



## Frequently asked questions about insurance-linked securities

By Schroders Insurance-Linked Securities Investment Team

**Insurance-linked securities (ILS) continue to generate attention as the need for a truly uncorrelated ‘alternative’ in today’s environment grows. We recently caught up with the Schroders ILS team to discuss some of the key questions that are frequently asked by prospective clients who have already begun to do their due diligence on this unique asset class. Among them, is climate change impacting the market and is now the right time to invest given current levels?**

### **Has the opportunity gone? Is it better to wait till yields have risen?**

Potential investors frequently ask whether ILS as an asset class is still attractive, following media reports that yields have been declining in the last couple of years. This inevitably leads them to ask whether they should wait for yields to recover before buying. The answer is not totally straightforward. We would say that it is still possible to find fairly valued investment opportunities, by which we mean those that compensate investors sufficiently for taking the insurance risk embedded in them, both on a stand-alone basis and within a portfolio. Their structure means that most resemble a floating-rate note with a spread over money market rates. With interest rates having been brought down to near-zero levels (or below) since the financial crisis, the returns on the floating leg of insurance-linked instruments have also been reduced. However, it is important to remember that this element of the return remains independent of the spread, which represents the reinsurance premium for taking on the underlying risk. This lack of connection means that, although yields have fallen, in our view they still remain attractive on a risk-adjusted basis.

That said, the lower yields mean that it takes more effort to find attractive investment opportunities. This has three implications for ILS managers:

First, having sufficient resources and the right specialism is crucial in the current market environment. We have to review more potential ILS investments and also decline more. This is true for new cat bond issues and in particular for private transactions. Attractive investment opportunities can still be found, but it takes more homework. This means more modelling, pricing and underwriting work, particularly around the key reinsurance renewal dates are concerned. A well-resourced team is important, but not enough. It is just as vital to have a team that has experience in working in various market conditions and fully understands the

dynamics of the reinsurance industry, of which ILS as an asset class clearly forms a part.

Second, gaining access to private deals has become even more important. Well-maintained links with the (re) insurance industry have always been important for ILS managers who want to offer more than just pure cat bond strategies. Now, however, given the rate pressures being felt in the more standardized part of the market, there is a crucial advantage to being the first to look at new transactions or to venture into less mainstream areas. Here it helps to be able to offer a so-called “quoting market” for private transactions, which means being able to price insurance risks which are brought to the market. For most of these transactions, a broker will contact ILS investors to gauge interest and to seek input on the pricing of the deal. Brokers will look at quoting markets for indications of the level of yield (reinsurance premium) at which they would be able to place the transaction in the market. In some instances our team would also suggest alternative loss trigger levels or structures which the broker could then take back to the issuer to discuss.

Being able to analyze a broad range of deals and put a price tag on them means getting preferential access to deals and potentially a larger allocation of the most coveted transactions. Only a few ILS managers are “quoting markets”: many are price takers who will only review a transaction once it has been priced before deciding whether they would like to invest. Needless to say, this makes the analysis and decision-making easier, but means such investors can miss out on some of the most attractive deals which are placed quickly and not shown to the wider market.

Third, the current market environment increases the need for an ILS strategy which is as broad as possible. The wider the investment universe, the more opportunities an ILS manager has to find the best-paid risks. Having a wider

spectrum of risks, structures and risk levels also helps to diversify an ILS portfolio in terms of its risk drivers. In this regard the private transactions market may offer many advantages in terms of breadth, diversity and risk-adjusted returns. However, the addition of these instruments to an ILS portfolio inevitably means lower liquidity as they are non-tradable: most have a 12-month maturity and are held in the portfolio for the entirety of this period. Investors considering an allocation to ILS must accept that there is likely to be a trade-off between return and diversification potential, on the one hand, and liquidity, on the other.

### Does climate change have a negative impact on ILS?

Although climate change will undeniably have an influence on the frequency and severity of certain natural catastrophes, its impact on insurance-linked instruments is more limited than one would expect at first glance. Climate change is a gradual and long-term phenomenon, whereas ILS are typically short-term instruments. Most catastrophe bonds have a three-year term, and private transactions linked to natural catastrophe risks typically provide cover for a 12-month period. Over such timeframes, climate change should not have any discernible influence on the level of risk of a security as modelled at the outset. There is little need to take into account the long-term climate change effects on the frequency or severity of extreme events for instruments that expire before these effects may impact them.

In any case, climate change is only likely to have an influence on part of the ILS market. Only those ILS that cover natural catastrophe risks are (potentially) affected – and within that only meteorological insurance risks. Other natural catastrophes such as earthquakes – a key driver of “tail risk” in the overall ILS market – are not really touched by climate change. The same is true for tsunamis caused by earthquakes below the seabed.

In cases where the effects of climate change would lead to increased frequency or severity of weather-related events, the affected instruments will not necessarily become less attractive. Professional ILS investors will model the risks and demand an appropriate compensation for assuming any consequent increase in the risk level. The insurance-linked instrument would therefore command a higher risk premium to compensate for the increased risk of loss. New research is constantly embedded in catastrophe modelling software, which is used by both the issuers of insurance-linked instruments and ILS investors. Issuers therefore need to be willing to accept rising costs for the use of these instruments, or increase the loss threshold (“attachment level”) to accommodate climate change.

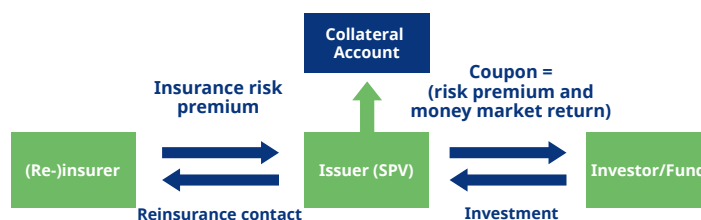
Should global warming lead to more extreme weather events in certain densely populated areas – either those already exposed or newly exposed – it could lead to an increased demand for (re)insurance over the medium term. This would translate into higher premiums and hence higher yields on insurance-linked instruments. Moreover, new areas becoming exposed to extreme weather could lead to a broader ILS market, which would be beneficial for investors as risks could be better diversified. Given the short-term nature of the natural catastrophe ILS market and the short spread duration, we believe premium increases over a medium to longer time horizon will

have a limited impact on ILS portfolios. If increases take place gradually, then investors should benefit from the reinvestment of their capital at higher yield levels over time. It is worth bearing in mind that climate change is just one of many elements that will shape the ILS market over the longer term. Other factors that we believe will play an important role include building standards, demographic changes (e.g. more people living in exposed regions such as coastal areas) and general trends in the loss thresholds of insurance-linked instruments.

### Are ILS exposed to the credit risk of the issuer?

In contrast to corporate or sovereign bonds, cat bonds and other insurance-linked instruments are not directly exposed to the credit risk of the issuer. This is because a “transformer” is required to make the insurance risk available to capital market investors, typically via a special purpose vehicle (SPV). The issuer transfers a certain insurance risk from its own balance sheet to the SPV by entering into a reinsurance contract. This reinsurance contract is backed by collateral which is paid to the SPV by investors. The SPV then issues securities – such as cat bonds or preferred shares in the case of a private transaction – against this collateral. The result is an insurance risk that has been transformed into an investible instrument.

Figure 1: Structure of an insurance-linked instrument



Source: Schroders, for illustration only.

This structure means that the cash paid for an ILS is not directly exposed to the credit risk of the issuer, as it is held separately in a trust account and invested in money market funds or instruments. As a result, the insurance-linked instrument is not directly affected by the issuer’s credit rating or general balance sheet strength. In the extremely unlikely event that the issuer of an ILS defaults (for example, by not paying the agreed risk premium), the notional capital remains unaffected. The insurance-linked instrument would cease to exist and the collateral in the separate trust account would then be paid back to the investors. What could result in a loss of notional capital, of course is an ‘insured event’ such as a typhoon, flooding or earthquake which would cause losses to the instrument: this is the insurance risk embedded in the instrument, rather than credit risk.

### Could issuers offload their bad risks onto the ILS market?

Fears are sometimes expressed that the ILS market may share some of the adverse characteristics of other debt securities. For instance, many investors will have had bad experiences with mortgage-backed securities (MBS) or collateralized debt obligations (CDOs) based on subprime mortgages in the US. One of the factors seen as having

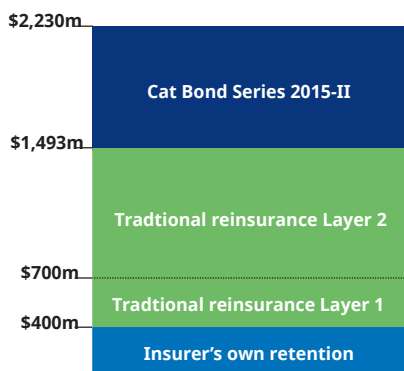
exacerbated the subprime crisis and the subsequent fall in CDO and MBS prices was the fact that many of these mortgages were so-called “originate-to-sell” transactions. Banks encouraged homeowners to take out mortgages, which they then packaged up and sold as MBS, taking them off their balance sheets and generating origination fees in the process. This created moral hazard as the sale of the loans meant the banks would suffer no direct consequences if borrowers defaulted.

So, do similar practices afflict the ILS market? In principle, investors are at an information disadvantage compared with issuers of the ILS, who have more information about the underlying insured exposures. In these circumstances, it would be easy for insurers simply to pass on the poorer risks that they don't want to keep themselves. Nonetheless, we would argue that there are a number of features built into ILS that should provide safeguards for investors.

Most importantly, with almost all of the transactions in which we at Schroders invest the issuer of the instrument retains some portion of the same insurance risk, and therefore will suffer losses before ILS investors do. The majority of ILS use so-called “indemnity triggers,” where investors’ collateral is only called on if losses insured by the issuer have exceeded a certain level. If the issuer is an insurance company, this means they will retain the first layer of losses – say \$50 million of claims as a result of a hurricane – and may have reinsured losses above this level via several layers of traditional reinsurance contracts or insurance-linked instruments. ILS typically cover higher layers – or even the top layer – in an insurance programme as these are most suitable for investors in terms of their risk-return profile.

The below graph shows part of the insurance programme of a US insurance company where one of the layers is a cat bond issued in 2015. The loss levels illustrated are “per-occurrence losses”: in other words the total claims paid out by the insurance company due to one single catastrophe.

**Figure 2: Cat bond example: simplified reinsurance programme**



Source: Schroders, for illustration only. The layers of other reinsurance vehicles may differ.

Because ILS typically only form one of the higher layers in a reinsurance programme, other parties will often bear lower-level risks. These other parties can include traditional reinsurance companies and, for the vast majority of instruments in our portfolios, also the issuer of the instrument. Since they will suffer losses before the investors in the ILS, there is a clear alignment of interest between ILS holder and issuer. All other things being equal, we believe this should prevent insurance or reinsurance companies from passing on “bad” risks to the ILS market.

For both cat bonds and private transactions, investors typically receive detailed data that allows for an accurate assessment of the risks to the transaction. With the appropriate tools and experience, it is possible for the investor to gain a good understanding of the risk or risks being transferred. However, this is where it is important to have access to a strong analytical team to vet ILS transactions and provide a second line of defense against “information asymmetry.”

All the risk modellers, underwriters and actuaries involved in analyzing new investment opportunities for our ILS funds come from the reinsurance industry. They therefore have an in-depth understanding of how insurance and reinsurance companies work, how they take decisions about their reinsurance programmes and on what information these decisions are based. AIR Catrader, the vendor risk model that our team uses to model catastrophe risks such as earthquakes or tropical storms, is used by insurers, reinsurers and ILS investment managers. The same is true for other actuarial techniques we use to analyze and price insurance risks for which these vendor models are less well equipped, such as tornados or hailstorms.

A particular competitive advantage that our team has in this regard is that some of our members also act as consultants to some of the world's largest insurance and reinsurance companies, validating their risk models or advising them on topics such as the implementation of Solvency II. This gives our team an additional understanding “from the inside” of how these companies work, the data they use and their risk management techniques.

## Conclusion

As we suggested earlier, in our view most ILS are still fairly valued, although we have become more selective. It is important to remember, though, that the main reason most investors to allocate to ILS is for the diversification benefits that they bring. In our view, ILS are an excellent diversifier for equities, sovereign and corporate bonds, real estate and almost all hedge fund strategies, regardless of their valuation or the particular stage of the economic cycle. This point has also been made in Mercer's latest Research Perspectives paper, which states that "we believe that the diversification benefits presented by this asset class [insurance-linked securities] still remain attractive."<sup>1</sup>

<sup>1</sup> Mercer Research Perspectives Vol. 3, December 2015.

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