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Now is the time for catastrophe bonds

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Losses spreading from the September 11 tragedy can be measured in economic, as well as human, terms. Certainly, one of the consequences of the terrorist attacks on New York's World Trade Center will be the most insurance liability ever. This only spotlights the shortcomings of the surprisingly critical reinsurance market. More than ever, catastrophe risks require efficient management, and the ever-growing financial world of securitization may provide the necessary service.

As arcane as reinsurance sounds, a proper reinsurance market is essential to enable efficient allocation of catastrophe risk. This too sounds arcane, but this allocation can be critical even to the average citizen. The average citizen depends on insurance, but insurance often depends on reinsurance.

A business or household normally insures against the risk of natural catastrophe – primarily earthquake in Israel – because it cannot bear the economic loss of a building or home by itself. But primary insurers also cannot bear the entire risk. Because the natural catastrophe risk that they insure concentrates on a single geographic region, they cannot survive a sizable local catastrophe. Therefore, they sell portions of the risk to global reinsurance companies which regularly retain the risk because these companies consider themselves protected – they pool exposures to all kinds of risk events around the world, diversifying the risk to the presumed point of manageability.

The traditional reinsurance model, however, is imperfect. First, not even the reinsurance companies may be able to handle easily the capital obligation that arises from a mega-catastrophe. Almost certainly, they would struggle with one super disaster following closely on the heels of another.

One can only guess at the final losses arising from September 11 – the size of possible claims and their legal issues have yet to be clarified. Nevertheless, the prospective liability has reduced reinsurance capacity so significantly that many types of reinsurance have become prohibitively expensive. This leaves those facing oppressive risk with the prospect of expending great sums for insurance, maintaining an unsound risk profile or, in the case of insurers, limiting business.

In addition, it is sometimes thought that primary insurers do not pass enough of their catastrophe risk to reinsurance companies to survive a sizable disaster. Various barriers to efficient reinsurance, such as insufficient reinsurance supply, reinsurance company market power and opacity, are thought to lead to insufficient reinsurance. Regardless of the reason, overexposure by a primary insurer exposes the unsuspecting insured.

One way to expand and improve catastrophe reinsurance is to access efficiently new sources of risk capital. If the capacity of the traditional reinsurance industry is tight or its reliability is not convincing, then non-traditional capacity should fill the void by either recapitalizing reinsurers or by directly reinsuring primary insurers. The most logical supplier of alternative and efficient capacity is the highly liquid and highly-volumed capital markets. To access these markets, all one needs to do is issue an appropriate security.

Enter the catastrophe, or "cat" bond. Essentially, a cat bond is a tradable capital market instrument that creates reliable reinsurance in the event of a catastrophe. It is the end-product of a financial process called securitization, which transforms risk into liquid security instruments. A cat bond can take many forms, but it always involves reward if no catastrophe occurs and, depending on certain conditions, debt forgiveness if one does.

In one cat bond variation, an insurance or reinsurance company seeks to pass on natural catastrophe risk by issuing a short-term bond with attractive rates of interest. If a triggering catastrophe occurs in a specific geographic region within a stipulated period of time, and if losses exceed a certain threshold, the bondholder will lose some aspect of its investment. For the relatively conservative investor, the bond can offer a principal protected tranche – interest will accrue at a moderate premium over prevailing rates, but will be confiscated in the event of the triggering catastrophe. For the investor willing to stomach more risk, the bond can offer a tranche with interest at a great premium, but which exposes the principal to confiscation upon an insured event.

For the investor, the cat bond can be alluring not just because of its nominally attractive rate of return, but because of its unique nature. Since the risk to the cat bond investor is linked to acts of God and not market conditions, a cat bond offers a money manager diversification from the normal risks of market investments. Of course, it may not be efficient to sequester the maximum potential loss, as cat bonds usually do, instead of pooling uncorrelated risks, as traditional reinsurers do. Nevertheless, sequestration allows the capital markets to act as truly dependable reinsurers. Securitization of natural catastrophe risks was not possible even a decade ago.

Capital market instruments require much information for accurate pricing and, for many years, insurers and reinsurers alone collected and analyzed systematically the geophysical, meteorological and developed real estate information required for an economic understanding of natural catastrophes. But today, a number of specialty firms develop and sell to anyone models that simulate the economic aftershocks of, say, an earthquake.

In Israel, economic exposure to earthquakes is growing as both population and building construction grow. This only magnifies the importance of laying off reliably significant earthquake risk. In today's environment, securitization via cat bonds may provide the best allocation of that risk.

Securitization has existed for only a short time and cat bonds for even less. Nevertheless, we know already that securitization works well where large capital capacity is required, and when the risks involved can be relatively understood. For the natural catastrophe overexposed, this means they may no longer have an excuse to postpone risk transfer, especially since earthquakes wait for no one.

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