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The following article on Insurance Event Linked Investments is written by a guest writer of Helvetic Investments, Mr. Stefan Mueller, Chairman and CEO of Solidum Partners AG, a Swiss based dedicated insurance linked securities investment advisor. Stefan Mueller holds a masters degree in finance. From 1996 to 1999 he worked as an underwriter at Centre Re, focusing on the design and implementation of financial solutions for insurance exposures. Until 2003 he was an insurance event-linked securities specialist at Converium, responsible for development and transaction of transfer mechanisms of insurance risks to capital markets. He is the founding partner of ISP Alternative Risk Advisors AG, which after a buyout in December 2006 was newly branded Solidum Partners AG.

This article is written in order to enhance investors' knowledge of this emerging asset class – and is not meant to create an offer of any product. The reader should please be informed that the owner of Helvetic Investments – IHAG Holding Ltd. in Zurich – holds an equity stake in Solidum Partners AG.

Insurance Event Linked Securities – an emerging asset class

Insurance Event Linked Securities, short ELS, are insurance-contract-based investments where the investor gets a compensation (insurance premium) for assuming insurance event risk. ELS come in the form of rights, obligations or securities. In each case the return of notional value or payment of compensation for assuming insurance event risk is contingent on the non-occurrence of a trigger event of specified magnitude such as a hurricane, earthquake, pandemic, satellite failure, airplane crash or other cause of loss. The most prominent exponents are catastrophe bonds, but they can take any other contractual form.

ELS belong to a new asset class: Insurance Linked Securities (ILS). The ILS investment universe can be divided in two distinct strategies: life and non-life. It is further advisable within the life segment to distinguish between (i) pure insurance event risk (e.g. excess mortality due to pandemics), (ii) trend risk (e.g. longevity), (iii) macroeconomic risk drivers embedded in insurance financing risk (e.g. premium financing, regulation triple X transactions and embedded value securitizations) and finally (iv) legal, structural and market risk (as in life settlements).

In this article, the focus shall be on ELS in the narrow sense and catastrophe bonds in particular, as described above, where an investor gets a premium for taking pure insurance event risk. ELS offer interesting benefits for an investor:

Attractive return potential with good risk/return characteristics:

- ELS offer a very attractive return for the assumed risk. Historically, after catastrophic events that lead to a reduction of the capital base of the reinsurance industry, reinsurance premium increase significantly while only contracting moderately in phases of little loss activity. Examples of such catastrophic events are hurricane Katrina or the loss-record year 2011 with insured losses in excess of USD 105 billion from the Great Tohoku earthquake in Japan, the New Zealand earthquake, tornados in the USA and floods in Thailand. Over such cycle, a cat bond exposed to Florida Hurricane with loss expectancy of 1% typically yields around 5% to 6% over money market.

Stable risk parameters:

- Contrary to credit markets, the risk within ELS does not increase when the general economic situation worsens.

- The insurance risk does not change over night as may the perception in a specific corporate name (or sovereign issuer). The forces of nature require larger time horizons.

Independence from other asset classes:

- ELS are independent from changes of the yield curve or the economic environment. This structural independence proved to hold up in a situation of stress following 9/11, during the sub-prime mortgage crisis or after the Lehman default.

- ELS show negligible to low correlation to other asset classes and therefore have an excellent portfolio diversification effect. However, as catastrophe bonds are liquid instruments and traded daily in sizable volumes, they are not isolated during a general flight to liquidity as observed post Lehman. But they managed the crisis substantially better and were sometimes the only instrument that could be liquidated close to par. The 4th quarter of 2008 was the record quarter in secondary market trading in catastrophe bonds since the naissance of this market in 1996.

No contagion effect:

- As only physical variables determine the activation of the insurance event triggers, there is no spill over effect from one group of bonds to another. An earthquake can not trigger a catastrophe bond with exclusive hurricane or typhoon exposure. This true intra asset class diversification is a desirable side effect of ELS investments. In order to determine the appropriate level of concentration risk, however, an investor has to monitor the composition of his portfolio because the catastrophe bond market is strongly driven by US East Coast, in particular Florida, hurricane risk.

Exogenous as well as market specific factors funnel growth:

- The strong growth of insured values in natural catastrophe exposed areas such as Florida, California, Asia or Europe challenges the capabilities of the insurance industry. The USD 15+ billion claims from the Thai floods of 2011 illustrate the reality of insured losses in fast growing developing market that are comparable to those in Japan, Europe or the US.

- More stringent capital requirements for insurance companies, driven by regulatory changes and increased scrutiny of rating agencies, force the industry to implement new ways of transferring exposures.

ELS offer investors access to genuine and pure insurance event exposures, i.e. access to the uncorrelated risk/return of a (re-)insurers' core business without assuming the asset portfolio and stock-price betas generally implicit within a typical (re-)insurance stock. It may be helpful to explore the basic structure of ELS with an example of a catastrophe bond.

Mechanics of a catastrophe bond: Since 1996, institutional investors can invest in non-life catastrophe bonds that use the format of a 144A securities issue, a standardized method of transferring insurance risk to investors, albeit one has to remember that each and every transaction is issuer specific and substantially different. Catastrophe bonds are securities under which a substantial premium is paid for the assumption of insurance (event) risk. The proceeds from the sale of the bond are invested in near risk-free assets to generate money market returns. The main compensation for assuming insurance event risk is the ceding (insured) company's premium for obtaining insurance cover. If no insurance events occur the protection seller (investor) receives the money market income and the risk-spread as regular, typically quarterly, coupon payments during the term of the transaction, typically two to four years. The redemption in full at maturity is contingent on the non-occurrence of a well-defined, insurance-related trigger event such as an earthquake, hurricane, typhoon, cyclone, tornado, hail storm, winter-storm, flood or pandemic. If one of the designated events occurs, all or part of the principal is transferred to the insured company, coupon payments cease or are reduced, and at maturity there is either no, or a reduced amount of principal repaid.

The basic structure of a catastrophe bond (Figure 1) includes the following elements:

- The sponsoring (ceding) entity, usually an insurance/reinsurance company, establishes a special purpose vehicle (SPV).

- The SPV enters into a re-/insurance agreement with the ceding entity and receives a premium.

- The SPV issues a floating rate note to investors; this note mirrors the terms and conditions of the re-/ insurance agreement. The investor receives the risk spread and the floating rate.
- The proceeds from selling the note are managed in a segregated collateral account to generate money market returns.
- If no trigger events occur during the risk period, the SPV returns the principal to investors with the final coupon payment.

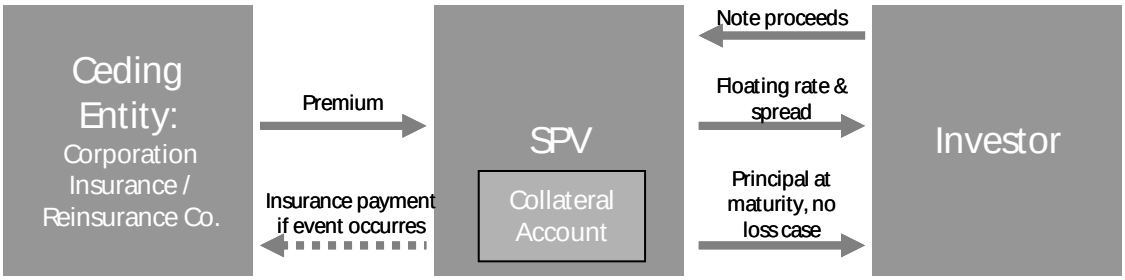

Figure 1:Catastrophe bond structure

The typical "excess of loss" position in a catastrophe bond structure supports alignment of interest between protection buyer and seller, i.e. the protection buyer suffers substantially before any investor, and this sharing of loss keeps the market relatively honest compared to developments observed in other securitization markets, e.g. in mortgage backed securities or the life settlement market. Not only are the type of business, the geographical scope, and the peril type clearly defined from which a loss can affect a cat bond, but typically the cat bond investor is only exposed to truly catastrophic events caused by 'Acts of God' which minimises moral hazard or adverse selection.

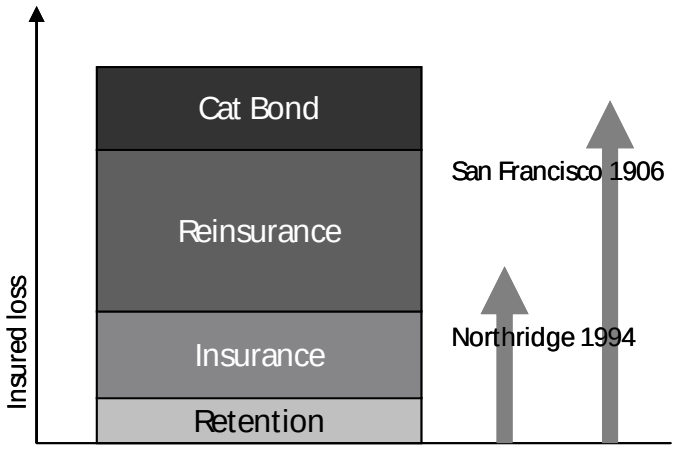

Figure 2: Excess of loss structure

Catastrophe bonds investors are subject to two distinct sources of risk, the first being the insurance risk that the catastrophe bond assumes (and ultimately determines its return and attractiveness), the second is the contingent credit risk embedded in the collateral account. Most current catastrophe bonds restrict collateral account investment to U.S. Treasury Money Market Funds, but there are at least five other approaches. The significance of the collateral structure has been brought to surface by the Lehman default. Originally, the typical catastrophe bond structure used a total return swap by which often an investment bank guaranteed a return equivalent to LIBOR on investments in the collateral account (and by doing so achieved cheap financing for its own activities). At the time of its demise, Lehman was the total return swap counterparty for 4 of 119 cat bonds in the market. Despite only a small number of bonds affected, this caused the market to focus on the safety of underlying assets and design new, conservative collateral structures that decreased the counterparty risk further. Going forward, investors have to be vigilant not to increase (unwanted) credit risk elements by relaxing standards. If an investor desires more return, he is most likely better compensated by selecting a riskier tranche in a catastrophe bond issue rather than adding counterparty credit risk to the structure.

Performance of catastrophe bonds:

Catastrophe bonds compare very favorably with other traditional and alternative asset classes, which can be seen by looking at Figure 3 displaying the Swiss Re Cat Bond Total Return Index, a benchmark (however non-investable and prior all costs, fees etc.) used for the ILS industry. This index is based on secondary market data and tracks the price, coupon and total rate of return for cat bonds since 2002. The past performance shows three periods of stress: Hurricane Katrina, the Lehman failure and the large Tohoku earthquake. Despite these events it clearly reveals an un-matched Sharpe Ratio. It further indicates a low correlation between catastrophe bonds and other asset classes. Therefore, theoretically, the required return on catastrophe bonds should be lower than the return of corporate bonds with a similar risk quantity. In practice investors in catastrophe bonds appear to earn a combination of an illiquidity premium, a ‘novelty’ premium and a modeling premium for taking insurance event risk.

Two words of caution may be appropriate here: Firstly the word “index” may suggest broadest possible diversification where in reality diversification may be limited: Catastrophe bonds are mainly issued to cover peak exposures and are, therefore, quite risk concentrated by nature. Depending on the market cycle, around 55% to 70% of all catastrophe bonds are exposed to first event US East Coast hurricane risk. As this risk is the most pressing one for the reinsurance industry, it also pays the highest coupon. As such, the index is biased towards high concentration of the highest paying exposure. Secondly, the really cataclysmic hit to the market has not yet been experienced and is missing from the index data. Since the starting of reliable data capturing the 1926 Miami hurricane was the historical wind event with highest loss

potential and would, if reoccurring today, cause insured losses of approximately USD 125 billion. Such a super-cat scenario will have an impact on most if not all cat bonds issued to cover hurricane risk in this region. So it becomes evident that for exactly this reason it is wise not to put all eggs in the same basket.

But let us end the historic performance discussion with another aspect that hopefully puts the remarks above into the right perspective. The cat bond market deals with events of true once-in-a-century characteristics, such as the mentioned 1926 hurricane. Shying away from the risk because of the possibility of such events happening would also mean that one should not invest in equities or bonds because of the risk of a World War 2 or Great Depression equivalent occurring. Surely, such a refusal is not an option. But what is possible is to increase diversification, e.g. by including well-paying ELS into the portfolio.

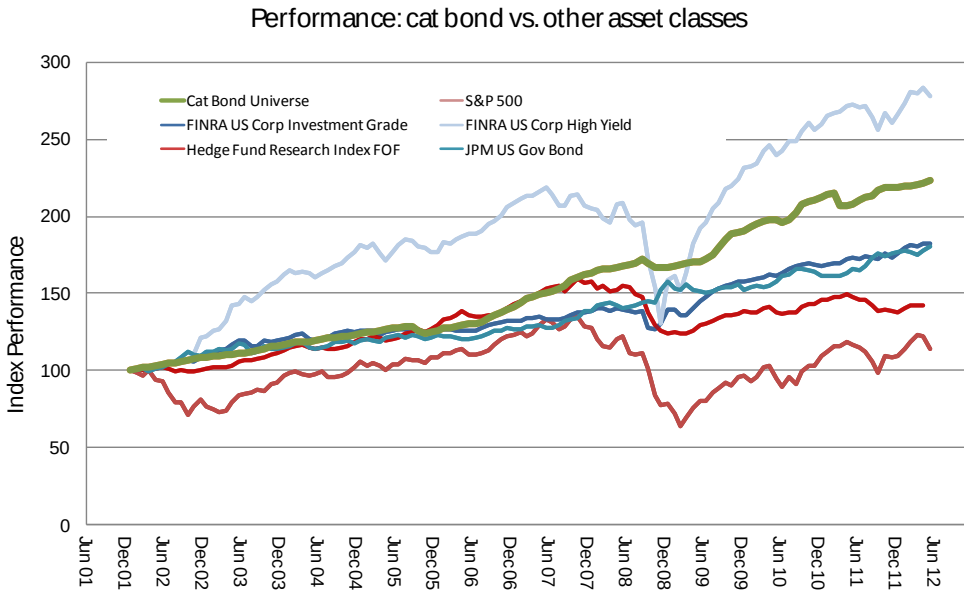

Figure 3 : Performance of the catastrophe bond universe compared to other indices.
Data-source: Bloomberg – JPMTUS Index

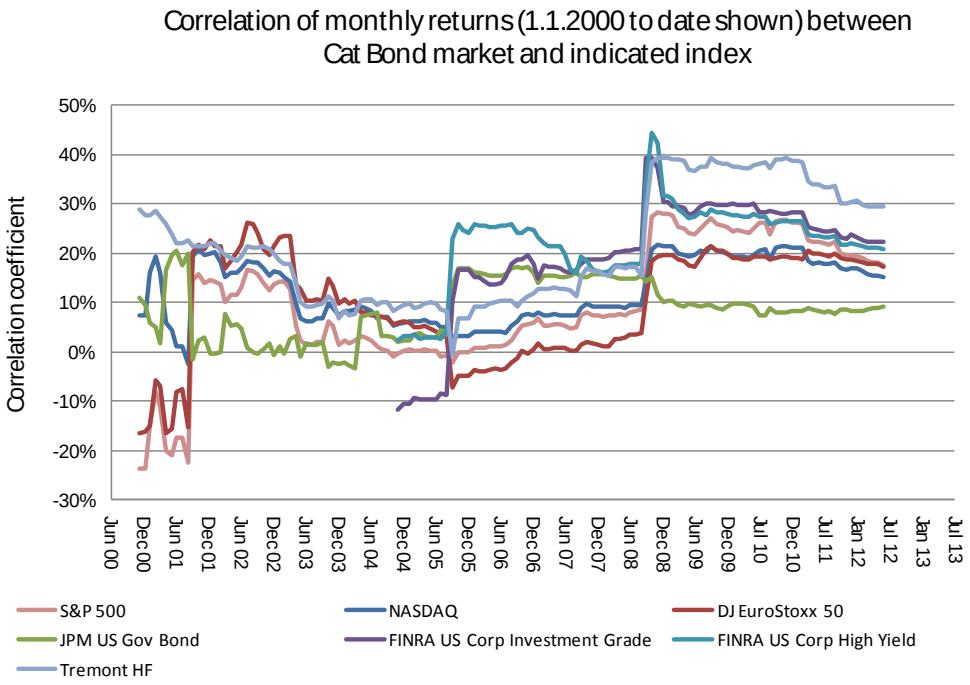

Figure 4: Correlation of monthly returns. Data-source: Bloomberg – JPMTUS Index

Figure 4 shows the historic correlation of monthly returns of the catastrophe bond universe versus other asset classes. (Based on the Swiss Re Cat Bond Total Return Index and expanding back to 2000 with data from Aon Benfield Securities, Inc.) This chart indicates that the independence of the cat bond market is generally quite high. Three events temporarily changed the correlation structure: September 11, Hurricane Katrina and the failure of Lehman Brothers, but in contrast to most other asset classes, the correlation increased only moderately and never approached values close to 1.

Why does this market exist? Traditionally, insurers have turned to the reinsurance market to offset risks that exceeded their own carrying capacity. Primary insurers are often strongly geographically concentrated, typically limited by national or state boundaries; this offers reinsurers the possibility of gaining diversification benefits by reinsuring primaries on a global basis.

At the same time, insured values increased dramatically. In the last decade, an annual growth of 8-10% could be observed in Florida, substantially surpassed in the developing regions of Asia and Latin America. In addition, losses from catastrophes have been rising faster than inflation for several decades. This means that very large catastrophes have the potential of generating losses that exceed the reasonable carrying capacity of the reinsurance industry. The global reinsurance industry has current capital levels of approximately USD 400 billion. To put this number into perspective, the 1926 Miami Hurricane occurring today would clearly exceed 25% of the reinsurance industry's capital base, ultimately stressing the industry's ability to fulfill its

payment obligation in a short time span; hence credit risk and access to funds are important drivers in an insurer's decision to go the capital market route.

Another concern for primary insurers is the volatility of reinsurance pricing. Catastrophe bonds allow insurers to efficiently plan the reinsurance budget as a catastrophe bond is typically a three years transaction.

Outlook: The market for catastrophe bonds and other ILS has been attracting more institutional investors eager to take advantage of the market's diversification potential and possibilities of excellent return. Despite the evident increased interest, catastrophe bonds remain a niche asset class that has not yet found a way into most mainstream portfolios.

For investors with an appetite for an attractive risk/return profile, being an early adapter of a new alternative asset class like ILS is a viable option, especially while catastrophe bond spreads are high compared to other asset classes.