

Jacqueline Loh: Public-private partnership – the way forward for natural catastrophe risk management in Asia

Opening address by Ms Jacqueline Loh, Deputy Managing Director of the Monetary Authority of Singapore, at the 5th Institute of Catastrophe Risk Management Symposium, Singapore, 24 April 2014.

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Professor Bertil Andersson (President, Nanyang Technological University, Singapore),

Professor Haresh Shah (Founding Chairman, Institute of Catastrophe Risk Management (“ICRM”)),

Professor Pan (Director, ICRM),

Distinguished guests, ladies and gentlemen, good morning.

Introduction

1. It is my pleasure to join you today at the 5th ICRM Symposium. The theme for this year’s Symposium, “Financing of Natural Catastrophes in Asia – The Role of Private Sectors, Governments and Regulators in Natural Catastrophe Management”, highlights the importance of having both the private and public sectors collectively manage natural catastrophe risks. Management of catastrophe risks spans a spectrum of activities across the entire risk management value chain, from raising risk awareness, to promoting effective risk assessment and pricing, and co-developing ex-ante risk financing solutions. This is a very relevant discussion topic, at a time when Asia is facing increasing vulnerability to natural catastrophes.

2. In keeping with the conference theme, I will be sharing a few observations on how we can strive towards sustainable risk financing using a Public-Private Partnership (“PPP”) approach. Asia is more at risk from natural catastrophes

3. Over the last 30 years, Asia has borne the brunt of natural catastrophe losses, accounting for almost half of the world’s estimated economic losses from natural disasters¹. However, less than 5% of the losses were insured, compared to 40% in developed countries². Over the last five years, the region experienced a series of high-profile and very painful disasters such as the Tohoku Earthquake and Tsunami in Japan, floods in Thailand, and the Super Typhoon Haiyan in the Philippines. Losses from these three disasters are estimated to be close to USD 360 billion³, about the average GDP of the Philippines and Thailand in 2012. As these economies were underinsured, the bulk of the financial burden was ultimately borne by the governments.

4. The development of catastrophe risk management in Asia is still at a nascent stage, compared to more mature markets in the US and Europe. Yet Asia is expected to continue to experience a rise in natural catastrophe losses, as a result of climate change, and rapid population growth, urbanization as well as economic concentration in heavily exposed regions. So With this confluence of factors, the financial burden from natural catastrophes is expected to intensify.

¹ “Source: EM-DAT – The International Disaster Database”.

² “Risk Financing is Key to Building Resilience Against Disasters – Study”, ABD, 31 January 2013.

³ “Based on Swiss Re and Aon Benfield’s estimates”.

Minding the protection gap in natural catastrophe risk management

5. Going forward, governments can no longer act as the “insurer of last resort”. In light of Asia’s widening protection gap, governments would need to shift away from retaining risks, and transfer a larger proportion of risks to the insurance industry, in order to increase their national resilience against natural disasters. Instead of tapping on ex-post disaster risk financing options such as government budgets, public debt issuances and international donations, it is increasingly important for economies in the region to pursue ex-ante risk financing solutions to finance natural catastrophe losses.

6. Amongst the various risk financing solutions, insurance in particular, has been found to exert a positive effect in mitigating financial consequences of a natural catastrophe event. A study on the macroeconomic costs of natural catastrophes⁴ has shown that an increase in insurance penetration by 1 percentage point can lower the cost borne by taxpayers by approximately 22 percent. It has also been found that with adequate insurance coverage, economic activity returned to pre-catastrophe levels long before reconstruction was completed.

7. Specifically, insurance can lower the fiscal impact of natural catastrophes on governments in two ways⁵:

- (i) Firstly, it has a preventative effect by providing price signals, which in turn create incentives for the insured to undertake physical risk prevention measures. This reduces their physical vulnerability to natural hazards, and can help to avoid more costly damages in a loss event.
- (ii) Secondly, it has a loss mitigation effect by providing prompt financial relief to support immediate reconstruction efforts, which will help to moderate further indirect losses, such as from business interruption. This reduces the need for private and public borrowing following a natural catastrophe.

Public and private sectors each has its role to play in increasing insurance penetration

8. The responsibility of ensuring adequate insurance coverage does not reside solely with the governments. Individuals and businesses, too, should have vested interests to ensure that their respective exposures to natural catastrophe risks are sufficiently mitigated and insured.

9. However, increasing insurance penetration is certainly not without its challenges, and here I will highlight three:

- (i) Firstly, the lack of awareness of natural catastrophe risk and solutions amongst individuals, businesses and governments; which can go some way to explain the lack of appetite for catastrophe risk transfer solutions in Asia. This is where I think the insurance industry can play a proactive role in raising awareness, through lending expertise and offering risk management advice, engaging governments and organizations in regional collaborative efforts, and through industry conferences such as the ICRM Symposium.
- (ii) Secondly, a lack of quality Asian catastrophe risk data, which impedes the industry’s ability to conduct robust risk assessments, modeling and underwriting for the region. In response to the importance of quality quantification of catastrophe risk in the region, we have seen many notable efforts being undertaken in various quarters.

⁴ “Lloyd’s Global Underinsurance Report, October 2012”.

⁵ “Peter, Dahlen, Saxena (2012), ‘Unmitigated disasters? New evidence on the macroeconomic cost of natural catastrophes’”.

At the regional level, the ASEAN Natural Disasters Research Works Sharing (“ANDREWS”) Committee has been formed to facilitate dialogue and information exchange between academia and insurance industry professionals on latest research and market developments relating to natural catastrophes. In Singapore, industry players have ramped up catastrophe analytics and modeling efforts rapidly in recent years. This is supported by scientific and state-of-the-art catastrophe risk research undertaken by research institutes such as the ICRM, the NUS Centre of Hazards Research and the Earth Observatory of Singapore.

- (iii) Thirdly, a shortage of expertise to properly understand and assess catastrophe risks. Even where catastrophe models are employed, it is essential to overlay deep expertise and good judgment to challenge assumptions in modeling outputs, in order to have a more robust assessment and interpretation of the risks. The Thailand floods in 2011, for example, offered useful learning lessons about how there can be blind spots, without a deep understanding of the underlying risks:
- (a) Thailand was not even designated by insurers as a catastrophe-prone prior to the floods, despite the potential risks and exposures;
 - (b) Secondary losses arising from the business interruption claims were heavily underestimated; and
 - (c) The accumulation of risks arising from Japanese cedants relocating their supply and production chains to Thailand from Japan, which had been hit with an earthquake and tsunami just months before, was generally overlooked.

Therefore, I would encourage the industry to build deep expertise in the regional markets and be in close proximity to Asia, so as to attain a good understanding of the Asian risk and underwriting environment.

10. While the industry is taking measures to enhance its capabilities in risk modeling and analytics, regulators also play an impartial role in steering the industry to model uncertainties better and in turn, strengthen the financial resilience of the industry. This has been done via new regulations which explicitly take into consideration insurance catastrophe risks in capital frameworks. We have seen these in countries such as Australia, Switzerland, Bermuda and the Euro Area. In Singapore, MAS has proposed the introduction of insurance catastrophe risk requirements in the RBC 2 framework, where we are currently working very closely with the industry in the calibration of catastrophe risk charges. In addition, the set of Enterprise Risk Management (“ERM”) requirements, which came into force from 1 Jan this year, can steer industry to model catastrophe risks better as insurers are required to identify and manage material risks such as catastrophe risks. The panel discussion on the topic of “Regulatory Environment on Catastrophe Risks in Asia” this afternoon would focus on how the regulatory environment can support the effective financing of natural catastrophes in the region.

PPP – A collaborative approach for sustainable disaster risk financing in Asia

11. While it is important to have different stakeholders step up in their respective roles in natural catastrophe risk management, it is not likely to be sufficient. A corroborative effort involving both public and private sectors, through a public-private partnership, is key, especially in Asia. This is in light of the large size of risks to be insured, the substantive size of population which needs insurance cover but remains unreachable, and the lack of natural incentives for the private sector to offer sufficient coverage for certain risks. A PPP approach recognizes the different roles as well as limitations of governments and private insurers, and can enable innovative solutions collectively. Public-private financing solutions, such as natural catastrophe insurance pools, micro insurance, and alternative risk transfer solutions such as catastrophe bonds, have the potential to enlarge the financial capacity of insurance solutions, by providing affordable cover to a wider pool. With the expertise and capital

support from international and regional organisations, the public and private sectors can work together in developing purposeful risk transfer solutions for the region.

12. It is encouraging that governments, regulators, industry, academia and international organisations in Asia have already taken initial steps to develop effective PPPs to enhance natural catastrophe risks management. In October last year, for example, the International Finance Cooperation (“IFC”), a member of the World Bank Group, announced a partnership agreement with MAIPARK Indonesia, a specialised catastrophe reinsurer formed by the government and industry, to develop an earthquake-index insurance product to help protect banks that provide loans to individuals and micro, small and medium enterprises from losses due to natural disasters such as earthquakes⁶.

Singapore as a PPP knowledge partner

13. As the leading reinsurance hub in Asia-Pacific, Singapore can play a critical role by being the first responder to natural catastrophe events in the region. Over the years, Singapore has developed a strong ecosystem to support Asia’s growing needs; comprising reinsurers specialized in property-catastrophe risks, a network of brokers with catastrophe risk modeling capabilities, commercial catastrophe modeling vendors and research institutions. I am very heartened to see the insurance industry’s active participation in the Natural Catastrophe Risk Working Group, which is an industry panel formed by the MAS in October last year. To meet increasing protection needs in Asia Pacific, the Working Group is looking at recommending policies and initiatives which could catalyze the development of underwriting capacity and expertise in Singapore’s catastrophe insurance and reinsurance market; and raise the overall risk awareness in the region. One of the initiatives being explored is the proposed establishment of a Natural Catastrophe Data Analytics Exchange – this is a facility which we hope could aggregate data from both private and public sectors, with the aim of generating new insights and catalyzing innovative disaster risk financing solutions for the region. This is a concept which will be validated with the industry over the next few months, and we look forward to engaging both the public and private sectors on this.

14. I would like to take this opportunity to commend ICRM as Asia’s first and only multidisciplinary research institute that is dedicated to enhancing the understanding of catastrophe risks in the region. I understand that ICRM is actively involved in a number of PPPs in the region, including the Global Earthquake Model (“GEM”), a PPP with OECD aimed at developing and deploying tools and expertise for earthquake risk assessment worldwide; and the ASEAN Earthquake Model (“AEM”), targeted at developing earthquake risk assessments for the region.

Conclusion

15. Let me conclude. Natural catastrophe risk management will be an increasing priority for Asia. The interconnectedness of natural catastrophe risk management calls for going beyond borders; and across stakeholders, both government and industry, to coordinate holistic strategies and manage natural catastrophe risks in a sustainable manner.

16. The ICRM annual symposium serves as a unique opportunity for various stakeholders to come together to discuss challenges, and chart the course for natural catastrophe risk management in Asia going forward. I understand that there is a line-up of interesting presentations covering very pertinent topics such as post-disaster impact analysis

⁶ “Source: ‘IFC Partners with MAIPARK to Provide Earthquake-Index Insurance for Indonesian Banks’”, CAN Newswire, 1 October 2013.

experiences and the types of catastrophe risk transfer and financing solutions, over the next 2 days.

17. On this note, I wish you a productive and memorable time at this Symposium and in Singapore. Thank you.