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**DISASTER RISK MANAGEMENT IN EMERGING MARKETS –
TOWARDS PRIVATE-PUBLIC PARTNERSHIP**

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Disaster Risk Management in Emerging Markets – Towards Private-Public Partnership

Executive Summary

A major catastrophe typically causes significant economic disruption, particularly in developing countries and emerging markets as the adverse economic impact on the affected areas is prolonged and the recovery delayed. Thus, emerging markets are more vulnerable than developed economies to setbacks from catastrophic events. Catastrophes can severely delay economic development, increasing poverty and social and political instability. A lack of insurance coverage also creates major financial problems for individuals and private companies: assets are destroyed by catastrophes, but the liabilities – mortgages and loans – remain.

Insurance tends to be underutilised in emerging markets: average insurance penetration, defined as premiums as a percentage of GDP, was only 3.6% in emerging markets in 2005, compared to a global average of 7.5%. This low level of insurance stands in stark contrast to the vulnerability of many emerging market countries to natural disasters.

Because of the low level of insurance penetration, emerging market governments often attempt to provide insurance in various forms, by operating social security systems and financing and managing post-disaster reconstruction. However, governments often face fiscal hardships and find it difficult to fully fund all their programs.

One way to increase insurance coverage, and thus to provide capital where it is most needed, is through public-private partnerships. For such partnerships to be successful, they must enlist the cooperation of all interested parties, including the government, private corporations, individuals, non-government organizations (NGOs) and the insurance industry.

A strong public-private partnership would narrow the gap between economic and insured losses, stabilising government finances and strengthening the insurance sector. In recent years, a number of successful applications of public-private partnership have been launched. This can be done in a variety of ways – by, for example, providing financing to governments through catastrophe (“cat”) bonds, through the creation of government catastrophe pools, and by designing affordable insurance solutions that can be distributed through channels that reach the poorest communities.

The Commonwealth Business Council and its private sector partners will be glad to provide information and assistance to help governments consider and implement new approaches and solutions to address disaster risk management more effectively.

Recommendation: Commonwealth Finance Ministers are urged to consider the development of private-public partnerships to address disaster risk management through innovative instruments and solutions including wider disaster insurance coverage.

1. Disaster Risk Management in Emerging Markets

A major catastrophe typically causes significant economic disruption, particularly in developing countries and emerging markets as the adverse economic impact on the affected areas is prolonged and the recovery delayed. Thus, emerging markets are more vulnerable than developed economies to setbacks from catastrophic events. Catastrophes can severely delay economic development, increasing poverty and social and political instability. A lack of insurance coverage also creates major financial problems for individuals and private companies: assets are destroyed by catastrophes, but the liabilities – mortgages and loans – remain.

For example, the tsunami that hit Southeast Asia in December 2004 was only minimally insured. Of an estimated economic loss of USD 13 billion arising from the tsunami, only USD 2 billion, or about 15%, was recovered through insurance claims. In the case of the October 2005 Pakistan earthquake, the situation was even worse – the economic loss was not insured at all. In contrast, 50% of the economic losses from the Northridge earthquake in the US in 1994 were covered by insurance.

Governments are expected to provide support, but the governments in the developing countries have limited fiscal resources. International aid helps, but it can be delayed or insufficient. Insurance can help manage these risks more effectively. It is well known that the insurance sector plays a crucial role in economic development. Because much economic activity would not take place without insurance, a reliable mechanism for risk transfer is a key prerequisite for prosperity and growth. For some risks, however, innovative approaches are needed to bolster the use of insurance. This holds particularly true for emerging markets, where the development of insurance faces various obstacles.

2. Insurance for Catastrophe Coverage

Insurance tends to be underutilised in emerging markets: average insurance penetration, defined as premiums as a percentage of GDP, was only 3.6% in emerging markets in 2005, compared to a global average of 7.5%. This low level of insurance stands in stark contrast to the vulnerability of many emerging market countries to natural disasters.

Because of the low level of insurance penetration, emerging market governments often attempt to provide insurance in various forms, by operating social security systems and financing and managing post-disaster reconstruction. However, governments often face fiscal hardships and find it difficult to fully fund all their programs.

Private insurers, though enthusiastic about promoting insurance in emerging markets, face various obstacles. The obstacles may arise from supply- or demand-side constraints, or from deficiencies in the legislative and regulatory framework. On the demand side, low wealth and income levels make insurance unaffordable to much of the population. Also, there tends to be low public risk awareness and understanding of insurance products. On the supply side, insurers have difficulty reaching potential clients and dealing with moral hazard and adverse selection.

These problems are not confined to emerging markets. But due to a lack of market information, the underwriting challenge is often more difficult in emerging than in developed markets. Finally, the regulatory environment can impede insurance growth. Restricted market

access for foreign insurers and reinsurers frequently stifles the expansion of insurance. In addition, the emerging market regulations often rely on price and product controls, creating further problems. Insurance prices set by regulatory authorities can be below the risk-based price, reducing the availability of insurance. Product controls, on the other hand, discourage innovation and limit consumer choice.

3. Towards Private Public Partnerships for Risk Management

One way to increase insurance coverage, and thus to provide capital where it is most needed, is through public-private partnerships. For such partnerships to be successful, they must enlist the cooperation of all interested parties, including the government, private corporations, individuals, non-government organizations (NGOs) and the insurance industry. There are four good reasons for the public and private sectors to cooperate in managing insurance risks in emerging markets.

First, the government is needed to set up a proper framework for insurance, including legal security and freedom of contract. A missing or distorted framework may result in restricted product availability or deficient insurance coverage.

Second, from an underwriting perspective, governments can alleviate the problem of adverse selection by, for example, requiring mandatory participation in catastrophe pools. This would create a large risk community, improving risk sharing. Together with mandatory participation, the enforcement of preventive measures such as stringent building codes, can reduce the threat of moral hazard, keep claims at a manageable level, reduce insurance rates and save countless lives.

Third, governments can act as lender of last resort. Some risks are so large and uncertain that the private sector cannot assume them on its own. For example, an extremely severe flooding in India or an earthquake in a large emerging market city would be very expensive. Sometimes these risks can be transferred, or partially transferred, to the capital markets but often the financial sector is unable to provide sufficient cover, because, for example, the risk is not well-known to institutional investors.

Fourth, governments can make insurance more generally affordable to lowest income households – for instance through subsidizing premiums. This would complement the advantages to private insurance, which are competitive pricing, efficient risk management and broad product choice.

In sum, a strong public-private partnership would narrow the gap between economic and insured losses, stabilising government finances and strengthening the insurance sector. In recent years, a number of successful applications of public-private partnership have been launched. Three examples are highlighted below:

- Rural micro-insurance to distribute weather insurance in India
- The Mexican parametric solution for earthquake risk
- The Turkish Catastrophe Insurance Pool (TCIP)

India micro-insurance

The first example of public-private partnership concerns rural micro-insurance in India. Since the Nobel Peace Prize was awarded to micro-finance pioneer Mohammed Yunus, this form of finance has gained attention throughout the world. Micro-finance provides tiny loans to needy people to fund business ventures, since it is difficult for them to obtain credit through banks. Micro-insurance refers to insurance policies with low sums insured. Often micro-finance and micro-insurance go hand in hand.

In India, because three-fourths of the population is directly or indirectly dependent on agriculture, any calamity reducing crop yield can have devastating effects on the population and the government's financial position. Many farmers are particularly vulnerable because they obtain loans each season to buy seed, fertilizer, and other agro chemical products, using their future revenue streams as collateral for the loans.

Traditional agricultural insurance cover is either limited in capacity or suffers from adverse selection and high administration costs, reducing its desirability. In order to give India's rural population the opportunity to protect themselves against crop failure, a micro-insurance solution has been developed with support from the World Bank and subsidized by the Indian government.

The solution uses weather insurance, which – unlike crop insurance – has payouts based on observable weather indexes. This eliminates moral hazard and adverse selection and allows a quick payout after an event, significantly reducing the cost of insurance cover. Furthermore, cooperation with micro-finance institutions, rural banks and government ensures the product can be efficiently distributed to the remote rural population. In India, the first rainfall insurance program was launched in July 2003 by BASIX – a micro-finance institution based in Hyderabad – through its KBS Bank in Andhra Pradesh. Interestingly, corporations as well as small farmers use weather insurance, demonstrating that micro-insurance and standard insurance products are not mutually exclusive.

Mexican parametric solution for earthquake risk

Mexico, like many other emerging countries, is highly exposed to various natural catastrophes. The country's low insurance penetration relative to global averages means that most economic losses are not insured, placing a large burden on the government. In 1996, after an earthquake struck Mexico City, the Mexican Government created a natural catastrophe fund called FONDEN with the aim of providing financial relief after natural disasters. However, FONDEN is funded by fiscal resources which are limited and usually insufficient to fully finance non-insured losses caused by natural catastrophes. This motivated the Mexican Government to explore alternative financing methods for deploying emergency relief efforts and providing coverage for large geographical areas with the highest exposure to physical damage from catastrophes.

In May 2006, the first parametric solution purchased by a government, in this case through FONDEN, was launched. The government is indemnified in the event of an earthquake whose scale exceeds a certain threshold (defined by magnitude, depth and location). Three events of USD 150 million each are covered within a three-year period. Of the total amount, USD 160

million was placed in the capital market through a parametric cat bond and the remainder was reinsured.

This Mexican cat bond illustrates how governments can directly tap the capital markets to finance post-disaster reconstruction. This offers an option to governments, other than simply relying on taxes or foreign aid, to efficiently use public and private channels to increase the financial funds available after a catastrophe. The Mexican Government is aware that this is only the first step towards a more adequate catastrophe risk management regime and is analysing similar solutions for other catastrophic exposures, such as hurricanes.

Turkey cat pool

Turkey is another country that is highly exposed to earthquake risk. The devastating 1999 Izmit earthquake, which caused the death of over 19,000 people with economic losses of USD 20 billion, went almost uninsured – only about 5% of the economic loss was covered. This prompted the Turkish government to take measures to mitigate the effects of future earthquake losses.

As a result, the purchase of earthquake insurance for private dwellings became mandatory (with some exceptions) and a Turkish Catastrophe Insurance Pool (TCIP) was formed. The main goals of the pool are to provide earthquake insurance cover for private dwellings at an affordable rate, to enlarge the risk community within Turkey and to benefit from diversification through reinsuring part of the pool's risk. Apart from risk transfer, the pool also promotes safe housing construction standards and assures the accumulation of assets for the indemnification of earthquake losses. All of this contributes to the easing of the government's financial burden after an earthquake.

The pool has been successful. By the end of August 2006, the number of policies was over 2.5 million. Since the inception of the pool, it has handled almost 9000 claims, paying USD 12.2 million for 140 separate loss events. Without the mandatory pool, it is unlikely that earthquake insurance would have been taken up by such a large portion of the population.

4. What is needed?

These successful solutions demonstrate how public-private partnerships extend the availability of insurance. The Mexican cat bond taps directly into the capital markets to help the Mexican government finance disaster relief after an earthquake. Mandatory participation in the Turkish cat pool helps to avoid adverse selection and enlarges the risk community, allowing efficient diversification and cost reduction. The Indian example, on the other hand, shows how public-private cooperation can make insurance affordable to poor rural farmers through an existing distribution channel. Ultimately, public-private partnerships are tailor-made insurance solutions that reflect the regulatory environment, risk profile and needs of the local market.

A number of lessons have been learned from experience thus far. First, for large catastrophe risks, public-private partnerships, whether through traditional reinsurance or the use of cat bonds or cat pools, works best when government, enterprises and individuals all shoulder losses. Insured policyholders participate through deductibles, while governments and the capital markets help to cover peak risks. Governments are particularly important for extreme events, as insurers of last resort.

Second, adverse selection is a major obstacle to successful underwriting in many emerging markets. A certain degree of compulsion in participation, enforceable by relevant regulations, can help to overcome this problem. Mandatory participation can be a powerful tool for the immediate creation of a large pool of policyholders so that risk is shared efficiently and underwriting benefits from economies of scale. Obviously, mandatory participation is not appropriate in all cases, but is an option to be considered, particularly for extreme catastrophic risks.

Third, it is important to engage the various stakeholders. Micro-insurance, for instance, offers an alternative business model where NGOs, the state and other affinity groups all play important roles in the distribution and servicing of insurance policies. Often, physical accessibility is one of the major hurdles to increasing insurance penetration in emerging markets. Only through the active participation of various stakeholders like the NGOs and local affinity groups can this hurdle be overcome.

Finally, public-private insurance solutions should be consistent with professional risk management, actuarial and legal standards. This could, however, result in premium rates that are unaffordable to the less well-off segments of the population. In this case, governments should consider subsidies to the less privileged to ensure that the benefits of insurance can be enjoyed by all. Considering the contingent financial liability incurred by governments in post-disaster financing, premium subsidies could prove to be a cost-effective way to manage disaster risks.

5. Conclusions and Recommendations

There are three key conclusions to highlight. First, insurance supports economic development. Insurance provides financial support when it is most needed, allowing companies and households to maintain their income and operations after major losses. Second, public-private solutions can facilitate the extension of insurance coverage in emerging markets. This can be done in a variety of ways – by, for example, providing financing to governments through cat bonds, through the creation of government catastrophe pools, and by designing affordable insurance solutions that can be distributed through channels that reach the poorest communities. Finally, to be successful these public-private solutions require the cooperation of all relevant parties – the government, corporations, households, non-governmental organizations and other entities that might be affected by the insurance coverage.

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