Insurance Derivatives and Securitisation: New Hedging Perspectives for the US Catastrophe Insurance Market?

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The latest issue of Swiss Re's *sigma* analyses the innovation process in the area of insurance derivatives and securitisation, and how a new link is emerging between the insurance industry and the financial markets. It illuminates the background issues and describes alternative risk transfer mechanisms within the context of natural catastrophe problems in the USA. A discussion of start-up difficulties and an estimation of the development potential follow from both an insurance and an investment perspective.

The insurance industry has been hardest hit in the 1990s by a record number of natural catastrophes which have raised the question of the limits of insurability. Potential losses from storm and earthquake risks in the USA currently exceed the available capacity in the insurance and reinsurance markets. Yet they are smaller than the daily fluctuation of wealth on the US financial markets. Thus the search for new capacity has led to the prospect of trading insurance risks not only within the traditional insurance system but also transferring them to the more liquid financial markets.

The first attempt to do this was made by the Chicago Board of Trade (CBOT) which launched futures on catastrophe loss indices and related options at the end of 1992. Following initial difficulties, these standardised contracts have already been improved in many respects. Parallel to the activities that are underway involving the CBOT and planned for a newly founded exchange in New York specialising in catastrophe risks (CATEX), several investment banks are currently developing models for the securitisation of catastrophe risks in co-operation with insurance companies in order to place such risks directly with investors in the form of securities.

We are dealing here with investment instruments whose returns are determined directly and solely by the loss pattern related to natural catastrophes. They offer the investor decisive advantages: In addition to providing an above-average yield potential with high volatility, such instruments are attractive since their performance is not correlated with any other financial risks. They therefore promise an outstanding diversification effect. The inclusion of insurance derivatives or securitised catastrophe risks to well diversified portfolios provides a text-book example with regard to applied portfolio theory (see the chart attached). Due to similar characteristics, investments in emerging markets have become an unquestioned component of internationally diversified investment portfolios in recent years.

From both an investment as well as an insurance perspective, the outlook for alternative risk transfer via securitisation and by means of derivative exchanges is promising. Based on calculations in a portfolio optimisation model and a survey of investment banks and potential investors, we anticipate a potential long-term influx of risk capital for the cover of US catastrophe risks to the amount of USD 30 to 40 billion (between 0.5% and nearly 1% of the US stock market capitalisation).

Despite similarities, the new cover concepts display major differences compared to non-proportional reinsurance solutions. Their potential relates to their ability to function as a flexible complement. At the same time, however, they do not present a substitution threat. It thus appears unlikely that they will exert pressure on prices in the traditional CatXL market.

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