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Consumers Drive Change

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Narrowing the Nat CAT Protection Gap in Latin America

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In 2017 Latin America experienced an outlier year in natural catastrophes. Nineteen events caused insurance losses of more than $5 billion, but total economic losses may have been as high as $32 billion.[1] In other words, about 16 percent of losses were insured. But global reinsurers seem to enjoy excess capital, and the regional insurance industry thrives as the Latin American economies expand. In the more developed insurance markets of the U.S. and Europe, typically about one-half of losses are insured. How can the gap be narrowed in Latin America? Two cases highlight the importance of insurance coverage. This article deals with the earthquakes in Mexico (September 2017), and the torrential floods from El Niño in Perú (February–April 2017) and proposes solutions that involve collaboration between the private and public sectors.

SEPTEMBER MOURN

Mexico was badly struck by two major earthquakes in September 2017. The first one, on September 7th, had a magnitude of Mw 8.1[2] and was classified as the strongest earthquake in the past 100 years. Its epicenter was located some 60 miles south of the southern Mexican state of Chiapas, in the Gulf of Tehuantepec. More than 41,000 homes were severely damaged in southern Mexico. In Mexico City, some 400 miles away, although no major damage was registered, buildings trembled and swayed and about 1.8 million people lost electricity service. Insurance losses were estimated at $400 m, and economic losses at $4 billion, a 10 percent coverage ratio, which is not surprising given that the earthquake caused damages in the less economically developed Mexican south.

A few days later, on September 19th, a date that Mexicans remember for a big earthquake that in 1985 killed more than 10,000 people, a second calamitous earthquake hit the state of Puebla and caused extensive damage in central Mexico, including Mexico City. Fifty-two buildings collapsed and more than 500 were damaged, for estimated insurance losses of $1.2 billion, and economic losses of $8b (a coverage ratio of 15 percent).

BAD, BAD BOY

The warm ocean water that develops in the equatorial Pacific produces high precipitation levels in South America in the early months of the year, affecting mostly Perú and Ecuador. This phenomenon is officially called "El Niño Southern Oscillation", or "El Niño" for short. In the months of February to April 2017, torrential rains caused the worst mudslides in 30 years. Perú declared a state of emergency, as 150,000 homes became uninhabitable. Thousands of farmers lost their crops as 37,000 hectares were severely affected. These farmers have little or no access to insurance. Thus, a natural catastrophe turned into an economic crisis, a scenario that is frequently found in less

Figure 1
Top Reasons That Prevent Consumers From Buying Personal Lines Property Damage Coverage

economically developed countries. Insurance losses were estimated at $380 million, but economic losses were as high as $3.1 billion, for an insurance coverage of 12 percent.

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Just to place the insurance coverage ratio in perspective, September 2017 also brought a deadly Category 5 hurricane. "Maria" struck Puerto Rico, several Caribbean islands and the U.S.[3] In Catano, a town in northern Puerto Rico, 80 percent of buildings were destroyed by sustained winds of 175 mph. Insurance losses brought about by Mary in all impacted countries, including the U.S., were estimated at $32 billion, and economic losses were $65 billion, for an insurance ratio of 49 percent.

THE DEMAND SIDE

A possible but very likely factor that explains the lack of insurance coverage is the poor understanding of insurance products. A recent survey[4] of members of FIDES, the Interamerican Federation of Insurance Companies, showed that property damage products are overly complex and often they exclude damages caused by natural catastrophes. This was clearly the case in Mexico, where thousands of homeowners were frustrated when they discovered that their policy did not cover the losses caused by earthquakes. Another problem is that policies cover the outstanding balance of a mortgage, but not the commercial residential value.

Lack of trust in insurance companies as well as insufficient disposable income exacerbate the gap problem. Finally, some people think that the government should pick up the cost when a natural catastrophe strikes.

THE SUPPLY SIDE

On the supply side several problems are apparent. Despite technological progress, the cost of producing insurance covers is intensely debated in the industry. Although no official statistics are available, we found that according to AMIS, the Mexican Association of Insurance Companies, for property damage products, about 24 cents on the dollar are spent in distribution and administrative expenses.[5]

Insurers face complex modeling challenges too. A few vendors have developed catastrophe models and the largest insurers possess the skills set, but compilation of meaningful statistics and the maintenance of expert systems add to the cost of homeowners' insurance, where quotes must be developed relatively quickly.

Regarding product design and development, insurers typically focus on preventing fraud, as opposed to bringing product value. Simplified forms and policy language are usually neglected. Consumers would certainly benefit from more accessible products.

Distribution is also problematic. Many insurance agents and brokers deemed property damage insurance as a complex product to sell, where much effort must be spent in understanding and explaining the product to a potential consumer. They would rather sell car insurance, where products are easier to understand and receiving a commission requires less effort.

In many Latin American countries institutional obstacles prevent the development of a healthy insurance market. The legal environment tends to be somewhat weak and contracts are

Figure 2
How can the Gap be Narrowed?

difficult to enforce. Many homeowners do not have a property title. Another institutional obstacle may be regulation. Many Latin American countries have somehow emulated the Mexico regulatory solvency regime, which is a risk-based regime inspired in the European Solvency II Directive. Risk-based solvency regimes require expert consideration of risk profiles, and modeling catastrophes is a complex and expensive task.

HOW TO NARROW THE GAP

The large insurance protection gap will probably never be closed. However, there are certain measures that may help in narrowing the existing gap. These are:

1. Promote insurance and financial inclusion—the fact that products are seemingly complex can be addressed by government action such as funding programs that promote financial knowledge and allowing access to financial services to millions who do not currently have the possibility to buy insurance covers.

2. Work on regulatory change—Copying and pasting regulatory solvency regimes from developed insurance markets is a recipe for failure. Risk-based regulation is taking hold in Latin America, where many countries are in the process of overhauling solvency regimes. However, it is important to balance the need of solvency regulation with the incentives for insurance companies to introduce new and innovative products without having to be engaged in overly complex processes. Solvency regimes must be adapted to the features of the market in question.

3. Strengthen product innovation—insurers need to focus on the development of products that cater to the needs of policyholders and not merely spend their full energy in designing "anti-fraud" products. Insurers can tap into the experience available from global reinsurance players, who offer not only capacity but also knowledge transfer. A win-win situation may be achieved.

4. Improve the ability to assess risk—with the exception of Mexico, Brazil, Argentina and Colombia, only a handful of actuaries can be found in other Latin American countries. Actuarial skills are urgently needed in the Latin American insurance industry. But also important is to build robust modeling skills, where other insurance professionals may also play a crucial role. The Latin America Committee of the Society of Actuaries has been an active promotor of actuarial education and research in the region, but much is yet to be done.

5. Create partnerships between government and private sector—this is probably a "catch-all" category. The above measures would greatly benefit from fruitful relationships between government and players of the insurance sector. This is not only about regulation: it is creating more fertile ground to sow the seeds of strong insurance market growth.

A FINAL IDEA

According to the World Bank, Mexico receives about $34 billion in remittances every year, an amount that is equivalent to 2.8 percent of its GDP[6] (the figures for Perú are $3 billion, or 1.3 percent of GDP). What about designing parametric coverages that give protection in case of certain natural catastrophes? For example, the payment mechanism can be triggered when an earthquake reaches a certain magnitude level. The funding could be automatically deducted from the money that immigrant workers send home to their families.

Actuaries can play a critical role in designing products that meet real needs, particularly in those countries where insurance penetration is relatively low. Innovation and the use of technology may help narrow the gap but building partnerships between governments and the private sector may be the most effective way to ease the burden derived from being uninsured or underinsured. ■

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ENDNOTES

1 Economic and insurance losses according to *Sigma 3/18*, Swiss Re Institute.

2 The United States Geological Survey reported a moment magnitude scale, Mw, of 8.1.

3 Hurricane Maria hit the Outer Banks of North Carolina on September 26, 2017.

4 The Latin American Committee of the Society of Actuaries in collaboration with the Interamerican Federation of Insurers (FIDES) conducted a survey in 2018. Results were presented at the 2018 SOA Annual Meeting in the session called "Closing the Nat CAT Protection Gap in Latin America."

5 Information compiled for purposes of developing the session indicated in the preceding footnote.

6 *Migration and Remittances Data 2018*, The World Bank.