An Introduction to Insurance-Linked Securities

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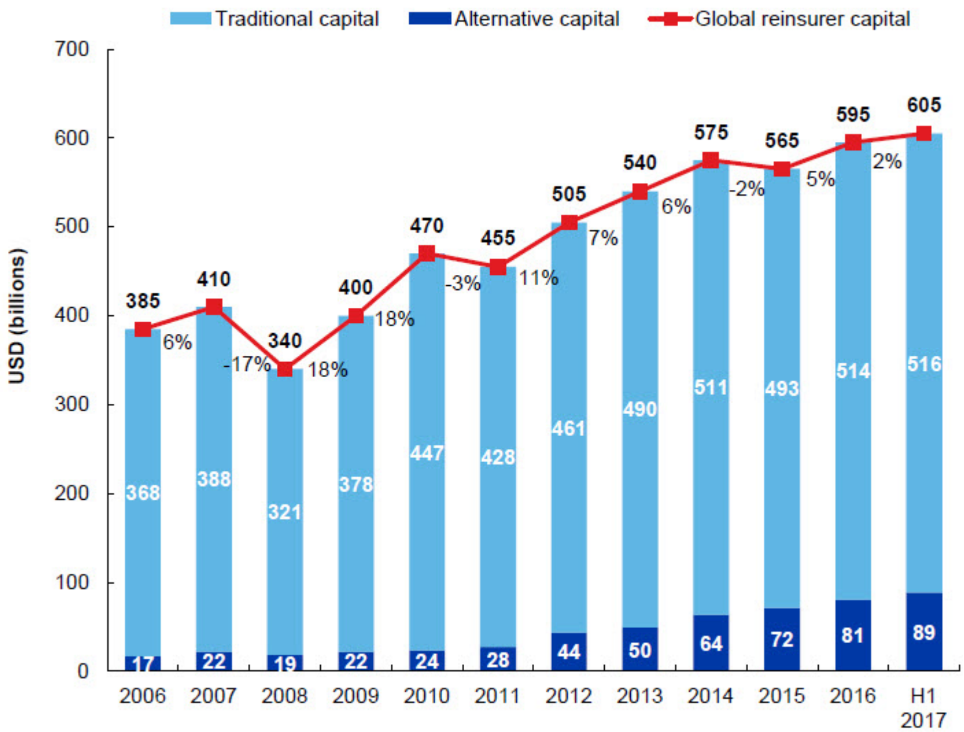
- Insurers are increasingly transferring a portion of their natural catastrophe related liabilities to capital markets and private investors through use of the insurance-linked securities market.
- These securities provide a diversifying source of return and low volatility yet are susceptible to large drawdowns caused by the occurrence of natural disasters.
- Investors considering the asset-class should be aware that coupon payments per unit of expected loss are near historic lows. As a result, forward-looking returns are likely to be below historic averages and the probability of negative returns is higher.

Brief History

The insurance-linked securities (ILS) market was created to help diversify risk within the insurance and reinsurance industries. Insurers often specialize in a certain region or area of coverage, leaving them susceptible to large losses if a catastrophic event strikes their area of focus, damaging the assets of their policy-holders. To protect against these situations, insurers have historically transferred a portion of their liabilities to reinsurance companies, in exchange for premium payments. While reinsurance companies still play a large role in this risk transfer process, over the past two decades, mutual funds, hedge funds and institutional investors have begun serving as an alternative source of reinsurance capital following the emergence of the ILS market.

Following Hurricane Andrew (1992) and the Northridge California earthquake (1994), the first form of an ILS was launched through the issuance of a catastrophe bond (cat bond). Since then a total of $96 billion in cat bonds have been issued with payouts tied to a variety of natural disasters, and the market has grown to $31 billion as of December 31st, 2017[1]. Over this period, seventeen cat bonds have lost principal from catastrophic events with losses totaling slightly over $1 billion[2], and an active secondary market has developed, with $4.2 billion traded in 2016[3]. Private ILS have also been created as total alternative capital and have reached $82 billion, which is 13.7% of global reinsurance capital and an increase from 6.2% in 2011[4].



Source: AON Benfield Securities. “Reinsurance Market Outlook.” September 2017

Structure

Cat bonds and a form of private ILS known as Collateralized Reinsurance makeup the majority of the ILS market. These securities are issued by a special purpose vehicle (SPV), sponsored by the issuer, that is a legally independent, bankruptcy remote entity, setup for the sole purpose of the transaction. The SPV issues the security to investors and receives principal amounts which in return are invested in cash or cash equivalents in a collateral account. If a qualifying event causes losses to exceed a specified level over the term of the agreement, typically three to five years, collateral will be liquidated to reimburse the issuer. If the terms of the bond aren’t triggered, the investor will receive the principal of the security back at the maturity of the contract along with coupon payments and interest earned on the collateral.

Diversification & Risk

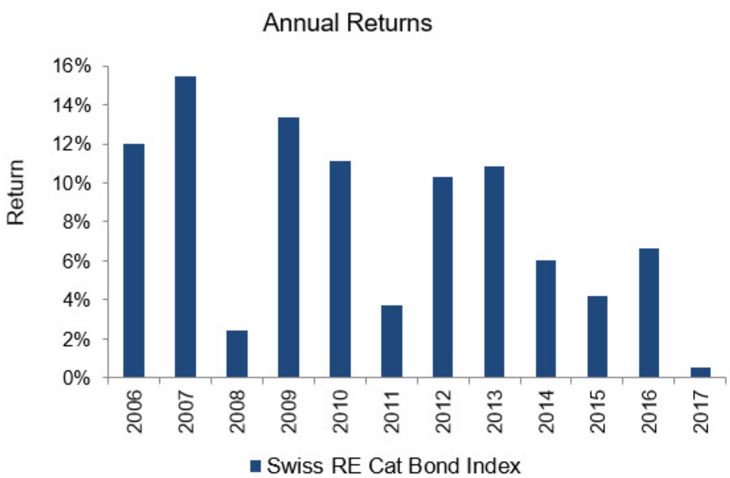
One of the most attractive features of this asset-class is the diversification of benefits to equity and fixed income assets. One goal of diversification is to create a mix of assets that are unlikely to simultaneously see declines during periods of market stress. While equity and fixed income are good compliments to one another, they are naturally interrelated as components of the capital markets. The benefit of ILS relative to traditional equity and fixed income investment is the driver of value is the occurrence of natural disasters as opposed to traditional economic factors. Additionally, the volatility associated with these assets has been fairly low compared to other market related investments. However, we do not believe the low realized volatility tells the full story on risk.

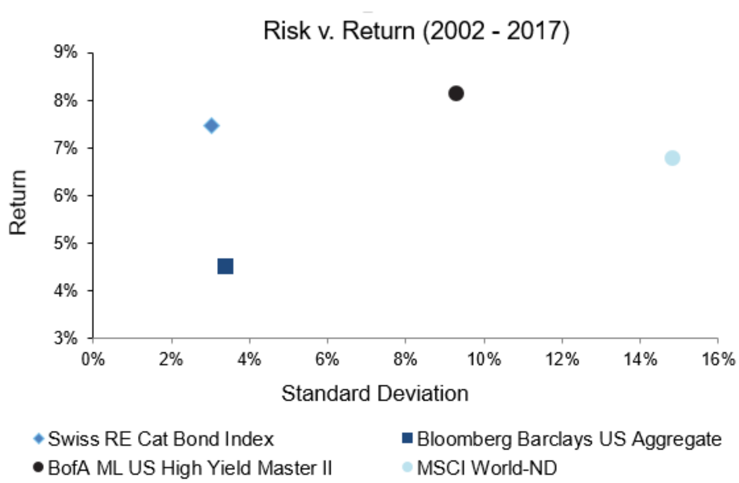
A hallmark of the asset-class is its concentrated exposure to “peak perils”, or areas with concentrations of expensive real estate that are highly susceptible to natural disasters. As a result, the market is highly sensitive to insured losses resulting from hurricane damage to the southeast United States and California and Japanese earthquake related damages. The large demand for insurance against peak perils drives a greater premium for insuring against those risks. While investors are able to reduce the potential for drawdowns by allocating to non-peak peril risks, it typically comes with the cost of lower return potential.

Additionally, while realized standard deviation has been low for these assets, it masks the potential for the asset-class to see a large drawdown if a significant natural disaster were to hit a heavily insured area, such as Miami. Annual losses incurred from natural disasters were modest from 2000 through 2016, averaging $51 billion a year[4]. In the three highest loss years for the asset-class – 2005, 2011 and 2017 – insured losses were between $120 and $130 billion, yet returns were still modestly positive with the worst drawdown of 6.3% occurring in September 2017. This was possible because the healthy premiums paid to investors to take such risks overwhelmed the realized losses. Therefore, if premiums shrink the probability for the loss of capital is likely to rise.

Pricing & Performance

The key determinants in the pricing of ILS are the estimated losses of each issue and the supply of capital for reinsurance. To estimate the expected losses of ILS, two main modeling services, AIR Worldwide CATRADER and Risk Management Solutions, are most commonly utilized. These models estimate the probability a disaster will strike and the potentially severity of that event. Then, the models will estimate insured losses, based on the number of insured properties included in the security and the characteristics (e.g. location and building materials) and value of each property. While the expected loss of ILS has remained fairly steady in recent years, the multiple of coupon payments per unit of modeled expected losses for cat bonds has fallen from roughly four times from 2004 to 2012, to slightly under two times as of December 31, 2017[1]. Amidst a relatively benign environment for natural disasters, investors have historically been rewarded for an allocation to catastrophe bonds. However, this dynamic may be muted going forward given the growing interest from investors for reinsurance capital. In a recent report, FitchRatings stated, “We believe the growth in the alternative capital sector has altered reinsurance market dynamics, making capacity shortfalls less likely and the underwriting cycle potentially flatter[4].” A muted return profile not only impacts expected long-term return, but the ability to overcome adverse events when losses are paid to insurers.





Source: eVestment

Conclusion

Investor demand for non-traditional sources of return and historically attractive risk-adjusted returns are likely to draw continued interest to ILS. While the diversification benefits of the asset-class should remain in-tact, a benign environment for natural disasters has been a tailwind for performance and the historically low standard deviation masks the potential for an impairment to invested capital. As the compensation investors receive for bearing the risks of ILS fell to an all-time low given the growing demand to invest in the asset-class, both forward-looking returns and the probability of negative returns are adversely impacted. We therefore recommend investors considering allocations in this space proceed with caution and give consideration to the premium received for the total risk being taken.

For more information, please contact any of the professionals at DiMeo Schneider & Associates, L.L.C.

1. Artemis. “Catastrophe Bonds & ILS Issued and Outstanding by Year.” Retrieved March 2018 from http://www.artemis.bm/deal_directory/cat_bonds_ils_issued_outstanding.html
2. Artemis. “Cat Bond Defaults.” Retrieved March 2018 from http://www.artemis.bm/deal_directory/cat-bond-defaults.html
3. Elementum Advisors, LLC. “Introduction to Risk-Linked Investments.” 1H 2017
4. AON Benfield Securities. “Reinsurance Market Outlook.” January 2018

About the Author:

Michael researches and performs operational due diligence on core investment managers and is a member of the firm’s Global Public Markets Research Group. Prior to joining the firm, Michael was the Director of Research at ORION Investment Advisors and worked with the investment management group of Clark Enterprises Inc., a private investment firm. He received a BA in Finance from the University of Maryland and is a CFA® charterholder and member of the CFA Society of Washington and CFA Institute. In his free time, Michael enjoys spending time with his sixteen nieces and nephews and rooting on University of Maryland and DC sports teams.

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