

# Market ILS and solutions



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examine the future  
development of capital  
market participation in  
the reinsurance sector

Once an alternative wrap for reinsurance and insurance companies familiar with the risks and eager to diversify their exposure, ILS have also become another family of investment products for 'alternative investors' much like hedge funds, cat funds and private equity funds.

These investors are very specialised and sophisticated and are drawn by the strong features of the ILS (for example, the high Sharpe ratio, which is a measure of the excess return on a risk adjusted target of return, divided by volatility of the product; and low correlation with traditional capital market assets).

Mutual funds and money managers are also becoming more active in the market, eager to benefit from high-yielding instruments in relation to flat interest rates and historically low yields on government and corporate bonds.

### ENHANCING INVESTOR APPETITE

In order to enhance investors' appetites, several issues need to be addressed. First, it is important to make the risk-reward profile more explicit – a key element for investors who are faced with numerous opportunities of investments

(for example, equity, bonds, asset-backed securities, credit, commodities). In this environment, insurance risks exhibit strong features, but further development of these products will rely on high-standard quantitative expertise and models as well as the confidence in these products and the reliability on the models.

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Secondly, the new investors in this market are very yield-sensitive (i.e., hedge funds or cat funds have minimum thresholds for investments, and leverage is often necessary to reach adequate rates of returns). As a result, until recently investors were

interested only in high-yielding tranches, which translated into bonds attaching around 1% to 2% of annualised probability of first loss. These levels of attachment made the ILS unsuitable for traditional investors who were concerned about a loss in their principal. Meanwhile, the high level of due diligence needed limited the penetration of these products among money managers. Recently, ILS were issued with a broader range of yielding tranches.

Moreover, while rating agencies had not often rated investment-grade cat bond tranches for single-event triggers, earlier this year S&P decided to rate such cat bonds up to BBB+ if the first loss is sufficiently remote (below 20bps). For investors compelled by their status to hold only investment-grade paper, that is an important development. As these products become more standardised and the range of issuers and programmes broadens, traditional investors will have more flexibility, particularly with a more convenient regulatory environment. In fact, the French financial markets regulator AMF approved the possible inclusion of catastrophe bonds in mutual ▷

funds' portfolios in early 2007. Pioneer, the asset manager, also launched in July 2007 a fixed income fund in which significant amounts of cat bonds are added to enhance yield. According to a recent article in *The Economist*, later this year the firm also plans to launch a dedicated cat bond fund targeted to retail investors.

An additional point under scrutiny by investors is liquidity of investment. Re/insurance risks can be underwritten under multiple wrappers, from retrocession contracts to industry loss warranties (ILW), from cat bonds and cat swaps to shares of sidecars. Some hedge funds and private equity funds, given their expertise in illiquid and buy and hold strategies, would be keen to take part in sidecars – high-yielding but totally illiquid before dissolution. On the other hand, mutual funds and cat funds, which must mark their investment to market on a regular basis, focus on cat bonds that can be traded in the secondary market.

#### ADDRESSING ISSUER CONCERNS

Despite the recent movements, capital market solutions remain marginal in the global risk transfer market. But this global

picture can be misleading. Should some of the factors that have impeded more significant growth be addressed, we are confident that ILS would play an even more important role in covering the economic consequences of weather-related events and other extreme disasters.

Issuers typically turn to ILWs because they are increasingly aware of their catastrophe

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exposure due to recent catastrophes and increased pressure from rating agencies to better manage their exposure or regulatory changes.

Rating agency influence in the insurance marketplace has soared tremendously in recent years. Rating agencies, including Standard & Poor's, Moody's and AM Best, have increasingly upgraded their

models and quantitative/qualitative assessment of insurers. Meanwhile, sustained premium growth and financial optimisation have topped the agenda of the largest insurance companies as so-called hybrid debt has become more popular.

Funding acquisition, funding a business strain, optimising the cost of capital or the coverage of solvency margin have been the factors driving a significant growth of debt issuances with ever increasingly sophisticated products (Tier 1 or Basket D for Moody's, which ranks the hybrid debt between A and E, depending on its equity content).

#### REGULATORY PRESSURE

Until recently, the regulatory pressure was mostly visible in the US, but the situation is changing in Europe as well. With the new regulation under Solvency II, the landscape is evolving considerably.

Under Solvency II, for example, insurance companies will be obliged to sustain a 1-in-200 year event as Pillar I target capital (SCR) will be required on a 99.5% VaR for a one-year time horizon. Interestingly, as the objective of the Committee of European Insurance and Occupational

Pensions Supervisors (CEIOPS) is to align solvency capital to risk-based economic capital, capital relief will be reachable through risk transfer instruments, either reinsurance or securitisation. It is foreseeable that reinsurance programmes and allocation of capital to P&C lines of business will be affected by Solvency II, as it has been by changes in rating agencies' capital

issuer (for example, how solvency margin, economic capital or rating capital are affected, along with the distribution of expected P&L). Issuers favour indemnity triggers not only because they cover their exposure, but because of their simplicity of analysis and lack of basis risk that arises in parametric or index-based solutions. On the other hand, investors usually

not been competitive with traditional providers of reinsurance from a single 'rate on line' perspective, except for very specific risks like higher tranches of retrocession or peak exposures in risk-prone areas (for example, Gulf of Mexico, Florida, earthquake in California). They typically remain highly structured and customised products. However, it is unfair because, as discussed above, ILS present important attractive features, even though they might be harder to quantify and price. As collateralised (largely or fully) and multi-year programmes, ILS address the issue of credit risk and price volatility. They also allow issuers to draw from an alternative source of capital and to leverage their bargaining power with traditional risk financing providers (insurance and reinsurance).



ILS are competitive on price for risks such as California earthquake

adequacy models. These elements shall have a positive effect on the insurance-linked security market.

### FURTHER CONCERNS

Another concern of the potential issuer lies more directly in the design of the ILS. The definition of the trigger is central because it determines both the profile of risk transfer to capital markets and the impact on target ratio for the

favour the latter solutions because they provide a much clearer view of their potential exposure since they typically rely on a third party to measure the trigger (modelling firms, US Property Claims Services for losses, etc.).

Not surprisingly, the pricing of ILS remains a challenge. We typically hear concerns about the high cost of ILS. That is true, but unfair. It is true because, until recently, ILS have

### INNOVATION AND DEVELOPMENT

Until 2005, the range of ILS had been limited to a few solutions, among them cat bonds and ILWs. In 2005 and 2006, sidecars were developed. Most certainly, new innovations will be developed to better suit issuers' needs and investors' appetites and ultimately help to lower the price of financial protection. A second



generation of contingent capital products and ‘just-in-time capital’ were recently developed and successfully marketed. Goldman Sachs, for example, launched the Stoneheath sidecar for XL in November 2006, which also embeds contingent issues of capital in case of pre-defined events.

Other solutions of convertible securities are in the pipeline. Guy Carpenter is developing a hybrid cat convertible, a dated hybrid debt (lower Tier 2) that is mandatory convertible into new common shares if a specified catastrophe occurs – the trigger of the conversion being parametric. This contingent capital product allows re/insurance companies to extend their capital base when a large catastrophe occurs. At a pre-determined price, without discount risk and without credit risk, capital is entirely liberated beforehand in the hybrid form (contrary to former Cat-E-Put). Investors may be interested since, unlike with cat bonds, the downside of the product is limited and the hybrid form allows substantial spreads over Libor during the life of the product.

### THINKING DIFFERENTLY

We expect alternative solutions also will expand beyond the

debt or equity forms, and even beyond the tradable securities form. Today, capital markets offer a wide range of tools and products, especially in the derivative universe. Relevant strategies were successfully marketed in early 2007 and met strong interest from insurance companies. Developing

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investment strategies based on equity volatility dispersion or equity stock correlation should provide another promising solution. When structured adequately and based on a basket of stocks highly impacted by insurance events, the derivative solutions have proven highly efficient, allowing for coverage of such risks as pandemics or a SARS outbreak in Asia.

Companies that conducted an in-depth analysis of their

peak risk exposure (pandemic, terrorism) realised that those risks are mainly ‘unknown’, in that they are very difficult to assess and would affect not only their liability side, but also their asset side and, more specifically, their equity investments.

Guy Carpenter is aiming to develop a new way to access capital market capacity, complementary to securitisation or another form of contingent capital that could cover both the liability and the asset (the equity investment bucket) sides.

To this end, it is implementing innovative ALM strategies, including investment strategies able to capture on this asset side, the impact of large re/insurance events on the volatility of the re/insurance industry (through the volatility of re/insurance stocks).

Such strategies not only capture the ‘extra noise’ around re/insurance stocks should a ‘mega-catastrophe’ happen, but they also represent an interesting and efficient hedge against equity market crashes because of the very high ‘beta’ of those re/insurance stocks.

Such strategies, based on a specific volatility dispersion reveal to be a much more efficient way to capture the risk

and/or its impact on the stock market than a directional position on the re/insurance stocks themselves.

In other words, the same investment strategy allows to cover the liability side (the peak risk that generates extra volatility in the insurance industry) and the asset side (the equity market crash resulting from a severe pandemic or a dirty bomb).

The investment should overperform, allowing the investors to recover their claim or asset losses with financial gains on the instrument. The strategy can be wrapped as a swap or as a fund or security (for example, European Medium Term Note).

### FUTURE DEVELOPMENT

Looking ahead, capital market solutions offer much more than an alternative way to transfer risks through securitisation. They may also be viewed as much more than new forms of capital, equity, and contingent capital, such as hybrid convertible. Clearly, these new capital market solutions are becoming an integral part of our business. We really are entering into efficient ALM solutions, beyond the traditional liability management or asset management approach. It

means there are innovative and simple ways of accessing capital market capacity, leveraging new asset classes based on second order risks such as equity volatility dispersion, whose potential remains mainly unexploited.

The past three years have seen a significant increase in ILS

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use and the development of several new and innovative products, and more deals are in the pipeline. With more than \$25bn of outstanding capital today (including sidecars, ILWs, etc.), the annual rate of growth we have witnessed in recent years and the increasing search for innovation and market opportunities, the threshold of \$100bn in outstanding capital might very well be reached in less than five years from now. Another major

series of catastrophes in highly insured zones of the globe is likely to accelerate the process even more.

### BENEFITS OF TRANCHING

The market for ILS is still in its infancy and will likely be quite different in five years, thanks to new bursts of innovation and a progressive lift of the limiting factors. In order to develop further, the ILS market must draw more investors beyond the hedge funds and private equity firms. The increasing popularity of securitisation among issuers will help increase the range of risks available in the market, but other solutions are needed.

Tranching is likely to help. Here, several distinct risks are pooled together, and the resulting portfolio is divided into multiple tranches with varying expected returns. Tranching allows structuring firms to transform low-rated bonds into investment-grade securities by concentrating the risks in lower quality tranches stemming from subordination and over-collateralisation. These higher risk tranches, called 'junior' or 'equity' tranches, are usually bought by alternative investors attracted by the potential waterfall profits they would receive if no triggering event occurs. Some ▶

groundbreaking deals have reached the market, including recent transactions brought to market by ABN Amro (Bay Haven Re in 2006, Fremantle Re in June 2007). Guy Carpenter, through its affiliate GC Securities Ltd., advised the issuer in both deals.

So far, investors have been able to pick up the risks they were offered when issuers went to the market. In the future, investors could approach insurers and define the risks they seek. Structuring firms or risk transfer hubs could emerge to find these risks or create them through tranching.

#### **BASIS RISK CHALLENGE**

As parametric or index-linked securities will always retain basis risk, solutions to address this point (other than indemnity triggers) will be found in other corners. Standardised products, such as Deutsche Bank-sponsored Event Loss Swaps and index-based derivatives, now present attractive features for qualified investors. The first attempt to launch index-based products more than 10 years ago failed to attract attention and liquidity (cat index on the Chicago Board of Trade in 1995). Many believe it may have been too early, however, capital markets have dramatically evolved, and the

investor base is deeper today.

As we look ahead, a very encouraging frontier was crossed recently with the New York Mercantile Exchange (NYMEX) and the Chicago Mercantile Exchange (CME),

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which both added natural catastrophe-related futures and options for trading. Derivatives will be written on these indexes, and the year to come should further illustrate the attraction of insurance risks to capital market investors.

It certainly appears that the convergence of insurance/reinsurance and financial markets about which many theorised during the past decade is gathering momentum, and the tipping point is here at last. ®

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