

No. 13, February 2014

Spreading the Load—The Past, Present and Future of Catastrophe Bonds

By William Dubinsky*

Those who've walked across a frozen lake know the best way to avoid a dip in the icy water below is to spread your weight across the ice. The same theory applies to risk management.

A policyholder shares a risk with an insurer, who can then share a proportion of the collective risk of some or all of its policyholders with a reinsurer.

A storm brewing...

When Hurricane Andrew hit south Florida in 1992, however, reinsurers were shocked at the pure scale of insured—and ultimately reinsured—losses, which were significantly larger than anticipated.

This led people to look for a way to spread their risk more widely. This occurred against the backdrop of a growing securitisation market, especially in the U.S., principally focused on mortgages and consumer loans.

Pioneers in the market worked to combine securitisation technology with the need of the insurance industry for a wider pool of capital, resulting in the first catastrophe bond (cat bond) transactions.

Cat bonds are insurance-linked securities, i.e. tradable insurance-related financial transactions. In the beginning these deals covered insurers and reinsurers who had the most extreme exposure to peak events, i.e. those that were likely to result in the largest insured losses, such as Florida hurricane and Japanese earthquake.

The earliest pioneers included companies such as Tokio Marine, USAA and St Paul Re, which is now Platinum Re. The transactions themselves would be fairly familiar to practitioners today, in terms of format.

For example, the first deal for St Paul Re, Georgetown Re, was essentially the same as a "sidecar", and the initial deals for Tokio Marine, USAA, and also the California Earthquake Authority were basically indemnity trigger and index trigger cat bonds.

This means that while the community transacting these structures has evolved, the actual transactions themselves have not changed dramatically. Rather the last 15 years has seen incremental tinkering to improve them.

Feeding a need

Cat bonds fulfil a growing need of insurers and reinsurers looking to trade their peak coverages, which require a lot of capital to sustain, to a third party who needs less capital to sustain them. This has led to a steady stream of capital—and therefore capacity—flowing into the reinsurance space.

The influx of capital has been significant. In 2000 the amount of capacity for insurance-linked securities (ILS) and related solutions was USD3 billion; at the end of 2013 we think an equivalent number is approximately USD50 billion.

If you can't beat 'em, join 'em

This influx has been especially pronounced in the last two years, and has begun to have a significant effect on parts of the catastrophe reinsurance market. Capacity flowing in from the capital markets is now resulting in price reductions across various lines of business, being particularly pronounced on lines unaffected by catastrophe

* Managing Director and Head of Insurance-Linked Securities for Willis Capital Markets & Advisory (WCMA). Dubinsky has authored this article in his individual capacity and it does not necessarily represent the views and opinions of WCMA.

losses.¹ The sheer volume of capacity currently in the market has now, however, got to an extent where it is resulting in price stabilisation on many loss-affected lines as well as, as some traditional reinsurers try to retain business.

Others have evolved into hybrid third party capital managers, setting up sidecars to take investor's capital and use their underwriting expertise to deploy the capital profitably and taking a fee for their trouble.

So why is there so much interest from investors in insurance risk? Primarily many investors are seeking investments where default risk is largely uncorrelated to the rest of the investment market. Insurance risk, unlike equity in actual insurance companies, is largely uncorrelated to the rest of the stock market. If the U.S. stock markets drop 20 percent in a quarter, the drop will not cause a natural catastrophe. Similarly, even though natural catastrophes can cause devastating losses to people and property, they tend to have little if any impact on the broader financial markets.

So where are we now?

With approximately USD17 billion of cat bond capacity producing an equivalent amount of collateralised capacity, the cat bond market has grown significantly from its mid-1990s origins. The market is largely driven by U.S. primary insurers; with 11 of the top 15 U.S. insurers by premium volume having accessed the cat bond market.

European reinsurers including Swiss Re, Munich Re and SCOR also make up a sizeable component of outstanding capacity, issuing for their own account as well as fronting for their clients. Bermudian reinsurers, Japanese insurers, government affiliated insurers, as well as corporates, also utilize cat bonds.

Given the potential for very large losses from U.S. natural catastrophes, it is no surprise that over 86 percent of outstanding cat bond capacity is exposed to U.S. perils and 73 percent is exposed to U.S. hurricane.

So who invests in cat bonds?

While generalist institutional investors (and reinsurers) still participate, specialised funds dedicated to insurance risk investments provide nearly two-thirds of total capacity. These dedicated ILS funds, either independent or affiliated with a reinsurer or other financial institution, provide an efficient way for generalist institutional investors to access this alternative asset class. As the asset class continues to gain scale, the pendulum may swing back towards the generalist investors who may see value in developing in-house expertise, especially for cat bonds.

In recent years, sidecars and reinsurance-sponsored collateralized funds have expanded to offer the generalist additional ways to invest in reinsurance risk. In contrast to cat bonds, which are excess of loss or nonproportional reinsurance, sidecars are quota share or proportional reinsurance.

Although more than 150 investors actively monitor and invest in cat bonds, the market remains quite concentrated with between 15 to 20 core investors that drive the market. Capacity remains concentrated with approximately two-thirds of overall direct investor capacity located in North America, a third in Europe and a limited amount in Asia.

So where do we go from here?

In regards to the future, it is my opinion that we will see cat bonds, and other capital markets reinsurance solutions (such as sidecars, collateralized reinsurance, contingent capital, etc.) becoming more "main stream", as opposed to sitting at the side lines of the traditional reinsurance market.

It is becoming an ever more central part of the conversations that brokers, reinsurers and large insurers are having about the role that capital and contingent capital should be playing. I think that this will continue, because the more mainstream that cat bonds become, the more people will look to use them.

Cat bonds have many benefits: for insurers and reinsurers as they offer the opportunity for carriers to make better use of their capital and increasing returns. They also offer multi-year collateralized protection. Cat bonds traditionally provide a single limit over a two to four year term at a fixed rate on line. The cat bond proceeds are

¹ Willis Re (2014). *1ST View*. London: Willis Re.



invested in AAA securities such as U.S. Treasury money market funds that can be liquidated readily to fund recoveries.

In particularly extreme events the collateral provides certainty in ability to pay vs. the mere promise to pay from an assuming company. From a public policy perspective they also offer the chance—because of their lower associated costs—to make insurance more widely available and affordable for policyholders (i.e., more people buying insurance). This increased demand can expand the take up rate of insurance and close the gap between economic losses and insured losses.²

I also believe that ILS in general will spread into areas outside of property catastrophe, such as pandemic business interruption coverage or casualty coverages of different types. As insurance needs begin to develop and expand worldwide, I think we'll see ILS expand into a lot of different areas as a complement to the product offerings of insurers and reinsurers.

² BNY Mellon (2013). *The Disaster Gap*. New York: The Bank of New York Mellon Corporation.