Use Municipal Catastrophe Bond Solutions in China's Catastrophe Pilot Projects

by JOHN & DAI MIN MILLIGAN-WHYTE

Having China's insurance and reinsurance companies underwrite catastrophe losses should not be the key focus in the new experimental catastrophe and agriculture pilot projects.

Massive losses from catastrophe risks are too large to be financed by China's insurance and reinsurance companies' capital. They could seriously affect their financial stability. They should focus on less volatile, smaller, profitable risks. A capital markets risk transfer approach is better suited to China's circumstances and needs. This article presents one of many capital market solutions that can overcome unaffordability and other deficiencies in using insurance solutions in the Shenzhen, Yunnan and other pilot projects. Using insurance solutions can make the need for government subsidies and costs of coverage larger as more coverage is provided. This is the fifth article in our series on how China can develop a sustainable, commercial and scientifically managed system increasing catastrophe and agriculture loss financial protection and decreasing government subsidies.

CIRC reportedly expects annual insurance premiums to increase from US$ 296 billion in 2013 to US$ 733 billion in 2020. How can such enormous annual, cumulative financial resources be used to fulfill the State Council's goal of creating a sustainable system commercially funding catastrophe losses?

In the U.S. 40% of catastrophe and agriculture losses are commercially transferred to insurance and reinsurance companies that are not government owned. But the U.S. government subsidizes catastrophe and agriculture insurance provided by government and non-government owned insurers and reinsurers. The prevailing hypothesis among China and foreign insurers, reinsurers and experts is that government-funded catastrophe insurance pilot projects will enable Chinese to get used to having insurance and stimulate the private insurance market to launch non-subsidized products. Realistically, that won't work quickly, if at all, in China due to entrenched cultural traditions and expectations of government funding of catastrophe recovery costs.

China can by-pass the limitations and inefficiencies of insurance and reinsurance by using cheaper and safer capital market solutions such as fully collateralized catastrophe bonds.

That is how State Council and CIRC can increase catastrophe protection while decreasing the subsidies and losses government pays. The difference between China's agriculture insurance systems administrative costs and claims payment costs reveal another key problem with insurance-based approaches. In 2013 government entities subsidized 80% of 30.67 billion RMB in agriculture insurance premiums, up 38% year-on-year, providing coverage for 214 million farmers. But these subsidies provided only 20.86 billion RMB in compensation to 33.67 million farmers. The 30% difference in the sizes of the subsidies paid to insurers and loss payments to farmers is 12.81 billion RMB. The current agriculture insurance arrangements have major deficiencies for farmers and government and cover only 45% of China's total planting acreage.

China's earthquake risks and losses are not currently and cannot be adequately covered by insurance.

For example, China's insurers paid merely 142 million RMB in claims to victims of the 7.0-magnitude earthquake in Sichuan that left over 196 people dead, 13,400 injured, 300,000 people displaced and caused widespread property damage. Insurers received only 895 claims for 47 fatalities and 121 injured cases. China's insurers and reinsurers are state owned so when they insure or reinsure catastrophe risks they add subsidies costs plus transaction costs in merely transferring catastrophe losses from government to government owned entities. If they become insolvent by taking on catastrophe risks they will require government bailouts.

The pilot projects should focus on transferring catastrophe risks and losses to foreign and Chinese capital market investors.

They can also be used to develop and test socialist market models with Chinese characteristics, which suit China's consumers' unfamiliarity with and reluctance to buy actuarially priced catastrophe insurance. That new strategy can work quickly and sustainably and does not rely on trying to get Chinese consumers and companies to pay actuarially priced insurance premiums plus creating profits for insurers and reinsurers. Using the capital market stakes advantage of China's economic success instead of hoping that the private insurance market will provide non-subsidized products. In various countries, governments are backing catastrophe bond issues. Investor demand remains high and the cost of sponsoring a cat bond are coming down.

State Council and CIRC can use the international and domestic capital

markets to transfer catastrophic risks and pay for losses by allowing selected municipal governments to sell catastrophe bonds. State Council has recently approved municipal governments issuing bonds in eight highly populated cities that are pilot project locations. Why not experiment in the pilot projects with allowing selected municipal governments to issue catastrophe bonds directly into the capital markets? International investors demand for catastrophe bonds with appropriate terms is high and demand for catastrophe bonds exceeds supply. If demand is high for catastrophe bonds sold by Chinese government entities, the interest rates China would have to pay are reduced.

China's first catastrophe insurance pilot program was launched on June 1, 2014 in Shenzhen.

It covers the costs of medical treatment, disabilities and deaths that are caused by storms, heavy rain, cliff collapse, lightning, floods, tornadoes, typhoons, tsunamis, mudslides, landslides, subsidence, hail, water logging, 4.5 Richter scale and above earthquakes, aftershocks and earthquake secondary effects and nuclear accidents caused by any natural disaster event. The coverage is for all the population in Shenzhen city administrative area, including the residents, tourists, workers and others. Government pays the premiums covering 10 million people for these risks including nuclear risks. The total premium is 36 million RMB, coverage for a single disaster event is said to be 2.5 billion RMB and maximum compensation for any beneficiary in a single disaster is 100,000 RMB. A 30 million RMB catastrophe fund is also to be set up to supplement the insurance.

PICC issued the coverage for one year. But it reportedly retained less than 1% of the risk. The reinsurer is Swiss Re. Munich Re considered participating but declined because it viewed the rate on line price as inadequate and was concerned that an insurer with less than 1% retention of risk may not have "accurate risk consciousness". In July 2014 typhoon "Wimason" became the first occurrence in the Shenzhen pilot project. According to Economic Daily, it was the most severe typhoon in 41 years and affected 468500 hectares of crops, caused the collapse of 37,000 houses, and direct economic losses of about 26,550,000,000 RMB or US$4.4 billion.

Swiss Re uses catastrophe bonds to transfer medical, disability and mortality risks it takes to the capital markets. For example it owns Vita Capital V Ltd. that issued two tranches of mortality-linked catastrophe bond notes in 2012 to secure a fully collateralized source of multi-year extreme mortality protection via risk transfer to capital market investors. Mortality catastrophe bonds cover large increases in mortality rates from events such as pandemics, influenza outbreaks, tsunamis, earthquakes, major natural catastrophe events, terrorist attacks, disease and epidemics. The Class D-1 tranche notes were reportedly thought to have an attachment probability at which the investor would lose all or part of the fully collateralized principal of the bond of 0.34% and will likely pay an interest coupon in the range of 2.7% to 3%. The Class E-1 tranche notes were reportedly thought to have an attachment probability of 0.8% and will likely pay an interest coupon in the region of 3.4% to 3.8%. Swiss Re reportedly raised US$ 275 million in protection for itself.

Yunnan is the location of a catastrophe insurance pilot project focused on covering housing and property losses caused by earthquakes.

Catastrophe caused property losses rates may be ten times larger than casualty losses, such as those in the Shenzhen pilot project. Covering property losses would be much more expensive and the terms and pricing of earthquake insurance are difficult to negotiate. The Yunnan pilot project has reportedly made preliminary progress in earthquake insurance system research and in a tentative plan. The Turkish Catastrophe Insurance Pool is a useful model to consider in a pilot project. It acts as the earthquake insurer of last resort in Turkey, providing government backed, compulsory earthquake insurance for property owners. It claims US$ 5 billion in earthquake loss paying ability, which it created by its issuance of it's Bosphorus 1 Re Ltd catastrophe bond in 2013, which raised $400m of fully-collateralized protection at a very competitive price. Other Turkish earthquake catastrophe bonds are reportedly likely to be well received by capital market investors. China is a large potential source of catastrophe bond investment opportunities for such investors.

Sidebar

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John Milligan-Whyte, the author of China Capital Reinsurance Finance Center's China Catastrophe and Agriculture Insurance System Plan and Shanghai's Free Trade Zone Plan, was Chairman of the Committee advising Bermuda's Minister of Finance, member of Bermuda's Law Reform Commission and United States National Association of Insurance Commissioners' Advisory Committee Drafting the US Model Insurance Act and Vice Chairman of the American Bar Association's Tort & Insurance Section. He is a director of China Capital Limited and was a director of insurance, reinsurance and hedge fund companies, co-recipient of the 2002 Asian M&A Deal of the Year Award and of the 2010 China Business Leaders Summit's Outstanding Business Leaders' Social Responsibility Award.

Dai Min, a Research Professor and President of the China Capital Reinsurance Finance Center, initiated the China Insurance Industry Leadership Program with Wharton and Renmin Universities funded by XL Group Plc approved by the China Insurance Regulatory Commission and was a currency trader on Wall Street and has advised Chinese and foreign companies since 1990.