

**THE LATEST IN INSURANCE LINKED SECURITIES: CHANGES IN THE
CATASTROPHE BOND MARKET AND THE EMERGENCE OF THE LONGEVITY BOND**

by

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The insurance-linked securities (ILS) market is changing and developing as investors and sponsors have reacted to dramatic changes in the financial markets by seeking to diversify portfolios with more insurance-based investments that are not correlated to the rise and fall of the financial markets. Notably, the catastrophe bond (or “cat bond”) market is recovering with rapid growth and new collateral structures after fallout from the collapse of Lehman Bros., which had a counter-party role in several cat bonds at the time of its bankruptcy, and the effect on credit markets created by credit default swaps typified by the downfall of insurance giant AIG. The more conservative approaches now being employed are attracting new investments in cat bonds across the global market.

A new market for the mortality risk-based cousin of the cat bond, the “longevity bond” is also beginning to emerge, with the notable recent formation of the Life and Longevity Markets Association, a London consortium of financial services institutions, including insurers, banks and pension companies devoted to standardizing products, valuation models, and trading indices. Its mission is to unite investors seeking a new market uncorrelated with the financial markets, with pension providers and insurers looking to hedge the developing longevity risks associated with growing populations with increasingly long life spans.

This paper will provide a brief history of the ILS market, its purposes, and the niches that have come to be filled by cat bonds and other products. It will then explore the new trends in these markets, and what they portend for 2010 and beyond.

I. A Brief History of Insurance-Linked Securities

Insurance-linked securities (sometimes referred to as “event-linked securities”) were developed as a means to create an alternative means for insurers and reinsurers to transfer risk from high-severity, low probability events – such as natural catastrophes or pandemics – that had become difficult to manage utilizing traditional insurance structures, particularly after large-scale natural disasters in the late 1980’s and early 1990’s, such as Hurricane Andrew in 1992, wrought havoc on the traditional insurance market.

Looking to spread the risk of such events, insurers and reinsurers developed “special purpose vehicles” (SPV’s) to tap into capital markets as a source of much-needed collateral to leverage against particular catastrophic events. Thus was born the catastrophe bond in the mid 1990’s.

The bonds operate as follows: when an insurance or reinsurance company (or governmental or private corporate entity) faces unaffordable or unobtainable reinsurance or retrocession coverage for catastrophic risk, it may instead set up an SPV to issue a bond, the proceeds of which are invested in low-risk securities, as a means to tap the capital markets for necessary collateral. Investors are drawn to the bonds as a diversification tool, to hedge against the risks of the less predictable financial markets by investing in securities for which the associated risks are instead tied to insured events, such as hurricanes in the southeast United States or tsunamis in Japan.

The risk, or the “bet,” for the investor, is the non-happening of the catastrophic event during the course of the investment (cat bonds typically mature in one to five years). At the time such bonds mature, the investor retains the collateral, having enjoyed the modest, but more predictable gains during the investment period no matter the fluctuations in the capital markets. However, upon the occurrence of an insured event, the investor faces the risk of loss of some or all of the principal investment. These risks, though severe, are by their nature also exceedingly rare, and can thus hedge against unpredictable losses in non-event linked markets.

To further hedge against the risk of under-collateralization, cat bond sponsors may generate additional revenue by entering into further risk “swaps” with so-called “counter parties” or third-party repurchasers of some portion of the risk. As we will see, these collateral structures proved problematic after disaster in the credit swap market and the Lehman Brothers bankruptcy revealed that cat bonds were over-invested in the credit markets, rather than relying on the more conservative approaches that are now gaining steam.

II The Expanding, Revamped Cat Bond Market

As noted above, the cat bond market was not immune to the effects of the global economic downturn. According to data provided by GC Securities, the cat bond market soared in 2006 and 2007, but the meltdown of the markets in late 2008 essentially shut down issuance during what is typically the busiest quarter in the cat bond market.¹ However, after a slow start in 2009, the market appears to have recovered, with a total of 19 bonds issued in 2009,² bringing the annual total of new transactions to levels nearing those of 2006 and 2007, making it the third highest total transaction year.

The market appears to have responded to the challenges presented by the economic downturn and the collapse of Lehman Bros, which was a counter-party to several cat bonds at the time it filed for bankruptcy protection. This credit swap collateral structure (referred to as “total

¹ See Johansmeyer, Tom, “Cat Bond Market Pushes Past \$3 Billion” (Daily Finance, Dec. 12, 2009)

² See Hills, Sarah, “Cat Bond Market Develops New Collateral Trends” (Reuters, Jan. 26, 2010).

return swap”) typified by Lehman’s role as counterparty now appears to be nearing extinction as sponsors have developed new, more cautious solutions.

Indeed, of the 19 bonds issued in 2009, only four relied on total return swap collateral structures, and all four were issued in the first quarter.³ Most of the new bonds issued relied instead on government-guaranteed collateral solutions or tri-party repurchase agreements (sometimes referred to as “tri-party repos”). The tri-party repo structure relies in part on credit swaps with banks based on corporate bond issues, returns on which are generally tied to LIBOR, and thus provide a level of investor security, while maintaining a higher rate of return for investors in the bonds. However, only three bonds used this structure. Another innovation used in some new issues was the use of government-backed assets, though there is concern that this collateral source may be short-lived as it was a result of various government bond issues and guarantees on behalf of third parties as a result of the financial crises and various government bailouts. The most common collateral structure among new bonds issued in 2009 relied on U. S. Treasury money market funds. While the returns are more modest, the structure is simple and minimizes credit risk, attracting wary investors.

While challenges remain as new structures are tested and sorted out, industry responses to previously problematic collateral structures appear to have allowed the cat bond market to recover, and to have brought the industry focus back on expanding the investor base.

III The New ILS on the Block: Longevity Bonds

In much the same way cat bonds allow property-casualty insurers and reinsurers to access capital markets as an alternative to traditional reinsurance transactions, a new market is emerging based on that model which will allow life, health and pension insurers and reinsurers to access capital markets in much the same way.

“Longevity Risk” is the risk that people will outlive expectancy, which adversely affects pension and annuity providers as the population and life expectancy of annuitants and pensioners grows. In Britain alone, one source calculates that every additional year of life expectancy gained past age 65 will increase the present value of pension liabilities by nearly \$50 billion.⁴ In response to the problem, pension companies, and their insurers and reinsurers, have looked to the ILS bond market as a means by which to manage longevity risk, in much the same way those at financial risk for natural disaster have looked to cat bonds.

³ See Hills, *supra*, note 2.

⁴ See “Live Long and Prosper: Plans Are Afoot to Create a New Capital Market in Longevity Risk” (The Economist, Feb. 4, 2010).

A natural fit for swaps in longevity risk are life insurers and reinsurers who *benefit* by increased longevity as it delays the death benefit on life insurance policies, or insurers of pandemic and other health risks which also benefit from longevity, thus allowing for natural swaps and risk offsets. These issues and others were the impetus for the recent formation of the Life and Longevity Markets Association (LLMA), a British consortium of insurers, reinsurers and pension providers that have united for the purpose of developing a market in longevity bonds.

The LLMA's founding members include AXA, Deutsche Bank, J.P. Morgan, Legal & General Group PLC, Pension Corporation, Prudential PLC, RBS and Swiss Re. The LLMA touts its goal of bringing structure to this new market, which it believes will benefit members (and those served by them) in tackling the problems of longevity/mortality risk, and will benefit investors seeking new markets not correlated with financial market or credit risk as a means of diversification. The LLMA has formulated a mission to standardize products, valuation, and indices, making it easier for investors to compare products and more accurately calculate risk and price.

IV Conclusion

Much has recently occurred in the ILS markets. The cat bond market is recovering, and has nearly expanded to pre-financial crisis levels due to innovations in collateral structures, and the inherent draw of more conservative insurance-based investment in turbulent times. These trends in innovation and expansion of the investor base in the cat bond market will likely continue into 2010. Moreover, a nascent market uniting longevity risk with the necessary collateral offered by capital markets appears ready to take off and its development will be closely watched as pension, annuity and other longevity risk exposures increase dramatically along with aging populations in the developed world.

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