

# Climate change and ILS: boon or bane?

An increasing number of natural catastrophes is driving demand for insurance. To better protect themselves and offload some of their risk, insurance companies can turn to either re-insurers or investors, through insurance-linked securities.

By François Divet

The globe is warming faster than at any rate seen over the last 10,000 years.<sup>1</sup> Climate change is increasing the frequency and intensity of floods and wildfires, as well as the intensity – though not the frequency – of tropical storms and hurricanes. Since 1994, the number of medium-sized events (with damages between \$ 1 to \$ 5 billion) has grown by an average 7.5% year-on-year.<sup>2</sup> The increased number of natural catastrophes is driving demand for insurance. Re-insurers or investors can help insurance companies offload some of their risk through insurance-linked securities (ILS).

## How ILS work

Insurance companies use ILS to transfer the risk of specific events, often nature-related, to capital markets. ILS co-exist with reinsurance markets and they are complementary rather than competing.

bonds (Cat Bonds), which mainly cover natural disasters.

In the example in Figure 2, an insurer would pay out the initial three billion of insured claims in the event of a hurricane, while half a billion would be paid by ILS investors and reinsurers. If no event occurs during the defined time, investors have received a return comprised of the floating rate plus a spread.

## Selectivity is key

There are both positive supply and demand factors for ILS: on the one hand insurers need to cover costlier climate-related events, on the other hand more investors are discovering the attractive diversification benefits. Because of this, the market continues to expand. This means better opportunities for ILS managers to be more selective and increase the diversification. It is important to highlight that ILS portfolios are actively managed; it is not a beta exposure to catastrophe risk. For example, following our selection process, we had relatively low

exposure to the most detrimental events of the most recent hurricane season.

## Insured losses are increasing – but climate change is only part of the explanation

While climate change is driving an increased demand for climate-related insurance, and higher total losses, it is only part of the explanation. As Figure 3 shows (for convective storms in the US), nearly half of the increase in total losses over the past 15 years has been down to inflation – a factor that will have accelerated rapidly in recent years. Our changed ways of living are another major driver, with for example more concentrated populations. Swiss Re estimates that out of the total 8% annual increase in losses from 2008 – 2023, only one percentage point is related to climate change.

## The protection gap remains wide

While the volume of insured losses globally is rising, a wide protection gap remains. This is par-

Key differences include that insurers use ILS to access a broader pool of capital, often at a higher cost than traditional reinsurance, and different tenures: reinsurance contracts typically cover one year, while ILS is spread over a longer period, often around three years. A large part of the ILS market is made up of catastrophe

FIGURE 1: NUMBER OF NATURAL CATASTROPHES BY CLASSES OF SEVERITY



Source: Swiss Re and AXA IM. January 2024.

tially due to a lack of capital in emerging markets, where many individuals and companies are under-insured. There are protection gaps as well in developed countries. This emphasises the need for active management when investing in ILS, where allocators need to have a deep understanding of the impact of natural catastrophes, know in detail which perils the insurance covers, and focus on quality.

**The investment case**

Alternative capital has grown steadily as a source for insurers over the last decade, with an annual growth rate of around 4.5%<sup>3</sup>. More and more institutional investors realise the benefits ILS can add to a portfolio:

- By insuring against natural events rather than economic, ILS have little to no correlation with economic cycles. Apart from the floating rate factor, ILS should for example not be impacted by a market crash.
- ILS also offer attractive risk premiums. Relative

to its expected loss (EL), spreads for a Cat Bond covering the risk of a hurricane, which has historically occurred every 50 years (2% EL), are typically around 7.5%<sup>4</sup> – a multiple of nearly four times the expected loss. 2023 was a very good year for ILS investors. We expect returns to be slightly less remarkable in 2024.

- ILS exhibit limited volatility compared to traditional asset classes. Although, like many alternative asset classes, it has limited liquidity.

**A growing market**

More insurers are turning to capital markets to re-insure part of their exposure, which is positive for ILS investors as more perils and geographies are covered, and they can be more selective. On the other hand, insured losses are rising. Climate change is only partially responsible for this, however, with inflation and population growth having a much bigger impact.

We see continued growth

for the market as it continues to deliver highly attractive returns. But being selective, with a deep understanding of climate related risks, is key to avoid parts of the market where climate change will have a significantly negative impact. ■



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1 NASA Climate change report. July 2024.  
 2 Source: Swiss Re and AXA IM, January 2024.  
 3 Source: AXA IM Alts. Based on Guy Carpenter, A.M. Best. Dec 2023.  
 4 Source: AXA IM Alts. July 2024. For illustrative purposes only.

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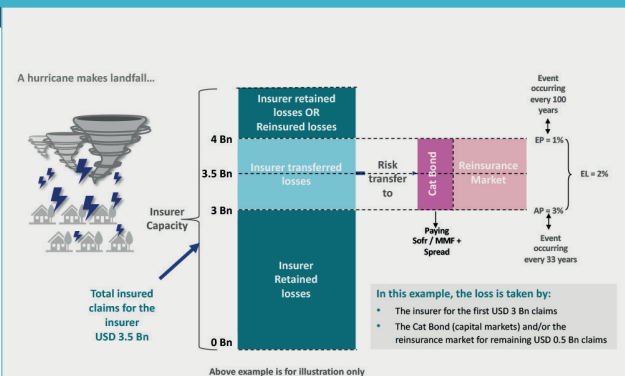
**SUMMARY**

The number of natural catastrophes is increasing and some of them are growing in intensity too. This is contributing to an increased need for insurance.

Insurance-linked securities have grown steadily over the last decade as insurers turn to capital markets to cover weather-related losses.

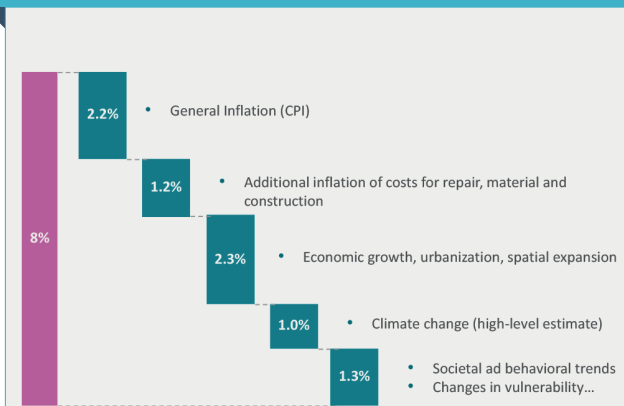
More investors are discovering the diversification potential of ILS, in addition to the attractive return premium and limited volatility, as ILS have little to no correlation with economic cycles.

**FIGURE 2: EXAMPLE OF HOW ILS WORK**



Source: AXA IM Alts. Images for illustrative purposes only. EL = Expected Loss, average loss over all scenarios, expressed as a percentage of the principal amount. AP = Attachment Probability, probability of exceeding the ILS trigger level which would cause the first-dollar loss to the ILS. EP = Exhaustion Probability, probability of 100% loss to the ILS.

**FIGURE 3: ANNUAL INCREASE IN INSURED LOSSES FROM SEVERE CONVECTIVE STORMS IN THE US FROM 2008 TO 2023**



Source: Swiss Re and AXA IM. January 2024. For illustrative purposes only.