INSURANCE-LINKED SECURITIES FOR INSTITUTIONAL INVESTORS 2014

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Exploring the evolution of the insurance-linked securities market (ILS) and examining the role of specific instruments in an investor's portfolio.

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WHITE PAPER

Insurance-linked securities capital: reinsurance industry threat or saviour?

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ILS market overview

The insurance-linked securities (ILS) market has grown significantly in recent years, and is now estimated to be worth US$ 45 billion.

Roughly US$ 20 billion of this is invested in catastrophe (CAT) bonds and US$ 25 billion in private ILS transactions. Demand from investors exceeds available transactions, and more capital waits on the sidelines. New capital inflows have caused CAT bond spreads to compress significantly and put pressure on reinsurance rates.

What is driving the popularity of ILS?

Global pension funds are the primary ILS investors. Yet the number of pension funds that have opted to invest in ILS is still relatively small, and they have only allocated an average of 2-3% of their total investments to this asset class. However, an increasing number of pension funds have started tracking and analysing the risk and return of ILS investments, and many of these may well invest in the next 2-3 years.

What attracts these investors to ILS? It is the simple but powerful fact that natural catastrophes – and many other insurance risks – are fundamentally uncorrelated to any other asset class. As a result, the investor gains a diversification benefit by adding ILS to an investment portfolio. Any uncorrelated investment is beneficial within a portfolio, even if returns are lower than on equity or bonds.

ILS investors target the most profitable lines of business. These are typically natural catastrophe risks – chiefly U.S. hurricane exposures. These risks are the easiest to securitise: the pricing is the most attractive of all natural perils; the risk period is short; the risk is well modelled; and there are reliable agents to calculate the industry losses that – in the case of industry loss trigger transactions – can determine eventual transaction losses.

Why does reinsurance equity not offer the same benefits to investors?

There are three forms of capital available to the reinsurance industry:

- Direct insurance risk transfer to financial market investors, either by means of fully collateralised mechanisms (ILS) or on a contingent basis (e.g. reinsurance companies or Names at Lloyd's)
- Debt
- Equity

Equity is the most expensive form of capital for the (re) insurance industry. Thanks to its diversification benefits, ILS is the cheapest. The most popular form of investment for those looking to enter the reinsurance market was, prior to the birth of ILS, equity offered by traditional reinsurers. However, returns on equity are eroded by company management costs and the tendency of reinsurers to diversify into less profitable lines of business. In addition, financial market investments on the asset side of the balance sheet expose reinsurance shareholders to additional financial market risks. A listed reinsurance stock thus has the disadvantage of being highly correlated to equity markets in general.

So, what ought to be a fundamentally uncorrelated investment gets transformed into a correlated investment, and the diversification benefit is lost. The investor is also exposed to the risk that the management of reinsurance companies might not always act in the best interests of shareholders.

As insurance investors focus on those lines of business that are favourably priced and soundly modelled, reinsurance companies might end up losing their most profitable lines to the ILS market. And it is this source of profit that reinsurers have traditionally relied upon to support and cross-subsidise substantial volumes of business that generally only break even. With profitable lines taken away by more efficient investors, reinsurance companies are left with business models that cannot sustain conventional cross-subsidisation.

What's the future of the reinsurance industry?

The reinsurance industry is likely to continue growing faster than GDP as new business opportunities open up in emerging markets. But there is a fundamental step-change happening in the financing of large insurance risks. Given that ILS capital has lower cost of capital than reinsurance equity, the shift from reinsurance equity capital to ILS will continue.

ILS investors will further explore investments in non-peak perils including man-made risks, such as fire or terrorism, or even casualty lines of business. Investors may also use financial leverage to improve the risk-return of ILS portfolios.

This means that, although the industry as a whole is growing, reinsurance balance sheets will most likely stagnate, or even shrink. Reinsurance companies will be forced to optimise their balance sheets in order to lower their cost of capital. Only those with efficient balance sheets will survive. The focus on cost of capital will lead to:

- An increase in the direct transfer of risk to financial markets
- An increase in debt issuance
- A reduction in equity capital

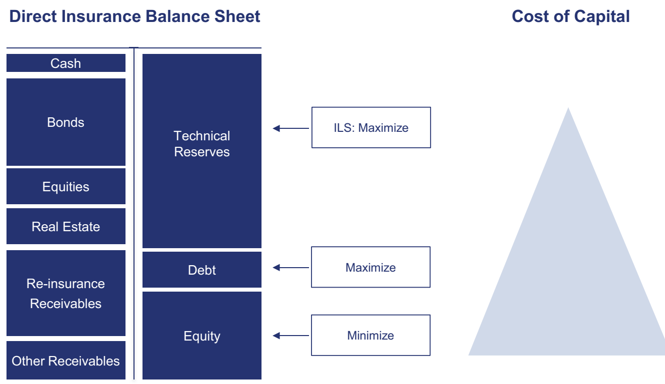
Important insurance events, such as large earthquakes or hurricanes, help accelerate the growth of the ILS market. Insurance investors are well aware that the best time to tactically allocate to ILS is after a large event. Therefore, significant capital sits on the sidelines, waiting to be invested as soon as reinsurance premiums increase. As ILS funds are also able to supply new capital to the market far quicker than reinsurance companies manage to raise equity capital, reinsurance premiums are likely to become much less cyclical in the future.

In summary

ILS capital is lowering the average cost of capital for reinsurance risks and will drive a structural shift to lower reinsurance premiums. This will benefit clients, primary insurance companies and individual policyholders. Conversely, reinsurance balance sheets will struggle to hold steady in the face of changing market dynamics.

"…reinsurance premiums are likely to become much less cyclical in the future."

Cost of Capital to drive Capital Allocation



Source: Twelve Capital.

"…ILS capital is lowering the average cost of capital for reinsurance risks and will drive a structural shift to lower reinsurance premiums."

SPECIAL GUEST ADDRESS

The importance of capital markets to the insurance sector in a post-disaster period

Commissioner John D. Doak
Oklahoma Insurance Department

As the Insurance Commissioner for the State of Oklahoma, it is my primary duty to ensure that consumers are protected when buying an insurance product in our state through our insurers. Whether large or small, every policy purchased represents risks faced by that consumer that he or she does not want to face alone. The state-based model of regulation that we use in the United States allows me and my department to understand and focus on the risks that are most prevalent in our area. This, in turn, helps the insurers who take on these risks to price appropriately and to respond to loss effectively.

In Oklahoma, we know that disasters will occur, we just don't know when or where. Our best strategy is to learn from each event so that we can lessen the impact of the next one. Our state is home to the National Weather Center, which uses advanced meteorological technology to study atmospheric events around the globe and to predict future events. We host the National Tornado Summit, an annual event with international attendance that provides education on how to mitigate and recover from the impact of tornadoes and severe weather. Additionally, my staff has worked with U.S. Sen. Jim Inhofe to help introduce legislation for a disaster savings account. These accounts would help consumers fund their own home fortifications before a catastrophe and recover after one occurs. But despite our continual efforts to improve our understanding of and preparation for disasters, these events will continue to happen and we will continue to suffer losses.

When disaster strikes, it is critical that I am able to respond immediately, deploy the resources necessary to ensure an efficient response and help facilitate the industry's efforts to do the same. During my first month in office, I organised a catastrophe response task force to allow my department to coordinate with the industry in preparation for potential disasters. The value this added to the industry, by helping consumers and insurers quickly and efficiently recover following a disaster, was no more self-evident than in the aftermath of the tornado that hit Moore, Oklahoma last year. Although the tornado was on the ground for less than an hour, it resulted in the loss of 24 lives and more than 100,000 insurance claims exceeding $1 billion USD, figures that continued to grow nearly one year later. Fortunately, the preparation of my department and the industry resulted in an immediate response that minimised both consumer losses and insurer costs through immediate initiation of the recovery process. Following the event, I reached out to regulators around the country to share the best practices that we have developed and used for consideration in their own states.

Recovery must begin immediately following one disaster because the next is coming. This is the reality faced by both consumers and insurers. Following a disaster, it is imperative that insurers have continued access to reinsurance and that the capital markets remain open and available to impacted insurers and their reinsurers well beyond the reach of the disaster. The availability of capital to insurers directly and indirectly through reinsurers provides liquidity which significantly impacts the ability of insurers to continue to provide the type of rapid and efficient response that served the community of Moore and the involved insurers so well. As we continue to develop and improve our mitigation and response plans, we also better define and price these risks within the capital markets, providing a more attractive and accessible investment option.

Capital market investors have many financial instruments available to spread their risks and raise capital. Insurance companies can spread their risks through the purchase of various securities such as catastrophe bonds, as well as by reinsuring their risks through other insurers. The capital markets and issuers have learned to adapt by working together and developing products that spread their risks. I want to encourage you to seriously consider not only the benefits these investments can provide to your own portfolio, but also the benefits they provide to the insurance industry and the consumers we protect.

INTERVIEW

The impact of risk spreads on insurance-linked securities instruments and their suitability

Interviewer

Steve Evans
Owner and Editor, Artemis.bm

Interviewee

Dr. Erwann O. Michel-Kerjan
Managing Director, Risk Management and Decision Processes Center, The Wharton School, University of Pennsylvania

Steve Evans: What key changes have there been to ILS risk spreads over the last year?

Dr. Erwann O. Michel-Kerjan: Over the last 18 months there has been a gradual slide in rates which has helped make these products more affordable for those who are issuing the bonds. However, on the demand side this has resulted in lower returns, of course.

There are three drivers that explain this recent trend, with the first being the overall current capital market conditions. 2013 was free from any significant catastrophes which subsequently resulted in a large amount of available capital in the reinsurance market. Typically, if the rate-on-line of a reinsurance product drops, so does the rate of the catastrophe (CAT) bonds (reflecting cheaper capital available). We're now seeing ILS premiums below 500 points above the collateral threshold. Although this is much lower than the 8% or 9% seen a few years back, I would argue it is a natural variability of the market.

The second driver is around the subtleties between different types of CAT bonds and the types of products actually being sold. One often hears about the ILS market as if it were homogeneous; it's not. The price of two different cat bonds, for instance, will be higher or lower depending on what the expected loss is for these two products. Many of the new issuances we have seen trigger with a higher return period (i.e., lower likelihood and lower expected loss); in effect, that means investors are actually being compensated for taking on less risk.

All of that can quickly change, though. If a big disaster occurs in 2014, spreads are likely to start increasing again.

This leads me to the third driver: how the financial markets are doing. 2013 was a remarkable year in the U.S. with the S&P 500 gaining 20%. That said, now all eyes are on the market with some anticipating that we could be on the verge of another financial crisis, or at least a severe correction. Add to that Europe's rocky situation and the lower than expected growth in several emerging markets, and the picture is a little bit more scary. All of these factors have the potential to impact the cost of capital in the short and long-term.

Steve: There is momentum behind market growth but how can this be ramped up further over the next 5 years?

Erwann: This can be approached from two ways: knowledge and simplicity, both of which will lead to a larger and more liquid market.

Firstly, we should celebrate that the CAT bond market is currently above $20 billion of outstanding capital, far more than in the past, and so clearly the ILS market is moving in the right direction. Can we double it in the next 5 years? The answer is certainly yes.

Experience shows that we need to provide greater education around the specific products targeted to a large spectrum of investors who, in the main, are not used to dealing with probabilistic risk assessment on natural disasters, terrorism or pandemics. In order to convince pension funds that ILS is a good addition for a small part of their portfolio, they need to understand what they're buying as it's not just finance but science, climatology, engineering and medicine. These are two different worlds whereby engineers and pension fund managers won't be talking to each other, but it is imperative that they do and start to understand the catastrophe risk modelling behind the pricing of these bonds. This has already started to happen.

Education is a big part of the equation, particularly if you consider that the return of these bonds must fit into a pension fund's long-term time horizon. An interesting parallel is the recent issuance of green bonds for instance (by Zurich Insurance Group). Several very large asset managers are also looking at this market. The more alternative bonds that we see added to municipality bonds, the more mainstream these CAT bonds will become.

Second - simplicity. We have to make these instruments simpler; almost by definition this is how you will make both investors and issuers cross the decision line.

Also, only a few of the 250+ CAT bonds issued have triggered. I'm not saying more need to be triggered, but because only a handful of them have, some people question whether they might be paying the premium for nothing, because the attachment point is too high. You can imagine many more bonds being issued with tranches that would trigger at a lower level. Parametric bonds of that nature should appeal to a large number of issuers which one could pool together, rather than having only one issuer at a time, which results in high administrative costs and fees. By pooling issuers you reach economies of scale. Think of a Category 3 hurricane hitting Miami-Dade next year. I could think of a number of public and private organisations that would benefit from post-disaster funding. If you pool issuances and pool buy-ins (through a CAT bond index), we would certainly make a significant progress is making this market more liquid.

Steve: What do you think we need to do to get these products into emerging economies?

Erwann: It goes back to education. Many of these discussions on the disaster management side are typically handled by the Ministry of the Environment (natural disasters) or the Ministry of Health (pandemics). In most countries neither has the financial expertise to understand ILS. On the other hand, whilst the Ministry of Finance does, they are too removed from the handling of catastrophes, until after a disaster when relief is needed. Experience shows that when you bring those decision makers together, then actions can be taken.

Steve: What new measures are governments, rating agencies and other key market players considering?

Erwann: Historically, ILS has been regarded as a private sector product. That said, over the past few years there has been bond issuance by state insurance programmes such as the California Earthquake Authority and the Florida Hurricane Catastrophe Fund.

Governments around the world have now started to put the question of disaster risk financing on their agenda at a more strategic level. For instance, I participated in the 2012 G20 Summit in Mexico where the Mexican Presidency assembled a dedicated group to help finance ministers and senior policy makers think more strategically about disaster financing. This was the first time that G20 members considered that topic to be a priority.

> "it's not just finance but science, climatology, engineering and medicine. . . ."

I've been privileged to have spoken several times at the World Economic Forum in Davos and can equally say the topic is becoming increasingly important on their agenda.

Certainly insurance (and ILS) is not the only solution but it should definitely be part of the solution. Another interesting trend I'm observing comes from the rating agencies, which are obviously a key player. They are now increasingly including a corporation's risk management plan into their assessment - and not just financial risk management, but operational, too. Although they aren't downgrading a corporation for not doing X, Y and Z, they are emphasising the importance of proper risk management.

If this rating trend observed in the business community moves to the public sector, that will be a key change. One could easily think of the necessity to rate a sovereign bond or a municipality bond with some consideration being given to how exposed this country or city is to disasters. After all, disasters have proved to be a key driver of loan default for small businesses around the world. If central governments are faced with increasing demand for providing free relief disaster after a disaster, pressure will increase for finding alternative risk financing solutions to be put in place before a catastrophe, rather than relying on taxpayers' money. This is happening here in the United States and in the UK too as we speak.

Steve: Catastrophic risks have enormous financial impact for businesses and countries. What is happening?

Erwann: That's a big question. Over the past decade there has been increased occurrence of more devastating catastrophes. When one looks objectively at the important metrics, all of them are in the red; more devastation is to come, much more.

Metric 1: population. We added 2 billion people on planet Earth in the past 20 years alone; 2 billion! Many of these individuals live in hazard prone areas, so we mathematically increase the overall exposure.

Metric 2: assets at risk. As people move out of poverty (a lot remains to be done here) and many more people enter the middle class, they purchase more, then more assets are in harms' way.

Metric 3: aging infrastructure. This is certainly the case in the US where trillion of dollars of investment are needed just to modernise our fairly old infrastructure.

Metric 4: interdependency. Moreover, our world is more globalised and interdependent than ever before. Something happening 5,000 time away from where we are can have a ripple effect onto us fairly quickly. A massive flood in Thailand, for example, affects the world global supply chain. In other words, we are exposed, directly or indirectly, to more sources of destabilisation.

Steve: Given that risk spreads have declined do you think it could encourage more country- or municipality-level risk transfer?

Erwann: Of course. Moving down from 8% to 5% premium is a big difference. ILS also typically provides premium stability over several years, a critical advantage that has been totally underappreciated in today's highly volatile world. There has been much discussion with insurance companies about whether they would be ready to issue fixed rate insurance contracts for 3 or 4 years and whilst the answer has been 'no' as of yet, CAT bonds have provided stability, reassuring to the treasurer of any corporation or city.

Steve: What direction will risk spreads head in in both the short- and long-term?

Erwann: It could go down or up. Down if we are lucky again, if there are no big disasters in 2014 and the financial markets keep moving up. Maybe 50 points or even 100 points. But they could go up again if there is a series of large catastrophes and/or a severe correction of the financial markets affecting the availability and cost of capital.

That said, one also need to be careful not to compare apples to oranges. There are many different ILS products, so spread will of course depend on the nature of the transaction and risk involved.

Steve: What do you see as the challenges of expanding the remit of ILS and CAT bonds to better assist with narrowing the disaster gap globally?

Erwann: Globally the larger question is who should pay for catastrophes. The public or private sectors? And when? Before (insurance) or after (ex post compensation)? How countries and markets respond to these two questions will largely determine the future of the ILS market.

Historically we looked to governments as the ultimate risk managers; that is true even in the U.S, often depicted as the most market-based economy. But if we take the U.S. catastrophes over the last 50 years we see the cost of these disasters increasingly borne by the taxpayers. Consider the following: when Hurricane Diane hit in 1955 only 6% of the aftermath costs were paid by the American taxpayers but by Hurricane Katrina in 2005, this number had risen to 50% and then 80% for Hurricane Sandy in 2012, that's 80%! Some would say this is hardly a market economy.

Whether this will be the new norm for America, because it would be hard for any future Congress not to follow precedent, is unclear. This could also be a tipping point. This has indeed resulted in elected officials debating as to who should shoulder the responsibility of relief. It took U.S. Congress 3 days to vote $50 billion of relief after Hurricane Katrina in 2005 but for Hurricane Sandy it took Congress 3 months of intense debate to vote for the same $50 billion of relief. What happened in between? A world financial crisis that had severe impact on national debt. Subsequently, if we don't want taxpayers to carry the cost of future extreme events, we will have to hedge some of these financial liabilities. Players in the supply and demand sides of the ILS market should be at the discussion table.

This reminds me of earlier discussions at Wharton in the early 1990s where the concept of cat bonds was first introduced. Twenty-five years have passed and the market is growing but could be potentially immensely larger. One just needs to be innovative to create value, and a decent return.

Steve: Thank you Erwann for that alternative perspective.

Erwann: It has been my pleasure talking to you.

> "It took U.S. Congress 3 days to vote $50 billion of relief after Hurricane Katrina in 2005. . ."

Return on Insurance

Twelve Capital is an independent investment manager specialising in insurance investments. Our core investment offering incorporates liquid and private transactions in Insurance-linked Securities (ILS) and Insurance Debt.

Both investment segments benefit from our team's significant experience in the insurance sector as well as capital markets, including in-depth expertise in deal sourcing, analytics, structuring and risk management.

We give institutional investors access to a compelling range of insurance-related strategies, and we generate attractive-risk adjusted returns for them.

Twelve Capital provides fund solutions and also manages sophisticated tailor-made mandates.

Twelve Capital was founded in July 2010 and is majority owned by its investment team.

We currently manage over USD3bn.

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