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ClimateWise
REDUCING THE RISK FOR TOMORROW

The role of insurers in strengthening business resilience to climate risk

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Introduction

Tokio Marine & Nichido Fire Insurance is Japan's leading general insurance company, established in 1879. In this ClimateWise Thought Leadership article Kunio Ishihara, Chairman of the Board, discusses the role of insurers in supply chain resilience, and where climate change poses particular threats to these supply chains across Asian markets. By referring to lessons from the Tohoku Earthquake and Thai Floods, Mr Ishihara also highlights examples of how insurers can mobilise expertise to help society recover from disaster in the aftermath of a catastrophe.

This ClimateWise Thought Leadership article is the third in a series which began in 2012.

Each article is authored by a senior executive from a ClimateWise member organisation and aims to inspire debate around a new issue related to managing climate change risk which the author believes could yield value for the insurance industry if adopted more widely.

The ClimateWise Thought Leadership Series is intended to provoke debate. Join the discussion on the ideas contained within this article on LinkedIn (Search '**ClimateWise**' to find the Discussion Group), or connect with us on Twitter (**@ClimateWise**) or email (**info@climatewise.org**).

The natural disasters of 2011 disrupted global supply-chains.

2011 proved to be the most costly year for the insurance industry in terms of natural catastrophe losses.

Besides the tragic losses to households, the corporate sector suffered from both direct and indirect impacts. Geographically, the Asian region was hit by two unprecedented events, the 11th March Tohoku Earthquake, followed by Thai floods and both left a deep impression in the aftermath; supply-chain disruption.

The Tohoku Earthquake revealed the complex web of manufacturing interdependencies on a global scale, and their fragility to shock.

A typical case involved an automotive microcontroller chip manufacturer, whose product line shutdown affected assembly lines of leading automobile manufacturers. It is a well-known fact that major manufacturers rely on multiple tiers of suppliers and so the extent supply-chain disruption harmed economic activities is not always clear.

Estimated economic losses vary substantially depending on the scope and methodologies used. However, domestic cumulative economic losses attributable to supply-chain disruptions was estimated as JPY 1.2 trillion (US$ 15 billion) for the first six months after the event.

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In terms of supply-chain disruption, flooding in Thailand is estimated to have caused even more serious damage to the industrial sector, most notably manufacturers of hard-disk drives (HDD) and automobiles. Thailand is known as a leading producer of HDD. The floods reportedly slashed a quarter of global HDD production, and resulted in a 55% price increase in the fourth quarter of 2011 compared to the same period the year previously[1]. Meanwhile, the halted automobile production is considered to have cost the leading three Japanese manufacturers more than $500 million, a month[2].

It is estimated that the insurance industry has paid out in the billions of dollars through either business interruption (BI) or contingent business interruption (CBI) insurance claims for the two catastrophes combined[3]. BI coverage is offered to provide indemnity against consequential losses arising as a result of covered physical damages to the specified premises under the property insurance policy.

CBI coverage, on the other hand, extends the scope to cover consequential losses resulting from premises that are not owned or controlled by the insured. Those manufacturers, who depend heavily on specific procurement of materials, tend to have stronger demand for CBI coverage than those whose materials are widely available. CBI coverage is not always readily available, however, since it requires careful underwriting assessment and customisation of conditions, including setting adequate sub-limits.

Underwriting CBI risk therefore calls for creative thinking and intensive study to evaluate and determine the applicable terms and conditions, as the policy holder's dependency on its suppliers can fluctuate almost on a daily basis. It is important to urge CBI applicants to increase the level of transparency to help identify which suppliers are critical not only in terms of dependency but substitutability of their products. Having a good grasp of supply-chains is thus crucial for an insurer's underwriting performance.

1. Fuji Sankei Business I, 28 August, 2012
2. Bloomberg, 21 October, 2011
3. National Underwriter, 9/16 July, 2012

The link between climate change and Thailand's heaviest flooding in fifty years may not be proven however, there is little argument that the economic consequences of severe natural disasters are gaining in intensity and progressing irreversibly, as urbanisation and industrial development continues in major Asian countries. According to the latest report released by the Japan External Trade Organization (JETRO), Thailand continues to attract small and mid-sized Japanese component manufacturers, in anticipation of an increase in demand, even after the flood event.

The continuous inflow of direct investment reflects the expectations of end-product manufacturers to procure components locally, which drives component suppliers to set up plants close to their customers.

How can the insurance industry help identify vulnerability within corporate supply-chains?

More often than not, the supply-chain management function in a manufacturing company tends to focus more on trimming production costs and streamlining logistics. Unlike process related risks that exist within its own assembly line, risks inherent in supply-chains are less visible, and therefore require extra efforts to detect and contain. This is an area where the insurance industry can bring value and offer meaningful solutions by more vocally educating clients on exposure to risks including those exacerbated by climate change.

The most appropriate way to communicate climate risk is to approach the issue from the business continuity perspective. Recognising potential operational disruption in a supply-chain is a crucial first step in designing a functional business continuity plan (BCP) for a manufacturer. It is almost always the case that insurers have the best access to how their supply-chain is designed, and which element carries critical importance. Nevertheless, the Tohoku earthquake and tsunami uncovered that while first and second tier suppliers were monitored closely by the corporate management, third or fourth tiers were less so.

In May 2012, the International Organization for Standardization (ISO) published "ISO 22301", a corporate guideline to effectively manage business continuity[4]. The guideline recommends businesses conduct impact analysis, including the identification of dependencies and supporting resources for corporate activities such as those performed by suppliers. Insurers have an opportunity to intervene in the risk identification process run by their corporate customers, and find out ways to adequately control climate and other critical risks without sacrificing competitiveness. Effectively communicating and pricing climate risk can signal to clients hot spots that need to be managed differently and ultimately also lead to introducing robust measures to solidify areas vulnerable to extreme weather events.

What can the insurance industry do further to expedite the recovery process?

While both the Tohoku Earthquake and Thailand floods were alarming to manufacturers dependent on global supply-chains, the shock was partially absorbed by the resiliency demonstrated by some critical component manufacturers. As featured in the Financial Times[5], Japan's recovery in its manufacturing capacity recovered much faster than initially anticipated.

The expedition was made possible thanks largely to the final assemblers which dispatched their operational experts to the affected supplier's plant site to offer technical instructions for a quick recovery. Although it was not captured in a front page article, the insurance industry did contribute to minimizing the operational downtime at several manufacturing facilities by contracting and sending cleaning and repairing experts to the affected sites.

Instead of waiting for a replacement, which may take several months, in most cases, damaged equipment can be repaired in a matter of several days, or weeks at the longest.

As a matter of fact, it is often the case that early recovery capability is seen as more important by manufacturers than receiving insurance compensation.

In the wake of the Tohoku event, Tokio Marine, with its partnership with BELFOR, recognised the value of offering early disaster recovery support services to its corporate customers. The disaster stricken manufacturers saw significant reductions both in costs for repairing their equipment and production downtime. The positive feedback from the recipients of the service convinced us to move forward with the initiative to embed the concept of early disaster recovery in designing BCP.

There is no argument that preventive measures should be sought first, however, it is also important to ensure that credible post-disaster recovery strategy is in place for major manufacturers. By positioning insurance and its service function as a critical element in designing a solid BCP, the industry can ultimately contribute to enhanced resiliency of global supply-chains.

Kunio Ishihara, Chairman of the Board, Tokio Marine & Nichido Fire Insurance, January 2013

4."Societal security - Business continuity management systems - Requirement", 15 May, 2012
5. Financial Times, 2 August, 2011