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## The Ripple Effect of an Asian Tsunami Around the World

by Bosco L. Chan

**O**n December 26, 2004, a megathrust earthquake triggered tsunamis, hitting the shorelines of nine countries in Southeast Asia, destroying infrastructure and leading to 273,000<sup>1</sup> dead or missing. This disaster made media headlines around the globe immediately. By following the newscasts, I recognized that the impact of the devastation was more than that described in the news; valuable lessons can be deduced by reviewing the far-reaching impact around the world.

Without knowing much about earth science, I went to the International Tsunami Information Centre Web site<sup>2</sup>. The word "tsunami" comes from a combination of two Japanese words: "tsu" meaning harbor and "nami" meaning wave. About 80 percent of all tsunamis occur in the Pacific and this probably explains why this kind of disaster is named using Japanese words. Tsunamis are generated by any disturbance that displaces a large amount of water, including earthquakes, volcanic eruptions, meteorites or landslides into the water or below its surface.

The total insured losses caused by the Asian tsunami are expected to range



from \$2.5 billion to \$4 billion. Early forecasts indicated that reinsured losses would not be large.<sup>3</sup> The low claim losses compared to the damage sustained imply that the population and property were generally underinsured or even uninsured. There are many reasons for this situation in developing countries: lack of financial resources, unawareness of needs and lack of understanding of risks. The good news is that as business expands overseas and more corporations outsource work to offshore companies to take advantage of the lower labor cost in the less-developed countries, the need for insurance coverage in these countries will increase. These underdeveloped

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1) Figure extracted from March 4, 2005 *Yahoo News* ([www.yahoo.com](http://www.yahoo.com))

2) International Tsunami Information Centre ([www.prh.noaa.gov](http://www.prh.noaa.gov)).

3) *Tsunami: Indian Ocean Event and Investigation into Potential Global Risks*, report by Guy Carpenter & Company, Inc. on March 14, 2005 ([www.guycarp.com](http://www.guycarp.com))

insurance markets provide great opportunities for international insurance and reinsurance companies to increase revenue growth.

I believe the necessity for insurance will come first from business-related insurance, such as property and casualty insurance. Management of international firms is relatively more familiar with the risks faced by businesses and these corporations also have the financial strength to negotiate insurance coverage. Insurance coverage, such as life and health insurance, will then develop along with the increase in wealth accumulated by the general public as a result of foreign investment in their country. Consequently, life expectancy will increase due to improvement in standards of living and medical care, leading to the demand for pension and annuity products. As local insurance companies demand advanced financial products to back their insurance policies, the financial sectors of these countries will have incentive to develop.

I remember a traditional Chinese saying: "Wealth comes with risks." It is important to understand the risks that are related to global business. You may be familiar with some of their characteristics already. But please allow me to describe them again together with insight from the Asian tsunami.

### **1. Risks of the same type are not always independent**

The first wave of the Asian tsunami slammed into shore and swept people out to the ocean. This tsunami wave swept over Thai seaside resorts and people dashed to the beaches to help the injured. Then a second wave struck and claimed even more victims. Generally, the third to eighth wave crests are the largest. This pattern is different from other natural disasters where they would hit only once (i.e., a typhoon). The casualties were the local seaside population and tourists mainly from Europe.

### **2. Correlation of different types of risks**

Earthquakes or volcanic eruptions can be stand-alone disasters but they can also lead to tsunamis. In addition, the World Health Organization said that as many as 5 million people were at risk because of the potential spread of disease due to the high volume of dead bodies, medical shortages and poor living conditions in areas affected by the Asian tsunami. It is clear that there is correlation between different types of disaster.

### **3. Risk has no national boundaries**

The tsunami was caused by an underwater earthquake off the Indonesian island of Sumatra that struck the shorelines of nine countries. A single natural disaster can create multinational damages. Another good example is the Severe Acute Respiratory Syndrome (SARS) disease that originated in Asia and spread rapidly across many countries by exposed/infected travelers in early 2003. Living on one side of the world does not guarantee safety from disasters or disease that are happening on the other side of the earth.

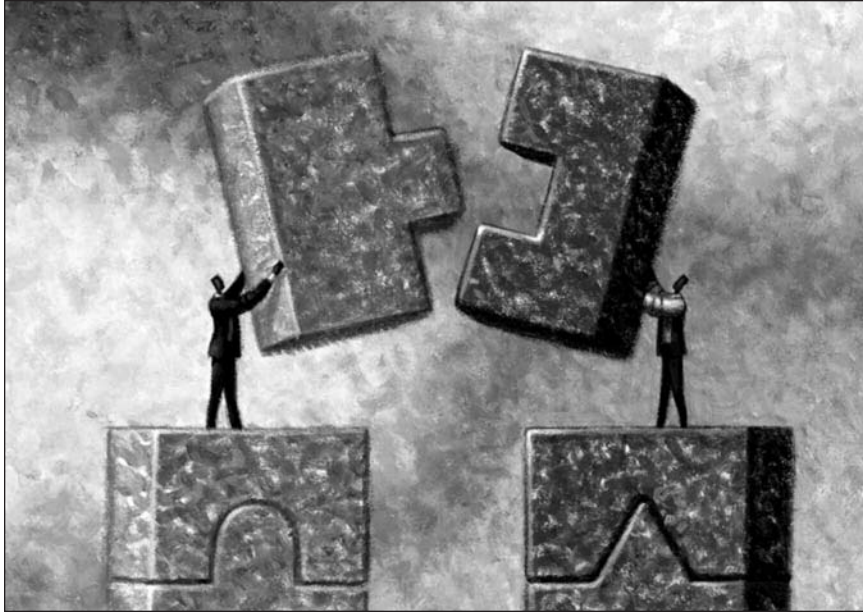
### **4. Technology risk**

Many of the coastal villages that were wiped out by the killer waves did not even have telephone service. An effective alert system would have to include a reliable emergency broadcasting system for scientists to warn coastal residents of an impending threat<sup>4</sup>. The cost for building a comprehensive facility to reduce future potential tsunami damages in all at-risk areas may be too expensive. It is possible that investment will only be made in tourist or highly populated areas. The limitation on the availability of appropriate technology due to cost can be a source of higher claim losses in the future.

**As local insurance companies demand advanced financial products to back their insurance policies, the financial sectors of these countries will have incentive to develop.**

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4) Canadian Broadcasting Corporation, January 4, 2005 News ([www.cbc.ca](http://www.cbc.ca))



### **5. Operational risk**

It is reported that Thai officials knew a tsunami might be coming but failed to issue a warning<sup>5</sup>. It is not clear whether there was insufficient time or if there was deficiency in the process. But this reminds us operational risk always exists. We should try to minimize it even though it can never be completely eliminated.

### **6. Legal risk**

Risk of losses due to litigation has made governance and the call for fiduciary responsibilities a priority. A U.S. attorney and two fellow advocates applied to the New York District Court on behalf of some survivors of the Asian tsunami for damages against the U.S. forecasters and Thai officials. They challenged the U.S. National Oceanic and Atmospheric Administration in Washington and the Tsunami Warning Centre in Hawaii for not warning the Indian Ocean coastal countries despite having information about the giant wave. They also blamed the Thai administration for failing to warn the public about the

disaster on time. It is the first worldwide tsunami claim<sup>6</sup>.

There are two interesting points here. First, the disaster did not occur in the United States. Also, how effective communication is between governments of different countries depends on observing accepted protocols and whether they are friendly. Second, if a warning was given but no disaster occurred, people suffering losses from a false alarm could file a lawsuit against the government too. The legal system indirectly drives the establishment of defensive policies or practices. Adopting defensive strategies helps to make the procedures more comprehensive but the marginal cost to strive for accuracy is likely to be very expensive.

### **7. Political risk**

The devastation caused by the Asian tsunami was broadcasted constantly. Everyone who heard the news was stunned by the catastrophe. This led to record-high donations made by individuals and governments all around the world who felt very compassionate about the tremendous loss and suffering that had taken place. These massive donations came with a price tag: for countries facing government budget deficits, the increase in government spending and the reduction in tax revenue from tax-exempt donations could cause political pressure in the next round of budget planning. As countries sent financial and medical assistance that exhibited their capability, power and concern, the physical damage caused by the disaster was transformed into monetary cost and then transferred implicitly to non-Asian countries.

### **8. Back-up risk**

While property damage insurance can be purchased as a protection against perils such as fire, floods and earthquakes, loss of business

5) Canadian Broadcasting Corporation, January 4, 2005 News ([www.cbc.ca](http://www.cbc.ca))

6) ZAMAN Daily Newspaper, March 6, 2005 News ([www.zaman.com](http://www.zaman.com))

activities may be substantial if a disaster strikes an institution with no adequate back-up facilities<sup>7</sup>. The back-up risk is the risk of losses on account of deficient contingency planning. Whether a company uses strategic offshore outsourcing or is simply a multinational operation with offshore facilities, a well-defined and well-tested business continuity plan is a must. There is a greater potential for disruption from a natural disaster in the developing world because of lower building-code standards, a general lack of preparedness and less mature business models. Companies that use offshore services should develop a global strategy across multiple suppliers or use global providers of offshore outsourcing so that services can be moved quickly to other parts of the world when necessary<sup>8</sup>.

We are living in a society exposed to a variety of risks. Modern technology can allow people from different parts of the world to communicate instantaneously. This connection improves work-efficiency, reduces delays, and makes for faster communication and increased productivity. At the same time, this situation creates new challenges. Media, technology and globalization of economy introduce new risks. The Asian tsunami highlights these risks and the far-reaching impact of the losses. Business leaders must pay close attention to understand the risks faced by their organizations because some of these risks can be difficult to identify and quantify. As we move into the new millennium, we need innovative methodologies to identify, measure, control and reduce risks. There is a need to develop global strategies applicable to local operations that could have very different risk profiles. □

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**We are living in a society exposed to a variety of risks. Modern technology can allow people from different parts of the world to communicate instantaneously.**



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7) Jorion, Philippe, 2001, *Value at Risk: The New Benchmark for Managing Financial Risk* – 2nd edition (Section 19.5.2), McGraw-Hill

8) "Eye on Offshoring: Lessons from the Tsunami," article wrote by Scott Warren of International Network Services, Inc. and published by Computerworld on February 21, 2005 ([www.computerworld.com](http://www.computerworld.com), quicklink#52492).