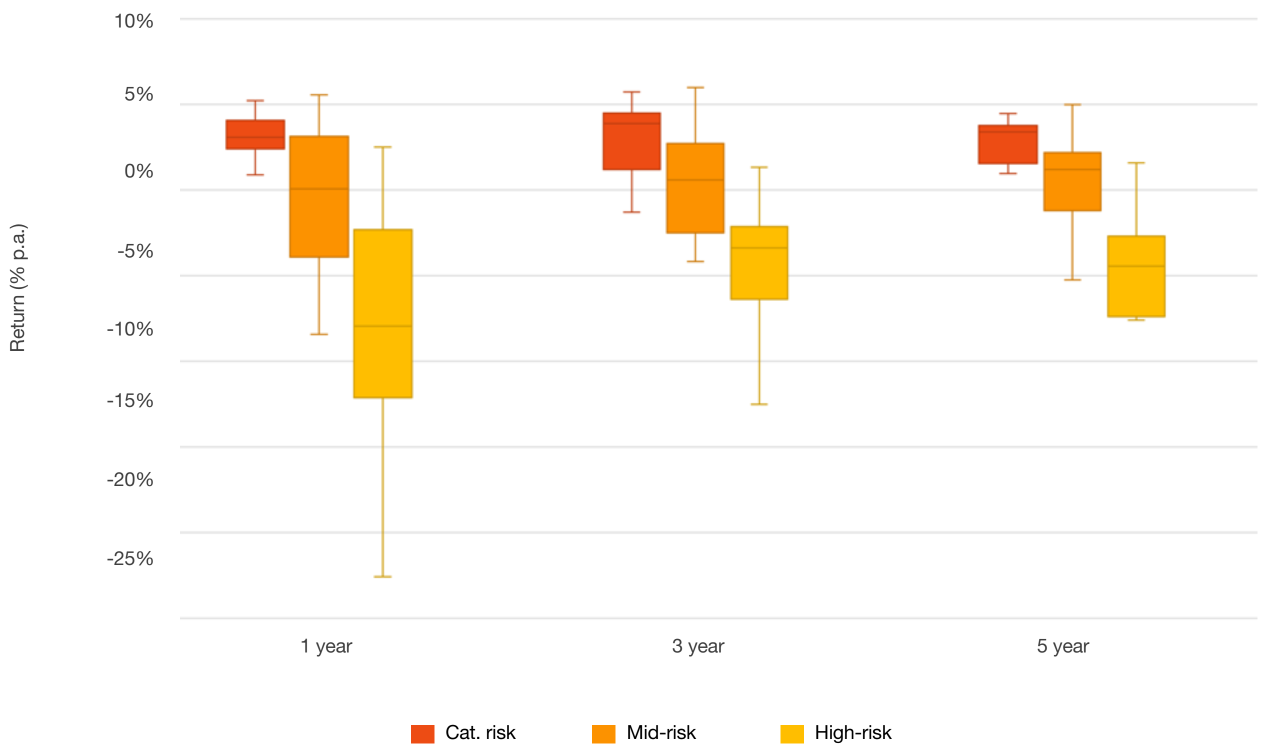
Peer performance comparison

Products with predominantly cat bond holdings have outperformed both mid-risk and high-risk private ILS products over one-, three- and five-year periods.

These products are more remote risk, meaning they only experience losses following extreme events. These 'extreme events' are generally 1 in 100 year type events, or in some cases even more extreme than that.

These funds could potentially experience a more significant loss than some of the mid-risk and high-risk products during these extreme events.

Chart 13: ILS manager historic returns



Source: Frontier, Managers. Performance is to October 2021.

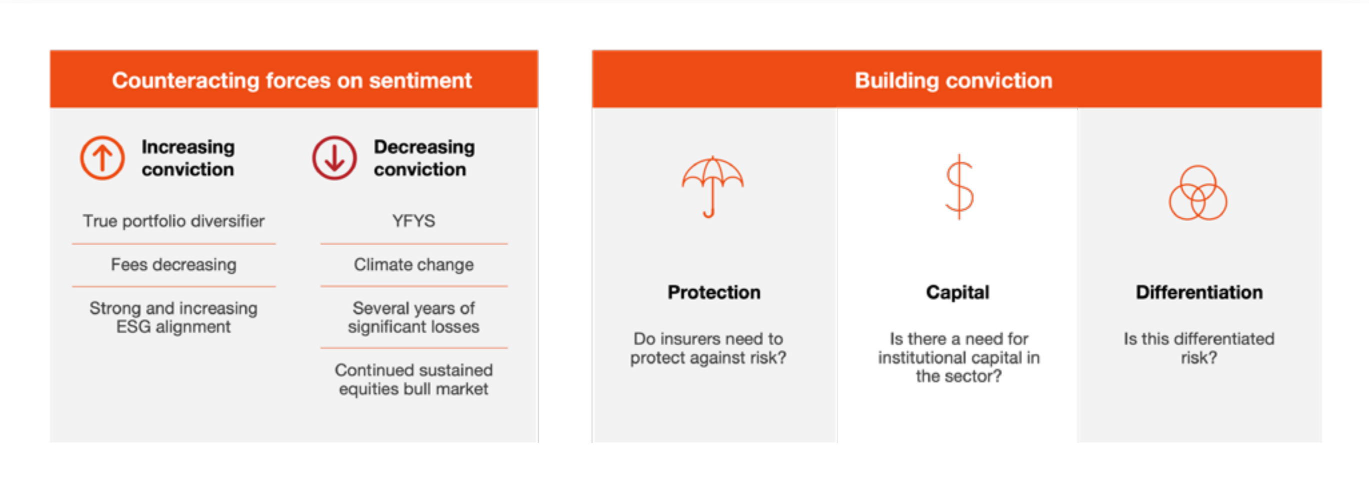
ILS investors

Some ILS investors are feeling bruised and battered after several years of significant losses and increasing uncertainty driven by external factors such as changing legislation and climate change

This has impacted their conviction in the sector. By contrast, other investors view the sector to have been one of the only asset classes to exhibit true diversification during the recent COVID-19 market dislocation and rebound. They have also viewed the decrease in fees, growth in products and increasing ESG alignment as positives. This has resulted in increasing conviction for these investors.

One local investor we spoke to described three questions they ask when determining their conviction in the sector.

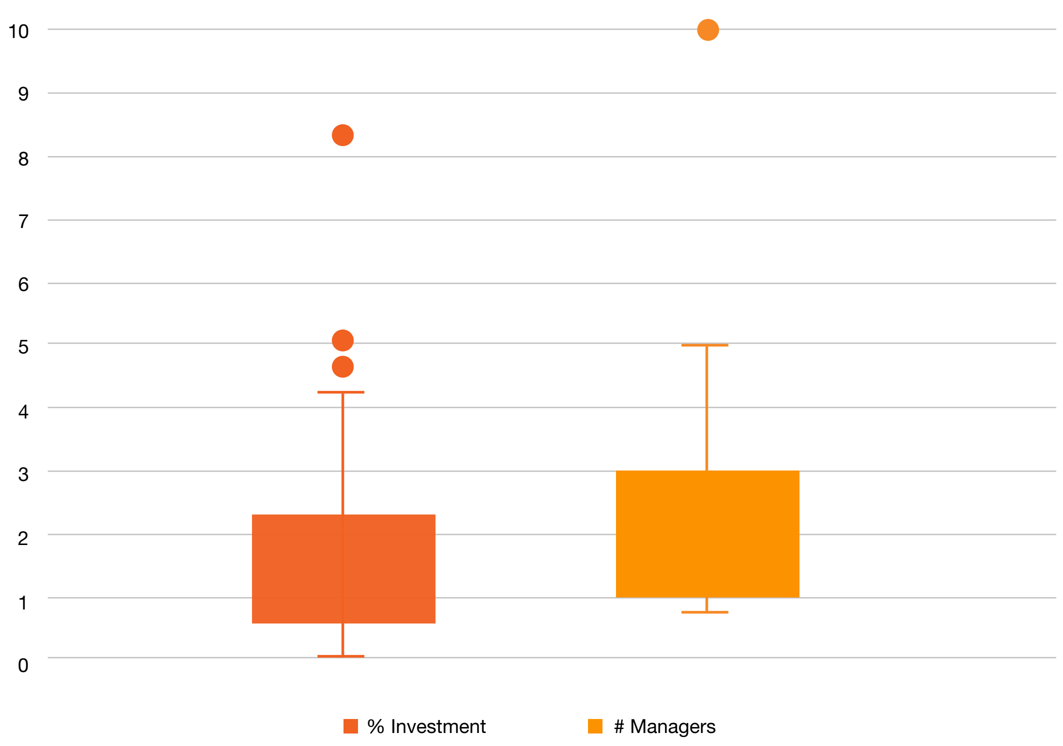
- Will insurers continue to need protection against risk?
- Is there a need for institutional capital to support the sector?
- Is the risk differentiated to other portfolio risks?



Source: Frontier and various clients and managers.

Reviewing the data on investor allocations to ILS, we can gain an insight into how investors structure their ILS allocations. The global peer group of ILS investors typically allocate between 1-2% of AUM to ILS. Most peers use between one to three managers, with individual allocations averaging approximately US$150m.

Chart 14: Peer ILS allocation



Source: Frontier, Artemis. Data to August 2021.

The final word

Performance of ILS markets has been challenging in recent times with an increased number of insurable events. The impact of climate change on sector performance is also weighing on investor sentiment. Despite this, the sector continues to require and attract capital from investors.

ILS investments offer a diversifying return stream that is independent of traditional asset classes making it an attractive option for risk conscious investors. Like any asset class, there is a degree of uncertainty regarding future performance, however, we maintain conviction in the sector and value its differentiated performance.

Want to learn more?

If you'd like to learn more about insurance linked securities, Frontier can help. Please reach out to your consultant or a member of the Alternatives and Derivatives Team.

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