



JAPAN EARTHQUAKE & TSUNAMI

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The March 11 earthquake and tsunami can best be described as a complex “Super Cat” event, and one which will have sizeable ramifications for businesses and the insurance industry across the globe.

The magnitude 9.0 earthquake which has its epicentre 130 kilometres (80 miles) east of Sendai was the strongest earthquake ever felt in Japan and could be felt in Beijing some 2,500 kilometres away. It was followed by a tsunami which was reported to have reached wave heights in excess of 9.75 metres (32 feet) which swept across a 2,100 kilometre stretch of North Eastern Japanese coastline and inland for several kilometres, before receding and taking homes, buildings cars and large ships back out into the ocean.

The death toll from the tragedy has yet to be calculated and given the lack of access to some of the areas which were impacted by both events it is expected to take some time before the toll can be finalised with any degree of accuracy. Initially the Japanese authorities have said they believe approximately 20,000 people died in the event but many believe that figure to be highly conservative with some estimating that it may well have been nearer 60,000 that perished both in the rubble and under the tidal waves.

Over 350,000 people are still homeless after the event and the problem for the Japanese government is that unlike in New Orleans after the 2005 hurricanes and the breaching of the City’s levees, the country does not have the capacity to accommodate such a figure within its current infrastructure or move people to unaffected areas.

The event has caused widespread and significant damage including to nuclear reactors at the Fukushima Dai-ichi plant which has resulted in a significant radiation leak after a series of explosions at the plant and the loss of power to the plant’s reactor coolants systems.

The radioactive leaks have impacted the country’s food and water supplies and have caused many airlines to cease flights to Japan. Many South East Asian countries are operating various quarantine measures for vessels, crews and cargos which have emanated from not only the affected areas but also Japan itself.

Japan’s government has said the cost of the earthquake and tsunami may reach \$309 billion, making it the world’s most expensive natural disaster on record.

The extensive damage to housing, roads, utilities and businesses across seven prefectures has resulted in direct losses of between 16 trillion yen (\$198 billion) and 25 trillion yen (\$309 billion), according to a Cabinet Office statement on 23 March.

The loss figure is considerably higher than other estimates. The World Bank estimated the damage might reach \$235 billion. Investment bank Goldman Sachs had estimated quake damage would be as much as \$200 billion.

If the government's projection proves correct, it would top the losses from Hurricane Katrina. The 2005 Category Four storm that ravaged New Orleans and the surrounding region cost \$125 billion, according to the Insurance Information Institute.

Japan's estimate does not include the impact of power shortages triggered by damage to the nuclear power facilities or any global impact, therefore the likelihood is that the cost will rise significantly on a global scale.

Risk Modelling for RMS said it believed the economic losses would not only reflect the level of direct damage to property from strong shaking and the catastrophic tsunami but will also involve other significant secondary consequences. The most substantive of these reflect failures in emergency generators and non-operability at four nuclear power plant complexes situated along the northeast coast of Honshu in the direct path of the strongest shaking and tsunami impacts.

Overall, RMS estimates that the total economic loss resulting from the earthquake shaking and tsunami inundation, as well as from the impact of the disruptions in power supplies, evacuations and decommissioning several nuclear power stations, will be in the range USD\$200–\$300 billion (c. 4-5% of Japanese GDP). Specifically, beyond damage to property and infrastructure, the estimate includes the costs of interrupted business processes and ports and a reduction in industrial and manufacturing production. Exposure to loss in this Super Cat event includes large scale destruction of housing, agriculture, land contamination, auto and marine sectors, industrial production and infrastructure damage.

It is still premature to estimate the total insured losses at this stage due to continuing uncertainties surrounding the event, but only a minor proportion of the economic loss will be covered by insurance.

Three major Japanese firms have a combined 85% share of the market and there is said to be an estimated 40% take up on earthquake coverages in the country given the high cost of the insurance.

In the aftermath of the earthquake and tsunami, much of the world's attention has been on the battle to contain the radioactive material in the Fukushima plant.

A senior vice president of the American Nuclear Insurers (ANI) which provides reinsurance for nuclear sites around the globe said the impact of the leak on the wider insurance industry will not be known for some time.

ANI said its reinsurance policy with Japan Atomic Energy Insurance Pool includes property liability coverage for some of the country's plants and third-party liability coverage for all of Japan's nuclear plants.

It added that the situation in Japan creates multiple short- and long-term ramifications for an already complex industry. But the immediate crisis appears to create no liability for ANI, officials say, because its Fukushima Daiichi reinsurance policy excludes earthquake and flood damage.

"There's never been an event like this" said Ron Sanacore, ANI senior vice president of operations.

The long-term impact of the Japan disaster on the nuclear insurance industry remains unknown, Mr Sanacore said. The entire insurance industry now anticipates a hardening of rates at least in Japan and possibly worldwide, but ANI said it was not in a position to anticipate the impact on its domestic and foreign policies.

"It may potentially have a significant impact on the industry," he added. "For the nuclear insurance industry, it is too soon to tell."

The response from the loss adjusting community has been severely hampered by the nuclear issues as the Japanese officials have been loathe to allow access to the areas which have been subjected to higher levels of radiation, which effectively are those which have been hardest hit by the tremors and the tsunami. The safety of our employees has to remain the priority and Crawford & Company is in continued communication with the key governmental agencies and their recommendations in terms of the advisability to travel to Japan.

This does not mean, however, that Crawford cannot continue to provide services and advice to its clients at a time of significant stress and demand. Crawford has deployed staff to commence remote investigation / evaluation and is also considering utilising satellite and photographic imagery commissioned on the affected area to support the adjustment process.

In addition, Crawford has established an Emergency Response Centre in Singapore manned by an advance party of Global Technical Services (GTSSM) adjusters and Japanese speaking employees. Additional resources are being deployed to meet client demands and mirror their own response given the

potential unprecedented scale of damage in the worst affected areas. Crawford is ready to deploy international GTSSSM adjusters into the region and key personnel have been identified.

The issue though goes far deeper than the sheer physical damage which has been visited on a significant area of the Japanese mainland. Even in these early stages it is clear that the events of 11 March will not be contained within the geographic areas which have suffered physical damage.

The two earthquakes which have hit New Zealand in the past six months and the Chilean Earthquake of a year ago caused significant damage to the localities but had no wider significant effect on the global economy and business. It is Crawford's view this will not be the case with Japan.

The country is the world's third largest economy and that economy is led by and reliant on its export of goods and services.

Therefore there is a vast number of businesses and industries which rely heavily on the goods which are manufactured and exported from the country and with ports already under growing strain after the closure of facilities in the affected areas and the added issues surrounding the testing for radiation levels on cargoes there is a significant danger that the coming weeks will see a severe strain placed on the global supply chain.

The use of technology to create the increasing reliance on the "just in time" supply system may well have created a global network which can speed goods across the world. What is of real concern is that few, if any, risk managers will have envisaged within their disaster scenarios such a catastrophic loss to such an important and specialist manufacturing base particularly in terms of electronic and hi-tech goods, with few other supply options available.

Therefore whilst the devastation in Japan is clearly going to be costly, the worldwide impact on businesses accustomed to the immediacy of the modern supply chain is only just beginning to be felt.

We believe that the market has to brace itself for a significant influx of Contingent Business Interruption (CBI) type claims alongside the losses from businesses directly affected in Northern Japan. In response to that recognition, Crawford has already mobilised forensic accountants to be in a position to respond quickly when the claims begin to arrive.

The complexity of global business means that the industry faces its own Gordian Knot on a global scale in terms of having to quickly unravel the interconnected claims that will arise not only in Japan but across

the world as expected supplies fail to materialise and the knock on effect which will be caused by firms across the world no longer in a position to meet the demands of their customers.

What has to be of real concern for the insurance industry and the loss adjusting community in particular is the lessons learned from the claims arising from hurricanes Katrina, Rita and Wilma and the more recent events in Chile, Queensland and New Zealand in terms of the causation disputes and wide area damage.

The devastating nature of the tsunami has caused a significant level of the physical damage in the region but there is certain to be disputes over the causation. The damage may have been caused by the surge and subsequent flood but was the causation the earthquake? The same can be said for the Contingent Business Interruption and the causation trail which may well include a lengthy supply chain and multiple insured and underwriters.

At present the figures which are being estimated are speculative at best as it will take many months for the full effects of the earthquake and the tsunami to be appreciated and evaluated. What is becoming clear is that while the sheer scale of the earthquake, the resultant tsunami and the physical damage it has caused is on a scale which has not been seen in Japan it has the potential to be eclipsed by the impact this will have in the months to come on Japan's manufacturing and service industries and via the global supply chain firms worldwide.

This event shows all likelihood of being a truly global insured event with unique features that will challenge our industry. Resultant claims are certain to be made across the world in the months to come, leading to the need for a concerted global claims response which can effectively track applicable policy coverage along the supply chain.