



Japan's Insurance Market 2012



The Toa Reinsurance Company, Limited

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Contents	Page
To Our Clients	
Tomoatsu Noguchi President and Chief Executive, The Toa Reinsurance Company, Limited	1
1. The Framework and Future of Japan's Earthquake Insurance System: The Great East Japan Earthquake in Retrospect	
Yasushi Kuriyama Managing Director, The General Insurance Association of Japan	2
2. The Catastrophe Losses of 2011 and Japan's Non-Life Market: A Modeler's Perspective	
Patricia Grossi, Robert Muir-Wood, and Craig Van Anne Risk Management Solutions, Inc.	11
3. China's Life Insurance Market: Current Conditions and Future Direction	
Yuki Katayama NLI Research Institute	19
4. Japan's Insurance and Reinsurance Market 2011-2012 – Resilience in Adversity	
Dominic Christian Co-CEO, Aon Benfield	28
5. Trends in Japan's Non-life Insurance Industry	
Underwriting & Planning Department The Toa Reinsurance Company, Limited	34
6. Trends in Japan's Life Insurance Industry	
Life Underwriting & Planning Department The Toa Reinsurance Company, Limited	40
Supplemental Data: Results of Japanese major non-life insurance groups (company) for fiscal 2011, ended March 31, 2012 (Non-Consolidated Basis)	48

To Our Clients

It gives me great pleasure to have the opportunity to welcome you to our brochure, “Japan’s Insurance Market 2012.” It is encouraging to know that over the years our brochures have been well received even beyond our own industry’s boundaries as a source of useful, up-to-date information about Japan’s insurance market, as well as contributing to a wider interest in and understanding of our domestic market.

During fiscal 2011, the year ended March 31, 2012, the Japanese economy continued to encounter a generally challenging set of circumstances, although it regained momentum to some extent, supported by a modest recovery of economic activity and the beneficial impacts of government policies. In addition to a slowdown of industry owing to the constraints on the supply of electricity as a result of the Great East Japan Earthquake and the nuclear accident, other factors adversely affecting the Japanese economy included a slowdown of overseas economies brought about by the European sovereign debt crisis and rising oil prices, as well as fluctuation of exchange rates, deflationary pressure, and concerns about the deterioration of the labor market in Japan.

The non-life insurance industry in Japan saw an increase in premium income because the number of purchasers of earthquake insurance increased after the Great East Japan Earthquake and the government’s scheme to provide subsidies to people purchasing environmentally friendly automobiles boosted sales of automotive insurance. However, the financial foundation of non-life insurance companies in Japan suffered from heavy losses incurred because of the flooding in Thailand and other major natural disasters. The life insurance industry in Japan also continued to operate in a challenging business environment. Although the number of new policies trended upward, the total number of policies in force has been flat and fund management performance remained lackluster.

The reinsurance market hardened centering on the property field, reflecting the frequency of major natural disasters continuing from the previous year. In addition, the turmoil in international financial markets owing to the European sovereign debt crisis made the outlook even more unclear.

In order to respond swiftly and precisely to these changes in the operating environment and to further enhance corporate value, the Toa Re Group established a new vision and launched a new medium-term management plan, Forward 2014, in April 2012.

By endeavoring to act as an exemplary reinsurance company, we are resolved to fulfill our mission: “Providing Peace of Mind.”

In conclusion, I hope that our brochure will provide a greater insight into the Japanese insurance market and I would like to express my gratitude to all who kindly contributed so much time and effort towards its making.



Tomoatsu Noguchi

President and Chief Executive
The Toa Reinsurance Company, Limited



The Framework and Future of Japan's Earthquake Insurance System: The Great East Japan Earthquake in Retrospect

1

• **Yasushi Kuriyama** Managing Director, The General Insurance Association of Japan

Introduction

Actual figures for damage from the Great East Japan Earthquake were announced one year after the disaster: a total of 19,009 people dead or missing, and 383,246 buildings completely or partially destroyed.

After the Great East Japan Earthquake occurred on March 11, 2011, all employees of Japan's non-life insurance companies sympathized deeply with those who had suffered so greatly, and pressed forward with the payment of earthquake insurance claims as quickly as possible so that those affected by the disaster could rebuild their lives.

As of March 12, 2012, approximately one year after the earthquake, victims of the disaster had received payment on 764,938 claims totaling 1,218.5 billion yen. This set a record for payment of claims by Japan's non-life insurance companies for a single incident, and survey results indicate that it had a multiplier effect on the overall economy exceeding 3 trillion yen.

The Non-Life Insurance Industry's Response to the Great East Japan Earthquake

(1) Organizational Framework

When the earthquake occurred on March 11, 2011, the General Insurance Association of Japan (GIAJ) decided for the first time in its history to apply a framework for processing large-scale damages in accordance with its predetermined Master Plan for Processing Earthquake Insurance Damages. Incidentally, the framework for processing small- and medium-scale damage was applied to the Great Hanshin-Awaji Earthquake.

The key feature of the framework for processing large-scale damages was the Earthquake Insurance Central Command that the GIAJ established at its headquarters in Tokyo. The Earthquake Insurance Central Command was responsible for 1) centrally organizing the various initiatives of the non-life insurance industry and 2) unifying the response to key related government bodies, administrators and mass media. The Earthquake Insurance Central Command then worked together with the Earthquake Insurance Local Headquarters in Sendai in implementing various coordinated responses.

(2) Claims Paid

According to aggregate GIAJ data one year after the earthquake as of March 12, 2012, earthquake insurance claims associated with the Great East Japan Earthquake totaled 764,938, claims paid totaled 1,218.5 billion yen, and 99.0 percent of reported claims had been either settled or investigated. The number of buildings destroyed was similar to the Great Hanshin-Awaji Earthquake, for which earthquake insurance claims paid totaled 78.3 billion yen, the previous record. This underscores the scale of the earthquake insurance claims paid to the many victims of the Great East Japan Earthquake. The main reason for the difference is the expansion of earthquake insurance coverage since the Great Hanshin-Awaji Earthquake.



(3) Non-Life Insurance Industry Response

The non-life insurance industry's response to the Great East Japan Earthquake can be broadly categorized as consultation, damage investigation, and provision of information.

A. Consultation

Immediately following the earthquake, non-life insurance companies and the GIAJ both consulted with a huge number of people, primarily regarding claims by earthquake insurance policyholders and requests from people throughout Japan for immediate earthquake insurance coverage. Courteous, respectful responses formed the core of these consultations.

Non-life insurance companies and the GIAJ expanded their call centers in preparation for a substantially larger number of consultations than usual. However, the volume was so large that callers regularly had to wait on hold. The most important of these consultations was responding to questions from earthquake insurance policyholders in the affected area regarding the procedure for filing insurance claims. Concurrently, another key issue was preparing the framework for encouraging claims among policyholders who were unable to file claims because of the chaos caused by the disaster and among the many policyholders who did not realize they could file a claim.

The GIAJ printed 80,000 posters and 546,000 leaflets, and cooperated with non-life insurance companies and insurance agencies to display or distribute them, primarily at evacuation centers. It also encouraged claims using mass media such as newspapers and radio. This publicity made policyholders affected by the disaster aware of how to handle earthquake insurance claims despite the serious ambient chaos.

The next requirement that emerged was creating a system for smoothly handling earthquake insurance claims even in cases where, for reasons including loss of the insurance policy due to the tsunami or the death of the policyholder, it was not clear which company had underwritten the earthquake insurance. Shortly after the earthquake on March 19, 2011, the GIAJ collaborated with non-life insurance companies to establish the System for Searching for Earthquake Insurance Contracts on Dwelling Risks, an internal insurance industry system for cross-referencing earthquake insurance policies and companies to create a framework for answering inquiries from policyholders, regardless of which company they called. Next, on March 28, 2011 the GIAJ established a dedicated call center and enabled handling of inquiries via its website.

B. Damage Investigation

Damage investigation was the second core component of the non-life insurance industry's response. The GIAJ introduced a number of new approaches, including the use of aerial and satellite photographs to approve total loss areas for payment of claims.

Although rules for approving total loss areas with aerial photographs in order to process earthquake insurance losses were already in place, this approach was actually used for the first time following the Great East Japan Earthquake. The process involved three main steps. First, 23,000 satellite and aerial photographs were used in transposing photos of tsunami damage to maps. Next, addresses and lot numbers were then added to the maps, and then finally correlated with the dwellings covered by earthquake insurance. While this process was fraught with unforeseen difficulties, it dramatically accelerated payment of claims by enabling all payments in total loss areas without building-by-building damage approval.

In addition, clarification of standards for tsunami, flooding and liquefaction damage; introduction of written investigations based on self-submitted reports by policyholders; implementation of a scheme for agencies to provide support for damage investigation; and written investigations based on self-submitted reports for areas such as the exclusion zone related to the accident at the Fukushima Daiichi Nuclear Power Plant were all policies introduced for the first time following the Great East Japan Earthquake. The rapid progress of claims between late April and early May 2011 was due to the introduction of these new policies.

C. Provision of Information

Information was the third core component of the non-life insurance industry's response. In dealing with the mass media in the initial period of the response to the earthquake, the industry realized that people were focusing on earthquake insurance, and that they were uncomfortable with and mistrustful of the insurance industry. In other words, the people of Japan held a critical view of the industry, wondering if the domestic non-life insurance industry was sufficiently solvent to pay the claims from the major earthquake, if it could deploy the people needed to respond to the earthquake, and if it would repeat its past failures to pay insurance claims. The people of Japan expected the entire non-life industry to be accountable for its response.

Given these conditions, the industry set three basic principles for providing information. One, it would by all means agree to all interviews. Two, it would respond as quickly as possible. Three, it absolutely would not cover up unpleasant information. With fast, open and unflinching responsiveness as a base, the industry issued a large volume of news releases, including releases that communicated information overseas. The mass media did not quite become an ally because of the information the non-life insurance industry provided, but it did demonstrate a definite understanding of the non-life insurance industry's actions without mistrust. This became an important element smoothing the response to the earthquake.



Three key points emerge from the above discussion of the industry's response. One, cooperation between the Earthquake Insurance Central Command and the Earthquake Insurance Local Headquarters enabled rapid, unhesitating support when managers on the ground called out for help. Two, companies in the industry collaborated in setting standards rather than causing confusion by setting standards individually, and competed to pay claims quickly and courteously. Three, the industry appropriately communicated information about its responsiveness to the public. These three points were key reasons for the definitely positive assessment of the industry's response from the world at large.

*The Structure of
Japan's Earthquake
Insurance System*

(1) Overview and History of the Earthquake Insurance System

Following the Niigata Earthquake of 1964, household earthquake insurance became available on June 1, 1966. Initially, maximum insured amounts were 900,000 yen for dwellings and 600,000 yen for household contents. Coverage was limited to 30% of the fire insurance coverage for the dwelling, with compensation only in the event of total loss.

Subsequent revisions included several increases in policy limits. A major revision in 1980 made earthquake insurance a rider that was automatically attached to a fire insurance policy in principle, unless deleted at the option of the policyholder; it also raised the 30% dwelling coverage limit to 50% of the fire insurance coverage, broadened compensation to a "half loss" event, and substantially increased maximum insured amounts to 10 million yen for dwellings and 5 million yen for household contents. In 1991, partial loss was covered, and in 1996 the maximum insured amount increased to the current 50 million yen for dwellings and 10 million yen for household contents. No revisions have been made since 1996, aside from minor changes. Rates have changed, but the underlying basic two classes for dwelling structures and four classes for location (prefecture) have remained in place since the program began.

(2) Features of the Earthquake Insurance System

A. Government Reinsurance Underwriting

Earthquake insurance in Japan operates under a self-help principle in which individual citizens take steps to protect their own assets. Therefore, premiums paid by policyholders ultimately fund insurance claims. However, the unique characteristics of earthquake risk gave rise to the establishment of a system in which the government underwrites reinsurance. The point here is that the government is responsible as a reinsurer to pay reinsurance claims in the event of an earthquake based on reinsurance premiums ultimately funded by earthquake insurance premiums, but must not make the mistake of confusing this role with its responsibility to provide a social safety net funded by taxes. In sum, the system is structured so that all earthquake insurance premiums paid by policyholders are entirely separate from other types of insurance, and private-sector non-life insurance companies, including those specializing in reinsuring earthquake risk such as the Japan Earthquake Reinsurance Co., Ltd. (JER), and the government reinsurance with the “special account for earthquake insurance” as its reserve, pay claims from their reserves in the event of an earthquake.

However, the system has one problem. Earthquake risk is unique in that it materializes infrequently, but can cause massive losses when it does materialize. The resulting problem is that reserves will not have the resources for payment of claims if they are not sufficiently funded prior to the occurrence of an earthquake. A simple description of the earthquake insurance system that prepares against this eventuality follows. The scope of private sector responsibility for insurance is based on its reserves. The government serves as the reinsurer responsible for paying amounts in excess of private sector reserves from the special account. If the special account is insufficient, the government temporarily borrows from general account tax revenue and repays the borrowed funds using subsequent earthquake insurance premiums. This structure is central to the system. While the government may temporarily draw on tax revenue, the system maintains the institutional self-help framework by requiring repayment from earthquake insurance premiums.

B. Earthquake Insurance Cash Flow Structure

Long periods of time are the key to the earthquake insurance system. The GIAJ and JER jointly prepared study materials for a September 8, 2011 working group on the government's earthquake special account. The following model of changes over time in earthquake insurance reserves draws on these materials for certain assumptions, such as continued annual payment of premiums into the reserves at the level of 100 billion yen per year, the same as in the year prior to the Great East Japan Earthquake.



As a result of the Great East Japan Earthquake, government and private sector reserves decreased to a combined 1.2 trillion yen in 2011. According to the model, the reserves will subsequently recover to 3.9 trillion yen in 2041 with the addition of earthquake insurance premiums. However, an earthquake in the interlinked Tokai, Tonankai or Nankai areas will cause a deficit of 300 billion yen. Subsequently, the reserves will recover to 1.5 trillion yen in 2061, but then fall back into a 1.5 trillion yen deficit due to an earthquake with its epicenter in Tokyo. Thereafter, the reserves will recover to 5.9 trillion yen in 2143, but then a major earthquake in the Kanto area will cause them to decrease to 400 billion yen. The graph below covering the period through 2491 indicates substantial decreases in reserves due to major earthquakes followed by recovery. Needless to say, this graph is only a representation based on numerous estimates and guesses. However, it does show that the earthquake insurance system relies in principle on premium payments from policyholders, making it a system that operates over very long periods under the self-help principle.

The law of large numbers does not apply to earthquake risk. The only choice in creating an earthquake insurance system is building a framework based on balanced cash flow over the long term with the crucial assumption that the government will serve as reinsurance underwriter.

C. Setting Maximum Payment Limits

Japan's earthquake insurance sets a maximum limit for payment of claims from a single earthquake, and allocates payment obligations between the private sector and government. This payment limit was determined based on estimated payment of claims resulting from the projected maximum loss should a single earthquake as powerful as the Great Kanto Earthquake occur again. The maximum payment limit when the earthquake insurance system was created in 1966 was 300 billion yen, with the private sector responsible for 30 billion yen and the government (reinsurance) responsible for 270 billion yen. The maximum payment limit increased steadily in tandem with expanded coverage and indemnity. It was 5,500 billion yen immediately prior to the Great East Japan Earthquake, with the private sector responsible for 1,198.75 billion yen and the government responsible for 4,301.25 billion yen.

The maximum payment limit increased to 6,200 billion yen from April 6, 2012 because of the substantial increase in the number of new policies as a result of the Great East Japan Earthquake. Also, private sector reserves decreased significantly because of recent payments. The allocation of responsibility changed as a result, with private-sector responsibility decreasing substantially to 488 billion yen and government responsibility increasing to 5,712 billion yen based on the notion that private-sector responsibility should correspond to its reserves.

D. Calculation of Earthquake Insurance Premiums

The Non-Life Insurance Rating Organization of Japan uses the following process for calculating premium rates. First, the government predicts earthquakes by creating a model encompassing 730,000 earthquakes based on the probabilistic seismic hazard map published by the Headquarters for Earthquake Research Promotion, a special government organization for earthquake prediction. Next, the land area of Japan is divided into a grid of square kilometers in which insured building risk is quantified. These two components are then used together to quantify Japan's total earthquake risk. Finally, insurance premium rates are calculated according to eight risk classes derived from the four regions and the two types of building structures.

The major reason necessitating this detailed calculation of premiums is that while the system certainly requires government reinsurance underwriting, it is ultimately a self-help system predicated on maintaining the government's core reinsurance underwriting role based on the economic rationality of this responsibility. Human limitations notwithstanding, premium calculation must be free of any sense of futility in employing the greatest possible rigor and detail.

The Future of the Earthquake Insurance System

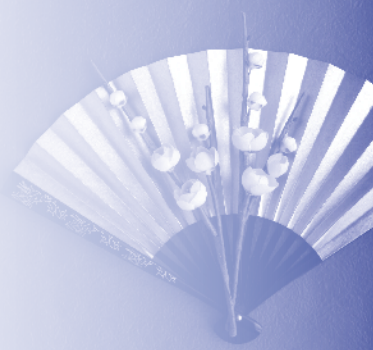
I would like to share my opinions on availability and affordability, which are two major issues in considering the future of the earthquake insurance system.

A. Unavailability

Insurance is not necessarily available for purchase. The phenomenon of insurance unavailability occurs when insurance companies no longer have the financial base to underwrite insurance. For example, an insurance crisis occurred in the United States in the 1980s and created major social problems.

Insurance unavailability has not been a problem in Japan. Theoretically, however, it could well occur due to the solvency margin regime or insurance risk management at particular companies. The point is that insurance underwriting cannot take place without a financial base that can accommodate the risks involved.

Conventionally, the earthquake insurance system for earthquake risk in Japan's household sector has been predicated on government reinsurance because no non-life insurance company would be able to prepare the financial base including reinsurance. However, the reinsurance that mutual insurance federations such as the National Mutual Insurance Federation of Agricultural Cooperatives obtained in overseas markets, and new financial techniques such as earthquake bonds, functioned effectively for the Great East Japan Earthquake. As a result, future studies may once again debate the need for government reinsurance.



My conclusion, however, is that the institution of household sector earthquake insurance could not exist without government reinsurance, for the following three reasons.

First, the earthquake insurance system is different from a mutual insurance federation because it is available to all Japanese citizens. It must underwrite earthquake insurance even if 100% of households want it, which is a fundamental difference in scale compared with the limited markets that mutual insurance federations serve.

Second, premiums must remain stable. Premium calculation based on considerations including overseas reinsurance markets and earthquake bonds would give rise to large annual fluctuations in premiums, creating the potential for confusion among the policyholders who pay the premiums.

Third, no entity besides the government can serve as the risk underwriter of last resort in order to maintain the current system in which insurance companies are responsible for payments within the scope of their reserves. Does any entity besides the government have the ability to fully indemnify the probable maximum loss if the Great Kanto Earthquake were to recur?

Moreover, the Great East Japan Earthquake caused a tsunami that was larger than expected. Earthquake predictions must therefore incorporate earthquake archaeology, which was not reflected in past predictions. One result could be a significant revision of the earthquake periodicity and scale assumed in conventional prediction, which could significantly increase the probable maximum loss for earthquake insurance. Furthermore, coverage has expanded substantially because of the Great East Japan Earthquake, which could also have the same effect. Undeniably, these issues create the potential for debate on the sustainability of the earthquake insurance system, including its government underwriting component. Even the government should have a limit on its maximum reinsurance capacity. All of these considerations must be part of the overall understanding of the issue of unavailability.

B. Unaffordability

Insurance unaffordability refers to premium affordability, or the extent of the ability of policyholders to pay their premiums.

Revisions to the earthquake insurance system since it was established have consistently increased indemnity. Expanded earthquake insurance coverage has therefore become a significant issue. The Great East Japan Earthquake has opened discussion of various demands. These include increasing the coverage limit from 50% of the attached fire insurance policy, creating a new category between half loss and partial loss, adding automobile coverage, and adding commercial properties. A major issue for earthquake insurance is the extent to which indemnity reflects these kinds of demands, which are linked to increased premiums.

Currently, earthquake insurance is not full replacement insurance for dwellings and household contents. However, even though it is not sufficient to fully replace assets accumulated over time, it has great value for disaster victims by giving them the means to start building their new life in the future, whether that means allowing a disaster victim to bury family members who have died, or move from an evacuation shelter to an apartment, or buy a small used car, or provide simple entertainment that makes an emotionally traumatized child smile. This approach keeps earthquake insurance from becoming full indemnity property insurance with high premiums that only the wealthy can afford. It involves close attention to the cost and benefits of earthquake insurance to keep premiums at a level that as many people as possible can afford by narrowly limiting the scope of indemnity.

Also, the tsunami damage from the Great East Japan Earthquake has given rise to the opinion that rate classes should be segmented to reflect tsunami risk. The discussion of increasing premium discounts for earthquake proofing shares this view. However, a logical outcome of classifying risk is that lower premiums for some groups will correspond to higher premiums for others, which is an issue that requires prudent study. Whether studying increased indemnity or risk segmentation, Japan should remain patient and remember that earthquake insurance involves mutual assistance and the public good.

Conclusion

The Great East Japan Earthquake has been called a major quake that occurs only once in a thousand years. If so, earthquake insurance has given Japan's non-life insurance industry an experience it can only have once in a millennium. We learned much from it.

Victims of the disaster demonstrated the great ability of insurance to contribute to the public good through their words of gratitude. The earthquake also provided an opportunity to reconsider insurance industry cooperation and competition, as well as an opportunity to find a new way of providing information. In addition, future discussion of changes to earthquake insurance will be a chance to consider the essence of insurance.

The Great East Japan Earthquake entailed great sacrifice. We must now move forward.



The Catastrophe Losses of 2011 and Japan’s Non-Life Market: A Modeler’s Perspective

2.

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Risk Management Solutions, Inc.

Summary

This article discusses two catastrophic events of 2011, which were significant insured losses to the Japanese non-life insurance market: the Tohoku Event (the Great East Japan Earthquake and Tsunami) of March 11, 2011, and the Thailand Floods, which persisted in the final half of 2011. Both events — ranking in the top 3 insured events of the year by all accounts — highlight the need for better catastrophe risk modeling and management practices. The authors discuss how catastrophe models are being reviewed following these events and the improvements needed in the management of property exposures at risk from natural hazards.

Introduction

The natural disasters of 2011 included not only the historic Tohoku Event but also a series of deadly tornadoes across the United States, an earthquake that destroyed the fabric of Christchurch, New Zealand, and major flooding across Southeast Asia (Table 1). Hurricane Irene made landfall along the Eastern U.S. seaboard – the first hurricane since the release of RMS v11 North Atlantic hurricane model. Each of these events provides an opportunity for re-evaluation of catastrophe models for these regions of the world, as well as improved methodologies for peril modeling (e.g., earthquake, severe convective storm, hurricane, and flood).

Table 1. Top 10 Insured Losses in 2011

Event (Date)	Event Location	Number of Deaths	Insured Loss Estimate (USD)
Earthquake (March 11)	Japan	15,844	35.00 billion
Earthquake (February 22)	New Zealand	182	13.50 billion
Flooding (July 25-November 30)	Thailand	790	10.78 billion
Severe Weather (April 22-28)	U.S. (Southeast, Plains, Midwest)	344	7.30 billion
Severe Weather (May 21-27)	U.S. (Plains, Midwest, Southeast)	181	6.75 billion
Hurricane Irene (August 22-30)	U.S., Bahamas, Caribbean Islands	46	5.00 billion
Flooding (December 21-January 14)	Australia (Queensland)	36	2.42 billion
Severe Weather (April 3-5)	U.S. (Midwest, Southeast, Plains)	9	2.00 billion
Earthquake (June 13)	New Zealand	1	1.80 billion
Severe Weather (April 14-16)	U.S. (Plains, Southeast, Midwest)	48	1.70 billion

Source: Aon Benfield

Following significant natural catastrophes, it takes time for relevant data to be collected and distilled into actionable insights. Every natural catastrophe event is unique – in its occurrence, size, hazard footprint, secondary perils, and overall impacts. For significant events impacting insured exposures, it can take a significant amount of time for the scientific community to adequately evaluate and come to a consensus, particularly for non-typical observations. For example, the uncharacteristically high ground motions in New Zealand (due to high stress drops) and the extent of rupture along the Japan Trench will be studied for years (e.g., there are currently more than a dozen competing slip models for the Tohoku event).

Moreover, the view of the scientific institutions of each country must be taken into consideration for changes in a hazard perspective — and thus, there is some dependency on their timelines for research. For example, for earthquake hazards, this includes the U.S. Geological Survey (USGS) in the United States, the Headquarters for Earthquake Research Promotion (HERP) in Japan, and the China Earthquake Administration (CEA) in China, among others. Finally, systematic damage assessments — to estimate mean damage to structures and their contents — take time to perform, as do claims acquisition and analysis. Some insurance claims from the Tohoku Event are still on-going over a full year later and cannot be fully processed to garner modeling insights for some time.

While time must be taken to incorporate appropriate changes to catastrophe models, insights from events emerge more rapidly.

2011 Great East Japan Earthquake and Tsunami

The 2011 Great East Japan Earthquake and Tsunami was an unprecedented event, from which many lessons can be learned for catastrophe modeling and disaster research. Future earthquake hazard assessments in Japan will reflect the possibility of higher magnitude events along the subduction zones situated off the coastline, ground motion prediction equations will be updated utilizing the thousands of ground motion recordings from the event, and new approaches to modeling comprehensive business interruption (BI) impacts will be developed. Flood defenses will be evaluated, as will nuclear power safety. Of the many insights into modeling, two key areas are elaborated upon in this paper: the changes in seismic hazard as a result of the 2011 Tohoku Event and the impacts of the tsunami waves along the Japanese coastline.

Probabilistic Seismic Hazard

Since March 2011, the seismic hazard research community has endeavored to understand whether other related damaging earthquakes can now be expected around Japan and how this event may have affected the timing (advance or delay) of other earthquakes in the region. In early 2012, RMS published the results of a study exploring microseismicity patterns and static stress changes across the seismic sources in the area from northern Tohoku to the Tokyo region (See http://www.rms.com/Publications/2011_Tohoku_Seismic_Risk.pdf).

The RMS study outlined potential changes in short-term risk due to static stress changes in the tectonic environment in conjunction with short-term elevated seismicity as a result of the 2011 earthquake. Significant variability exists among the proposed finite fault slip solutions for the event, which leads to a wide range of proposed static stress changes and consequently, varied occurrence rate changes for the seismic sources across the impacted region. Subduction sources, and some crustal sources, near the edge of the Tohoku Event's rupture area show stress increases, while all sources within the rupture area itself exhibit stress decreases. From this analysis, it

became clear that occurrence rate changes cannot be resolved exclusively by analyzing static stress changes on known seismic sources. The presence of many unknown seismic sources makes this a limiting approach to understanding short-term changes in hazard and risk (Figure 1).

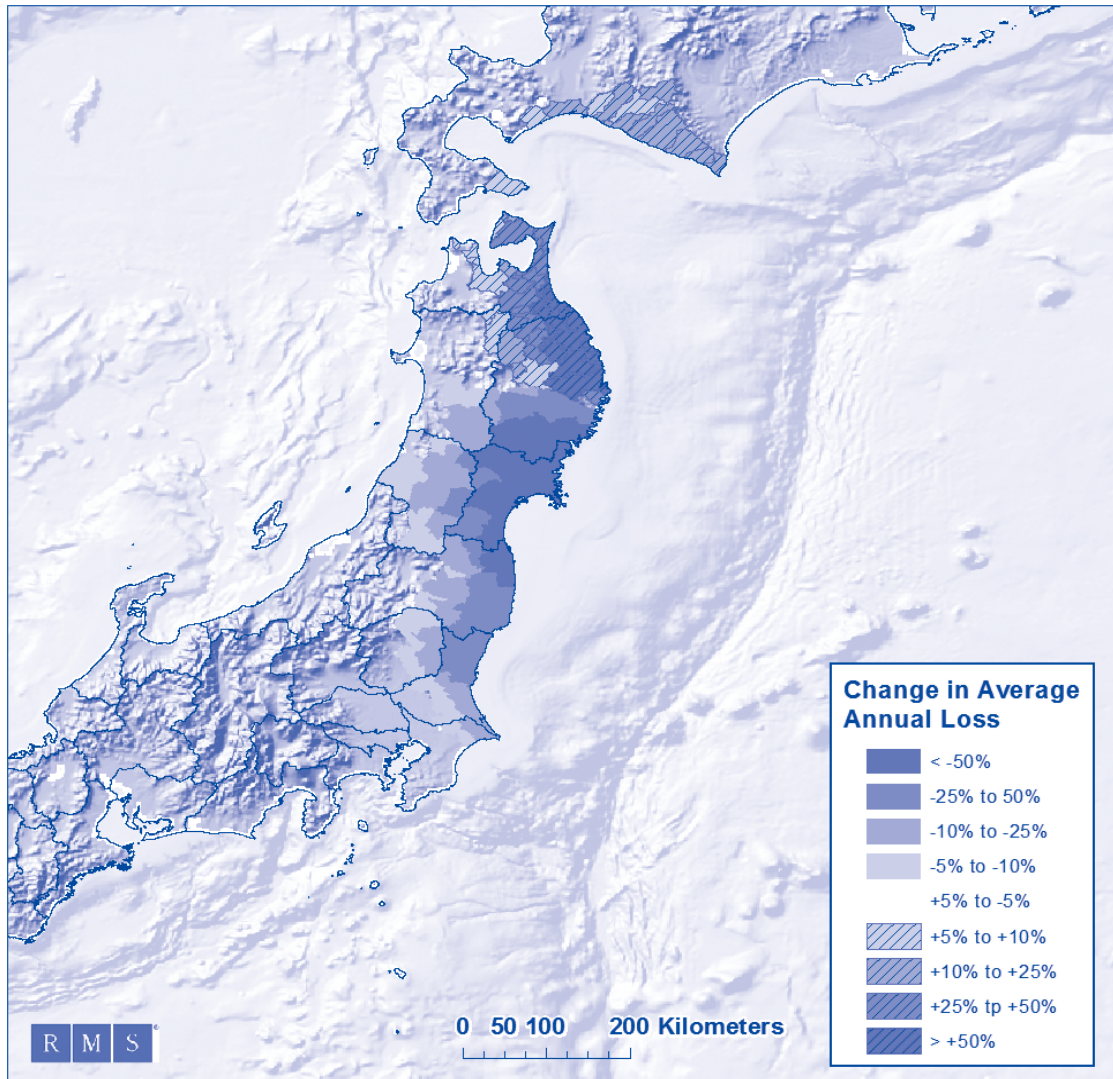


Figure 1. Changes in risk due to static stress changes as a result of the 2011 Great East Japan Earthquake, showing changes in ground up average annual loss (AAL), with solid colors indicating areas of decreased risk and hashed patterns indicating areas of increased risk; changes within $\pm 5\%$ are not shown.

Across the Northeast Honshu region, sensitivity testing of occurrence rate changes due to a combination of static stress and microseismicity rate changes is recommended to explore the range of changes in short-term risk estimates. Estimated occurrence rate changes, based only on the calculated static stress changes, indicate that short-term earthquake risk (i.e., within two years of the event's occurrence) to the Tokyo region, where approximately 10% of Japan's population resides, has remained relatively unchanged following the 2011 Tohoku Event. Considering increased patterns of post-event seismic activity, however, risk estimates can potentially increase.

This uncertainty in potential hazard poses a challenge to accurately assess hazard within the next few years, as post-event seismic activity decreases with each passing month. RMS is utilizing the results of this short-term risk analysis, the decay rate of seismic activity since the 2011 event, and preliminary changes in seismic source characterization by Japan's Headquarters for Earthquake Research Promotion (HERP) for a late 2012 update to its Japan Earthquake Model.

Tsunami

While the 2011 earthquake has reshaped the hazard landscape of Northeast Japan, the event also highlighted that in the largest of earthquakes, tsunami peril can be the principal driver of casualties, damage, and insured loss. In Japan, tsunami was the principal cause of damage to ports, boats, cargo and the coastal railway system (Figure 2). The waves were generated by the sudden vertical displacement of the sea floor from the 40 meters (or more) movement on the Japan Trench, the underlying shallow subduction fault zone that marks the boundary between the Pacific and Okhotsk plates and that dips down beneath the coast of northeast Japan.

As the seafloor above the upper end of the fault was raised several meters, the overlying water was lifted and then this mass of water spilled sideways and became the tsunami advancing west towards the coast of Japan and east across the Pacific Ocean. In deep water, the wave moved at speeds of more than 600 km per hour but slowed and increased in height as it reached shallower water in low lying coastlines.

Along Japan's coastline, water moved on average 1 km inland and to elevations in excess of 30 meters in some coastal inlets. In many coastal settlements with tsunami walls, predicated on repeats of tsunamis no larger than those witnessed over the past two centuries, these walls were overtopped or destroyed.

Around 1.2 million properties were identified as being damaged by the earthquake and tsunami. The best breakdown of damages suggests that 104,000 buildings were completely destroyed by the tsunami, while 111,000 were partly destroyed and 67,000 partially damaged. This compares with the shaking damage in which 25,500 buildings were totally destroyed, 143,000 were partially destroyed and 635,000 partially damaged. By these estimates, the earthquake caused approximately 42% of the damage to buildings, the tsunami 39% of the building damage, and the loss of buildings in the exclusion zone around the Fukushima power plants reflects 19% of the total direct damage. However, given that the nuclear incident was attributable to the tsunami, in total 58% of the impact was related to the tsunami.



Figure 2. Devastation in Onagawa, showing heavy, mid-rise concrete structures toppled due to the tsunami waves following the 2011 Great East Japan Earthquake (Source: RMS)



This degree of devastation stresses the need for detailed (i.e., high resolution) modeling of tsunami risk. There are challenges, however, to calculating tsunami risk at a location. It is necessary to understand the speed and extent of a tsunami wave's propagation inland, as well as the elevations of buildings and their vulnerability to inundation. As with all flooding, risk depends on site-specific elevations, construction characteristics, and the existence of local and network defenses. While aggregate information can be a valid approach to assessing a portfolio at risk from earthquake ground shaking, high-resolution information is needed to differentiate tsunami risk (Figure 3). For a fully probabilistic tsunami model, one must understand the recurrence associated with tsunami-generated events — notably, large subduction zone earthquakes off the coastlines of the world. In Japan, a M9.0 earthquake will not now recur off the Tohoku coastline of Northeast Japan for hundreds of years. More than 1100 years had elapsed since the previous equivalent version of the 2011 earthquake in 869AD. However, similar earthquakes and megatsunamis are expected along the coast of Hokkaido. There is also the potential for major tsunamigenic earthquakes along the Nankai Trough subduction zone of southern Japan, as well as on the Ryukyu subduction zone to the southwest of Japan running all the way to Taiwan.

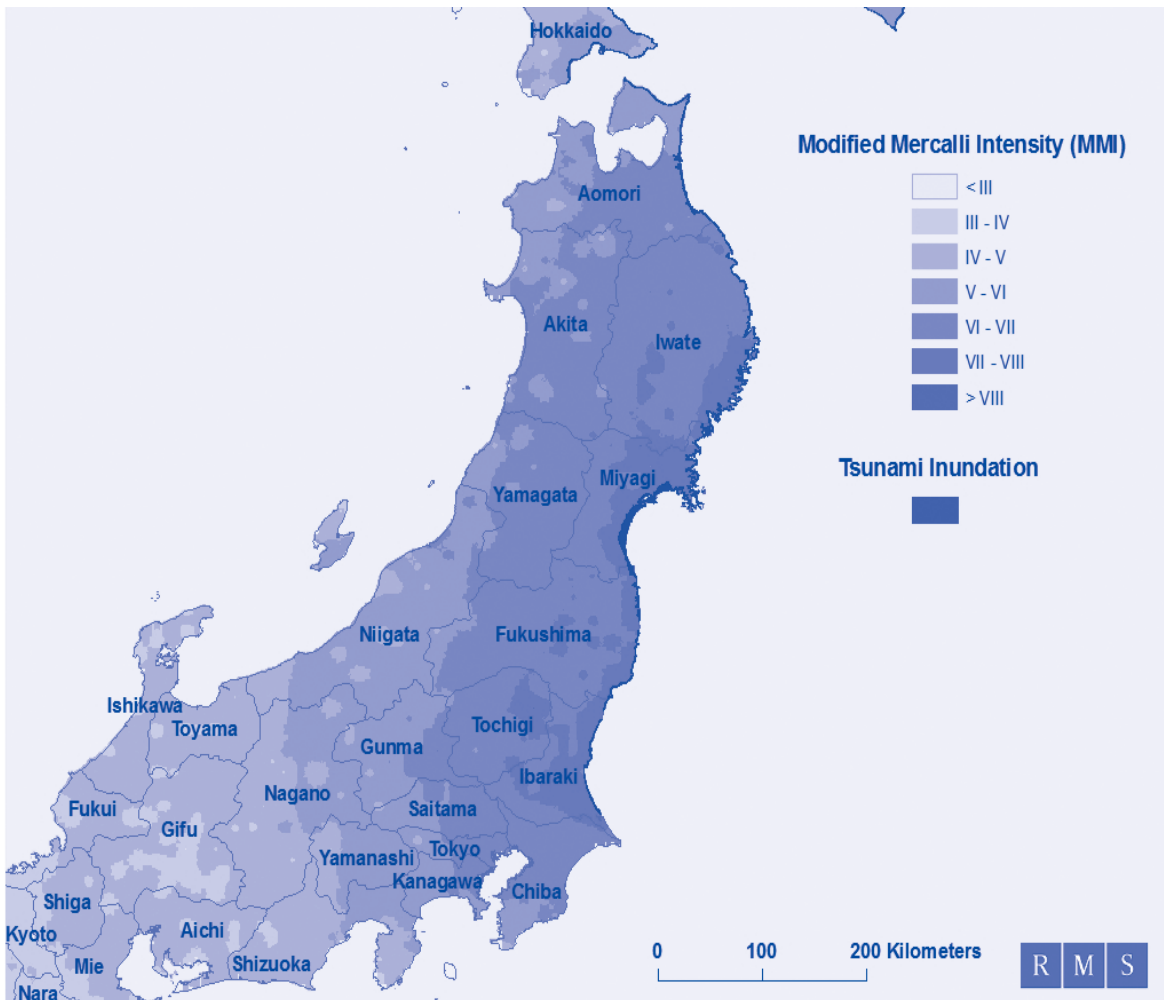


Figure 3: The impact zone of the 2011 Great East Japan Earthquake and Tsunami, illustrating the wide area of ground shaking (from under III to over VIII) felt across Honshu, and the concentrated northeastern coastal areas affected by the tsunami (Tsunami Inundation)

*The 2011
Thailand Floods*

The most significant aspect of the 2011 Thailand Floods was that it was a surprise catastrophic loss to the global insurance industry, impacting concentrations of industrial exposures within the Chao Phraya River basin. Flooding began in late July 2011 and by the end of November 2011, waters began to recede. Throughout this time, major flooding affected much of northern and central Thailand, most severely in the Chao Phraya River basin, but also in the Mekong River basin (Figure 4).

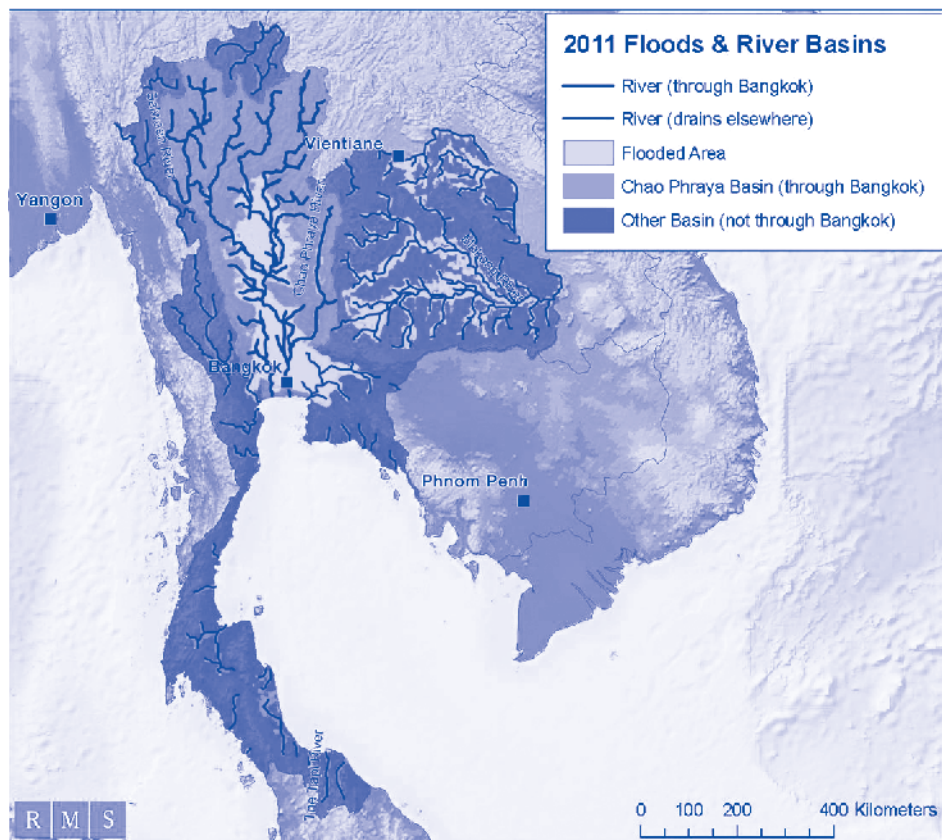


Figure 4: Thailand's river network, along with flooded area in the 2011 Thailand Floods

The river systems of central Thailand are very slow draining, with low gradients. Much of the central part of the country is a large delta, where rivers come together 270 km from the coast to form the Chao Phraya River that then flows slowly through the swampy delta towards the sea. The capital city of Bangkok, close to the mouth of this river, is only 2 m above sea level.

Over the past twenty years, the Government of Thailand had encouraged the creation of a number of industrial parks to the north of Bangkok. When finding suitable sites, the government required undeveloped, flat land (readily extended as needs arose). Inevitably, such land was within floodplains. The industrial parks each specialized in high technology and auto manufacturing sectors, with components companies and major manufacturers situated in the same site. Major Japanese companies with large manufacturing facilities in these industrial parks include Toyota, Honda, Hitachi and Canon.



While this concentration ensured companies could reduce the costs and time for transportation, it created major concentrations of risk — the opposite of the principle of diversification that underlies insurance. Even though the values of plant and equipment at these sites were substantial (e.g. in at least one case, in excess of \$10 billion), the risk mitigation measures proved insufficient.

During the 2011 flooding event, water inundated seven major industrial parks in the main flood zone (Figure 5), which were closed for between 35 and 85 days. As a consequence, the insured losses have been estimated to be US\$11 billion – both on commercial policies written in Thailand and on the corporate policies written in Japan. Although there was an enormous amount of primary and secondary contingent business interruption, it appears the majority of these losses were not insured.

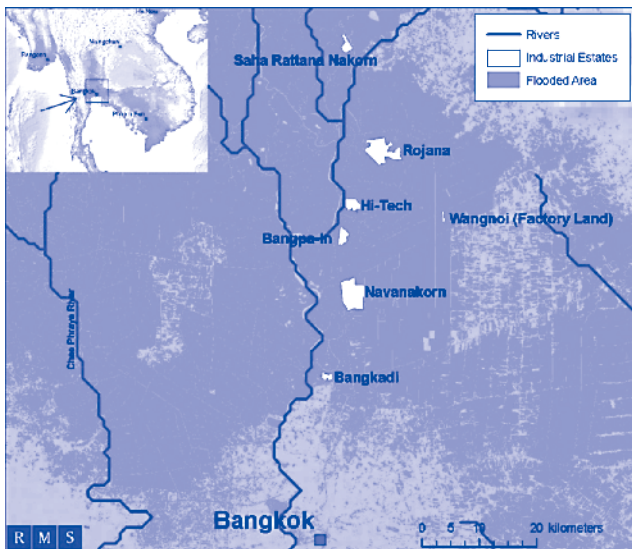


Figure 5: Industrial estates flooded during the 2011 Thailand Floods (left); damage at an industrial facility in early December 2011 (right)

The 2011 Thailand Floods have alerted the international insurance industry to the inherent problems associated with large concentrations of exposure developed in locations where the level of protection is not appropriate to the values at risk. The culture of risk management must keep pace with development.

*European Solvency II
Coming to Japan*

Though the timing is coincidental, with the occurrence of the 2011 Great East Japan Earthquake and Tsunami, it is now understood that the Japan Financial Services Authority (JFSA) is contemplating the adoption of a form of solvency oversight that is expected to be similar to the experience of the European market. The primary objective of European solvency oversight is the protection of policy holders — by ensuring the financial soundness of insurance undertakings and company operations is driven by a measurement-based risk management system. For such a risk management oversight to be successful, it requires three elements: the accountability of senior management, the

on-going ability to dynamically assess portfolio risk at all levels of the underwriting process (to manage exposure accumulation), and the implementation of JFSA oversight across the Japanese market in an efficient, timely, and consistent manner.

The reality of catastrophe modeling — for the insurance industry — is that all models (across perils and across geographical areas) are not created equal: in terms of methodology rigor and accuracy, or in terms of the robustness of the underlying exposure data. Indeed, it may be that a certain peril in a certain geographical area may not be modeled until market demand supports the financial investment required to develop a robust and realistic probabilistic model – even when the scientific and engineering knowledge is sufficient to do so. Does this mean that the goals of solvency oversight will not be met? Not at all!

A 2011 survey of insurers by the Institute of Risk Management (IRM) indicates that only approximately 20% of insurers are 'highly confident' of the efficacy and completeness of their exposure data. Recent catastrophic events affecting the Japanese insurers may provide some insight into the benefits of dynamic risk management that adheres to the solvency oversight goal of measurement-based risk management practices. In both the 2011 Thailand Floods and the 2011 Great East Japan Earthquake and Tsunami, fully robust modeling was not available to the industry to assess common risk metrics such as Average Annual Loss (AAL) or return period loss estimates. If one accepts the definition of risk being the vulnerability of exposure to a certain peril coupled with the likelihood (probability) of that peril occurring, then it can be argued that the risk management system in place at the time of these events fell short of the goal of solvency oversight.

However, the industry has the ability to make great strides towards a robust measurement-based risk management system by rigorously capturing exposure accumulations at the highest resolution possible. While this is far from a probabilistic risk analysis of ground up, gross and net loss at location, account and portfolio levels, it is an imperative start towards a real-time understanding of exposure accumulation by senior management. Had exposures in Thailand and Japan been captured and dynamically tracked at the location level in a way the data could have been easily manipulated, such a high resolution understanding may have yielded great insight in mitigating a future loss event. Such a state of knowledge of portfolio exposure will advance significantly the implementation towards a measurement-based risk management system, even in the absence of a fully robust probabilistic catastrophe model.

Conclusions

Both the 2011 Great East Japan Earthquake and the 2011 Thailand Floods highlighted areas of improvement for catastrophe models, along with ways to more vigorously manage catastrophe risk. Prudent catastrophe risk management should involve the re-examination of exposure accumulations across the most catastrophic loss scenarios (as in the case of the 2011 Thailand Floods) and the consideration of a range of scenarios for concentrations of risk, such as the Tokyo region or other megacities, such as Mexico City. Further, there is a need for more detailed data to be captured and utilized when transferring risk for high resolution perils, such as tsunami or flood, as well as a need to strive for measurement-based risk management systems within insurer's operations.

3. China's Life Insurance Market: Current Conditions and Future Direction

Yuki Katayama NLI Research Institute

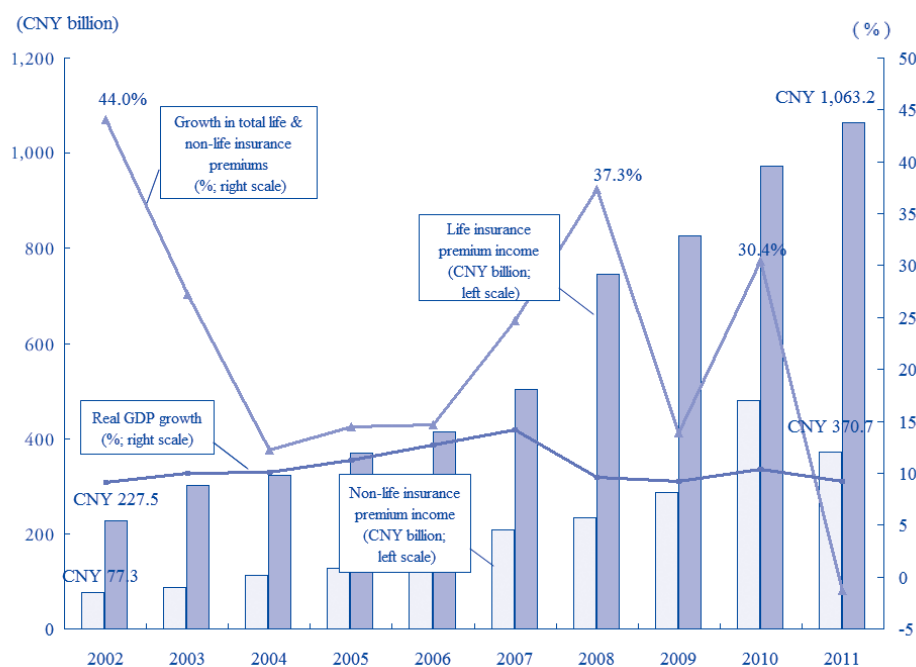
Strong Growth in China's Insurance Market

China's insurance market has grown substantially in tandem with economic development since China adopted its reform and opening policy and became a member of the World Trade Organization (WTO). Since China gained WTO membership in 2001, China's insurance market has grown in importance over the decade from 2002 to December 31, 2011, as it has risen to the number two position in Asia after Japan while domestic premium income has increased by a factor of five.

Premiums per capita are small because China's population is large, but potential for growth is strong because GDP per capita is expected to increase to USD 10 thousand from USD 5 thousand in the five years ending December 31, 2015.

In contrast, domestic insurance underwriting in China was at a standstill for nearly two decades from 1958 to the end of the Cultural Revolution in 1976, excluding the minimum necessary business outside of China. Essentially, China's domestic insurance market has only a 30-year history after underwriting of all types of insurance began again in 1982. More time is required and issues must be resolved before China's insurance market matures and achieves stable growth. I would therefore like to consider those issues and the market's current direction based on the current market situation.

Figure 1: Premium Income in China's Insurance Market



Source: Created by complementing publicly available data on the China Insurance Regulatory Commission website with publicly available data from the National Bureau of Statistics of China website

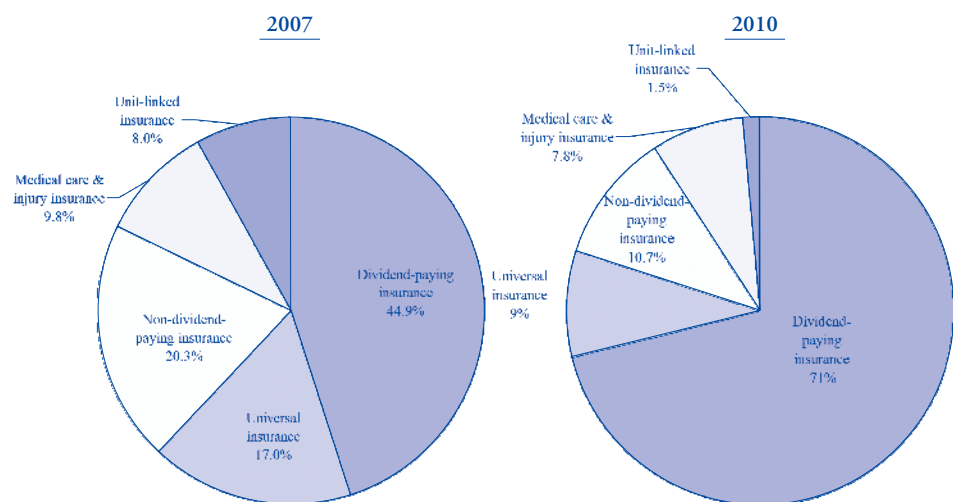
*Sales Trends:
External Factors Easily
Affect Life Insurance
Product Sales*

China's insurance market has grown by a factor of five since 2002. A key feature of this growth is that premium income has continued to increase by more than 10 percent annually excluding 2011, and as Figure 1 shows, had phases of pronounced growth in 2002, 2008 and 2010 due to the impact of the economy and financial markets.

Three peaks of strong year-on-year growth in premium income basically overlapped a period of five consecutive years from 2003 with real GDP growth over 10 percent. With national income increasing strongly, capital flowed into financial assets such as stock investments and insurance during this time.

Originally, savings-type insurance such as dividend-paying endowment insurance accounted for a large proportion of China's life insurance market. However, investment-type insurance also made a significant contribution to the peaks in premium income growth in 2002 and 2008. Around 2000 a number of insurance companies in China began selling unit-linked insurance. At that time, insurance companies were worried about negative spreads from repeated decreases in interest rates on deposits, which led them to aggressively sell unit-linked insurance. While sales subsequently subsided, against a backdrop of the strong fundamental need among the populace for asset formation and investment, unit-linked insurance's market share increased to 8.0 percent from the former 1.5 percent in 2007 (Figure 2), when economic growth and stock prices peaked with real GDP growth of 14.2 percent and the Shanghai Stock Exchange Composite Index at the 6,000 level.

Figure 2: Life Insurance Market Share by Product (Premium Income Basis)



Source: Annual Report of China Insurance Market 2007 and 2010-2011, edited by the China Insurance Regulatory Commission and published by China Financial Publishing House

However, following the global financial crisis in the second half of 2008, the government agency China Insurance Regulatory Commission (CIRC) enacted bancassurance regulations for sales of investment-type insurance. Accordingly, insurance companies took steps such as revising their product portfolios, causing investment-type insurance sales to decrease. In 2010, therefore, endowment insurance



and other types of dividend-paying insurance came to account for a large proportion of the life insurance market totaling about 70 percent (Figure 2).

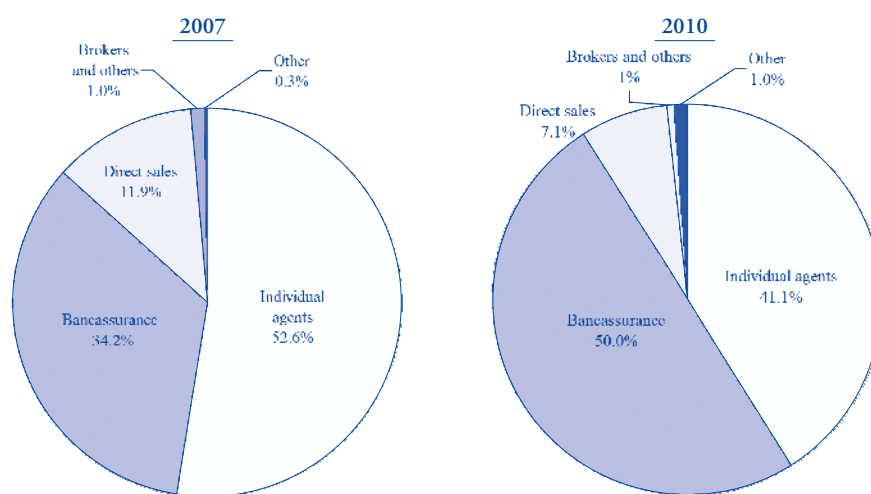
Thus people in China exhibit a pronounced tendency to view insurance products as a tool for financial asset formation rather than just security in the event of a calamity such as death or disability, with capital frequently flowing from bank accounts to insurance products according to fluctuations in the interest rates on deposits. Similarly, economic and financial conditions make certain products popular at certain times, and the influence of government agency regulation and initiatives drives product sales more than the initiative of users or insurance companies. In other words, external factors easily affect China's insurance market.

The social insurance system encompassing medical and pension insurance is now in an adjustment phase. The insurance industry and government agencies must emphasize the importance of and the need for the essential security function of insurance, such as medical, casualty and death insurance.

Expansion of the Bank Sales Channel and the Addition of Insurance Companies to Bank Groups

The foreign-capital insurance company AIA Group Limited was the first to enter China's individual agent channel in 1992. Since then, this channel has become important in China's life insurance market. Today, the three major insurance market channels are individual agents, bancassurance sales, and direct sales by insurance company employees. Internet sales and telemarketing are new sales channels that are gaining popularity, especially for non-life insurance, but still only account for about 1 percent of the life insurance market (Figure 3).

Figure 3: Life Insurance Sales Channels (Premium Income Basis)



Source: Annual Report of China Insurance Market 2007 and 2010-2011, edited by the China Insurance Regulatory Commission and published by China Financial Publishing House

Originally, the household savings rate was high in China, and banks had long been the intermediary in financial asset formation. The strong social credibility of banks as financial institutions has engendered familiarity with the insurance market's bancassurance channel among users, especially for savings-type products. Of particular note, insurance companies used banks to sell the investment-type insurance products mentioned earlier. As a result, bancassurance generated growth in insurance sales from around 2007, and became a key channel that has driven the insurance market from 2008. Exemplifying its increasing significance and importance, the bancassurance channel accounted for half of the overall market in 2010 (Figure 3).

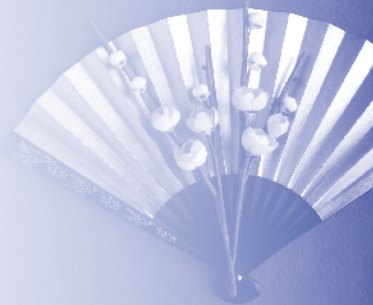
Against this background, bancassurance benefited both banks and insurance companies. For example, banks were able to generate stable fee income without the use of capital at a time when equity capital regulations were becoming more rigorous, while insurance companies gained access to the enormous customer base of banks.

Banks have submitted a steady succession of applications to invest in insurance companies since receiving permission for this investment in January 2008. Of note, banks have taken over insurance company investments from which large Chinese companies and major foreign-capital firms have withdrawn since the global financial crisis. Approximately one bank per year has received approval to invest in an insurance company since around the end of 2009, with three banks – Bank of Communications, Bank of Beijing and China Construction Bank – receiving approval for their applications. Moreover, approval is pending for three other banks – Industrial and Commercial Bank of China, Agricultural Bank of China and China Merchants Bank. Thus banks are likely to continue forming groups that include insurance companies in the future.

Figure 4: Investment by Major Chinese Banks in Insurance Companies

	Investing bank	Before investment		Investment format	After investment			Investment format
		Insurance company/Equity ownership			Insurance company/Equity ownership			
Approval received	Bank of Communications	China Life-CMG Life (Commonwealth)		Foreign capital joint venture	(Commonwealth)			Foreign capital joint venture
		China Life 50%	Commonwealth Bank (Australia) 50%		Bank of Communications 62.5%	Commonwealth Bank (Australia) 37.5%		
	Bank of Beijing	ING Capital Life Insurance		Foreign capital joint venture	ING-BoB Life Insurance			Foreign capital joint venture
		Beijing Capital Group 50%	ING Groep (Netherlands) 50%		Bank of Beijing 50%	ING Groep (Netherlands) 50%		
Approval pending	China Construction Bank	Pacific-Antai Life Insurance		Foreign capital joint venture	CCB Life			Chinese capital
		China Pacific Insurance 50%	ING Groep (Netherlands) 50%		China Construction Bank 51%	Four companies including the Taiwanese subsidiary of China Life 49%		
	Industrial and Commercial Bank of China	AXA-Minmetals Assurance		Foreign capital joint venture	–			Foreign capital joint venture
		China Minmetals 49%	AXA Group (France) 51%		Industrial and Commercial Bank of China 60%	AXA Group (France) 27.5%	China Minmetals 12.5%	
Approval pending	Agricultural Bank of China	Jiabe Life		Chinese capital	–			Chinese capital
		<ul style="list-style-type: none"> • Beijing Zhongguancun Science City Construction 20% • Chongqing International Trust 20% • China New Era 20% 	<ul style="list-style-type: none"> • China Sigma 20% • Shanghai Anchin Mika Industries 20% 		Agricultural Bank of China 51%	Five other companies 49%		
	China Merchants Bank	Cigna & CMC Life Insurance		Foreign capital joint venture	–			Foreign capital joint venture
		Shenzhen Dingzan Investment Advisory 50%	Cigna (United States) 50%		China Merchants Bank 50%	Cigna (United States) 50%		

Source: Created by complementing publicly available authorized disclosure of the before and after investment data from the China Insurance Regulatory Commission website with company press releases



On the other hand, CIRC has been enacting bancassurance regulations since 2009. CIRC temporarily halted previously brisk bancassurance sales of investment-type insurance in Beijing and Shanghai at the end of 2008, then introduced various rules in 2009. These included a requirement that banks establish dedicated in-branch bancassurance counters staffed by qualified experts who had taken specified training courses.

In 2010, the China Banking Regulatory Commission (CBRC) added several mandates to the previously mentioned rules. These included a rule basically limiting banks to agency agreements with a maximum of three insurance companies to address sharply rising fees and unauthorized transfers by banks, and a rule requiring qualified employees to handle bancassurance.

These moves limited bancassurance agency agreements and encouraged banks to favor their group insurance companies or affiliates in strengthening ties with insurance companies.

Under China's 12th Five-Year Plan running through 2015, CIRC has added the goal of increasing security-type insurance product sales to its existing emphasis on savings-type product sales, while aiming for a market structured to emphasize essential insurance functions. Similarly, in sales channels insurance companies may need to emphasize sales of medical, critical illness and level-premium whole life insurance through individual agents in addition to relatively simple savings-type products through bancassurance mechanisms. Individual agent market share has fallen to about 40 percent because of problems with deceptive practices at the time of sale and the entrenched position of bancassurance. However, this share may well increase in the future as a result of changes in insurance market product mix.

Regional Variations in Insurance Penetration

Having covered products and channels in China's insurance market in the previous section, I would like to discuss actual levels of insurance penetration in China.

Dividing China into the eastern, central and western regions, the eastern region with its economically developed coastal areas accounts for about 50 to 60 percent of premium income for China as a whole. The advance of insurance penetration in the eastern region is intimately connected with China's history. For example, China's first insurance company was founded in Guangzhou in 1805. Shortly after, insurance companies were established in the coastal areas of Shanghai and Tianjin after these ports opened up as a result of the Opium War with the United Kingdom. Today, these areas feature advanced insurance penetration as well as economic growth.

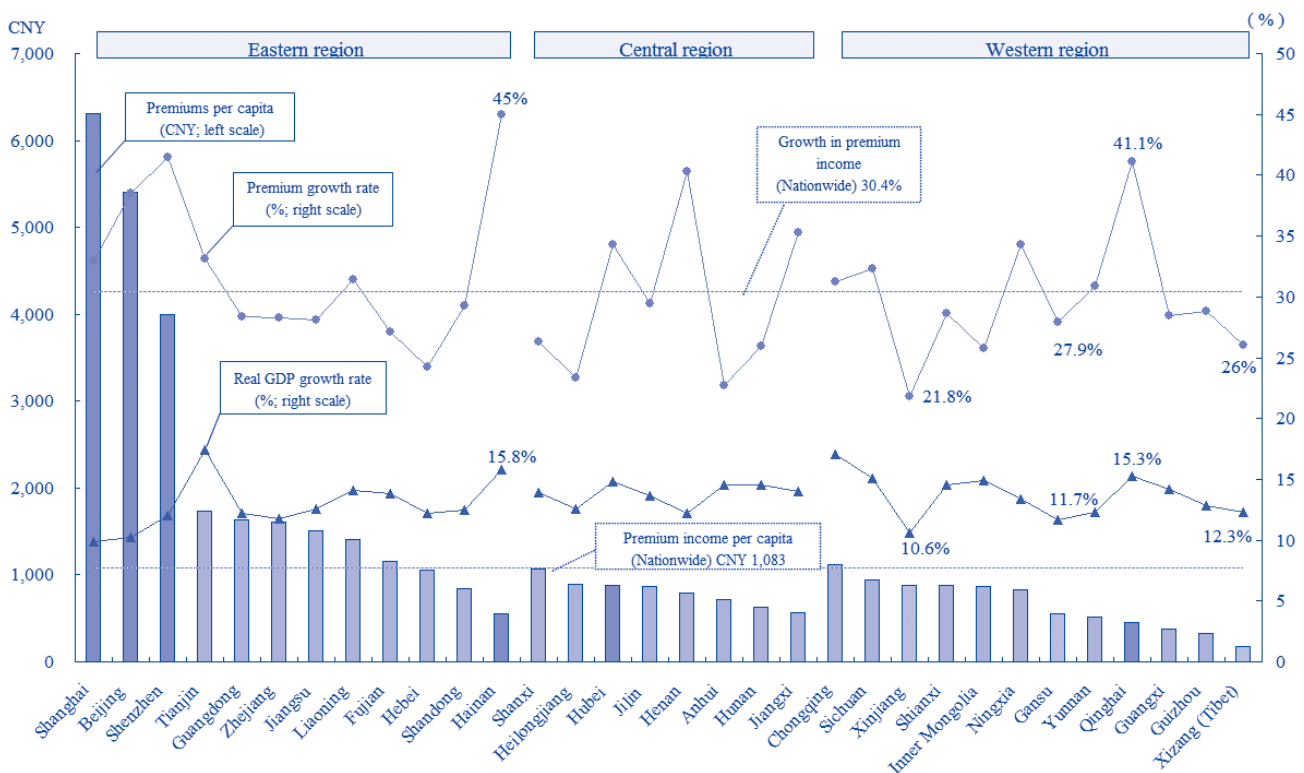
Looking at insurance company head offices, branches and sales offices by region underscores their significant impact on regional disparities in insurance share. About 85 percent of all insurance companies in China have their head office in the economically developed coastal areas of the eastern region, where about 50 percent of all branches and sales offices for both life and non-life insurance are located. Basically, the location of insurance sales infrastructure alone accounts for almost all of the regional disparities in premium income.

3. China's Life Insurance Market: Current Conditions and Future Direction

Moreover, premium income per capita for China was 1,083 yuan in 2010, but varied significantly by region (Figure 5). For example, premium income per capita was 6,310 yuan in Shanghai, 5,407 yuan in Beijing and 4,000 yuan in Shenzhen, demonstrating higher penetration in these economically developed eastern cities than in other cities and regions. While gross regional domestic product varies between Shanghai, with the highest premium income per capital of 6,310 yuan, and the Xizang (Tibet) Autonomous Region, with the lowest per capital premium income of 172.6 yuan, the difference of about 37 times for per capita premium income is pronounced.

Additionally, the highest share of premium income in gross regional domestic product was 7 percent in Beijing, which is on par with developed countries, while the lowest was a paltry 1 percent in the Xizang (Tibet) Autonomous Region.

Figure 5: Insurance Penetration by Region (2010)



Source: Created by complementing data for each region from People's Bank of China, *China Regional Financial Operation Report (2010)*, with publicly available data from the China Insurance Regulatory Commission website

The target of sustained growth in China's insurance market will require further gains in existing markets where insurance penetration is advanced, and new business development in untapped markets where insurance penetration is not advanced. However, the great disparities between these two market types suggest that products sold will vary significantly according to region, income and customer.

Besides the existing market of Tianjin, several regions have high rates of economic and premium income expansion that indicate potential for growth. Hainan Province, Qinghai Province and Hubei Province are regions that are promoting resort and energy development as well as infrastructure investment. Premium income growth was particularly strong in Hainan Province and Qinghai Province at more than 40 percent year on year. While the current insurance markets are small in these regions, they are expected to have strong potential for growth.

On the other hand, the Xinjiang Uygur Autonomous Region, the Tibet Autonomous Region and Gansu Province are not on the insurance industry's second avenue for growth as discussed above, and the gap between these and other areas is widening. Insurance penetration in these areas will not center on standard insurance products. Rather, it may come from small-amount insurance, or microinsurance, similar to postal life insurance in Japan, which provides a certain measure of security at a low premium. Post offices throughout the country and large Chinese life insurance companies that are familiar to people in regional areas will be the channels enabling penetration, particularly for small-amount insurance in low-income demographics and regions where the purchase of standard insurance products is difficult.

*The 12th Five-Year
Plan for the Insurance
Industry and Future
Direction*

Thus, while the insurance industry has work to do in each region, the overall Chinese insurance market is growing strongly. How has CIRC defined the future direction for the development of the market?

Since 2006, CIRC has formulated and executed five-year plans for the development of the insurance industry. In 2011, it announced the five-year plan through 2015, which has the following five major objectives.

Figure 6: The Five Major Objectives of the 12th Five-Year Plan for the Insurance Industry

<ul style="list-style-type: none"> ● Achieve stable, rapid expansion in market scale. <ul style="list-style-type: none"> ▪ Achieve insurance premium revenues of CNY 3 trillion, total insurance industry assets of CNY 10 trillion, per-capita insurance premiums of CNY 2,100, and insurance penetration (premium income/GDP) of 5% by 2015. 	<ul style="list-style-type: none"> ● Upgrade risk prevention capabilities. <ul style="list-style-type: none"> ▪ Increase capital. ▪ Prevent systemic risk through a sufficient solvency margin ratio. ▪ Improve the corporate governance of insurance companies. ▪ Upgrade control and supervision systems for solvency margin ratio, corporate governance, and selling practices. ▪ Build mechanisms for withdrawing from markets. Deploy insurance reserves. Build risk management systems.
<ul style="list-style-type: none"> ● Strengthen overall insurance industry competitiveness. <ul style="list-style-type: none"> ▪ Increase the share of insurance industry assets in total financial sector assets. ▪ Improve management standards in the insurance industry to enhance its presence in the financial industry. ▪ Increase the international competitiveness of major insurance groups. ▪ Promote steady growth among small and medium-sized insurers. ▪ Expand the scope of insurance underwriting and diversify products and services. 	<ul style="list-style-type: none"> ● Improve society's trust in insurance. <ul style="list-style-type: none"> ▪ Improve awareness of and satisfaction with insurance. ▪ Upgrade systems for handling complaints about insurance and protecting the interests of consumers. ▪ Reform misleading sales practices. ▪ Resolve claims payment issues. ▪ Standardize service and enhance its quality.
<ul style="list-style-type: none"> ● Deploy the social functions of insurance companies. <ul style="list-style-type: none"> ▪ Increase the ratio of insurance in force to total financial assets in China. ▪ Increase benefits for disasters and accidents that affect society. ▪ Enhance the ability of insurance to supplement national disaster relief and social security systems. 	

Source: *Outline of 12th Five-Year Plan for the Chinese Insurance Industry's Development* (China Insurance Regulatory Commission, 2011)

CIRC's numerical targets for 2015 include a 100 percent increase in market scale compared to actual 2010 market scale (Figure 6), which would be the same growth rate targeted during the five-year plan launched in 2006. Specific targets for 2015 are total life and non-life premium income of 3 trillion yuan, compared with 1.45 trillion yuan for 2010; total insurance industry assets of 10 trillion yuan, compared with 5.05 trillion yuan for 2010; and per-capita premiums of 2,100 yuan, compared with 1,083 yuan for 2010.

In addition, the plan envisions a future market in which insurance companies switch their priority from their former focus on expanding scale to enhancing their presence in the financial industry, thus aiming to improve and strengthen their social standing. In this regard, the Great Sichuan Earthquake of 2008 reaffirmed the role of the insurance business in supplementing national systems for handling situations such as catastrophes. China's response to the global financial crisis provides further background, as measures to expand internal demand through means such as infrastructure investment highlighted the important role of institutional investors. Moreover, the CIRC anticipates the shift of its powerful market and policy leadership to insurance companies and users in stages with progress in doubling national income and increasing insurance penetration over the coming five years.



CIRC's objectives for life insurance products include encouraging expansion in long-term savings products such as endowment insurance and medical insurance as well as in security-type products, accompanied by stable, moderate growth in investment-type insurance. Concerned that a drop in stock prices will cause a wave of policy cancellations and unsettle the market, CIRC is aiming for a market structured to emphasize even greater stability for the essential security function of insurance. With China overhauling the medical insurance and pension systems that make up its social insurance and the one-child policy accelerating the onset of an aging society, expanding the penetration of supplemental savings-type and security-type products has become a critical task. CIRC has also targeted more diverse sales systems, encouraging insurance companies to use channels suited to their sales models. This involves increasing sales via bancassurance and individual agents and incorporating the relatively new channels of telemarketing and the Internet.

On the other hand, the regulations for investing in insurance companies have eased as part of deregulation, resulting in easing of restrictions on the size of equity stakes when appropriate. This is adding breadth and diversity to the capital base of insurance companies by supporting government, private and foreign investment. Previously, CIRC restricted the equity stake of a single investor to less than 20 percent in principle, but eased this restriction when relevant conditions were met. Foreign investment is subject to separate regulations. However, CIRC may significantly ease investment limits in light of the level of bank investment in insurance companies.

Foreign life insurance companies are limited by law to 50 percent or less equity ownership of life insurance companies established jointly with a Chinese firm. They also receive treatment that is unofficially quite different from their Chinese counterparts, such as longer wait times for approval of applications in each jurisdiction to establish operations and begin sales. While restrictions on foreign investment are likely to ease over the medium and long term, this may well take time considering the degree of maturity of the market.

The Chinese insurance market of the future will have a stronger presence both domestically and internationally. A SwissRe Sigma report forecasts that China will rise to second in the world in terms of premium income from life insurance in 2021. While China has many issues to refine and resolve in becoming a truly major player in global insurance, its potential for growth is enormous. Expectations are great for China to fulfill this potential as Asia's premier growth market.



4.

Japan's Insurance and Reinsurance Market 2011-2012 – Resilience in Adversity

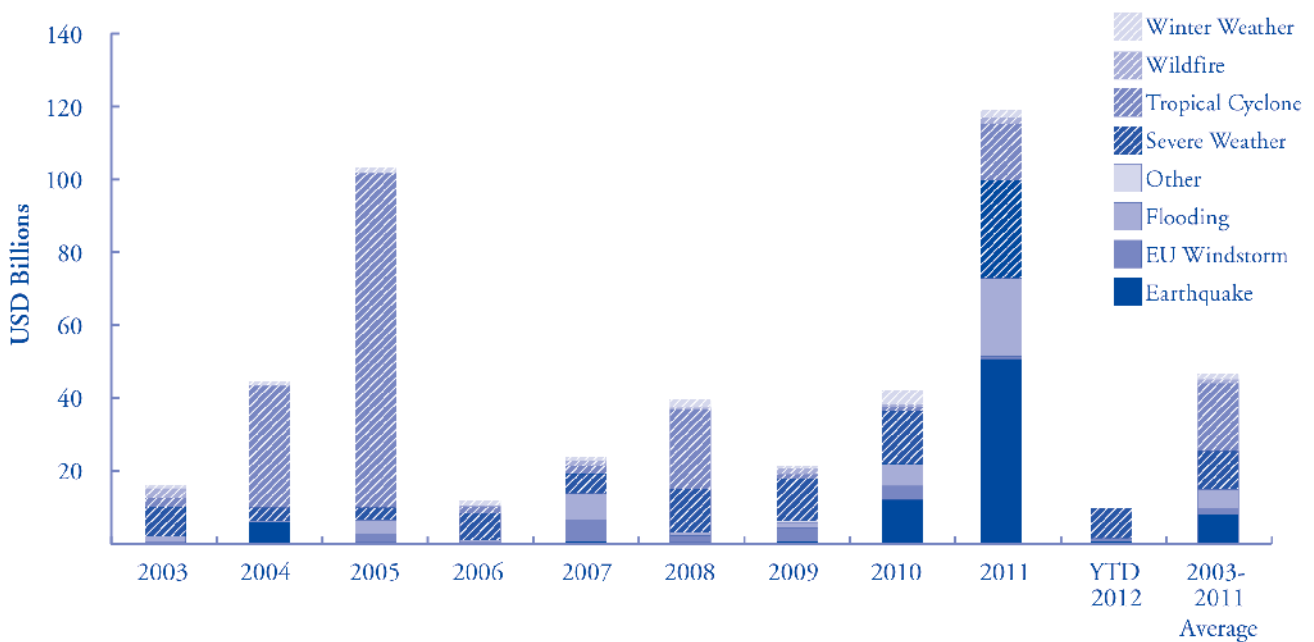
Dominic Christian Co-CEO, Aon Benfield

Introduction

An unprecedented combination of catastrophe events in the last two years have tested the insurance and reinsurance industry in Japan as never before, focussing global attention on risk assessment and risk management in Japan and in the Asia Pacific region. The magnitude and destruction of the March 11, 2011 Great East Japan Earthquake and Tsunami, and the extent of the human tragedy, captured the world's attention, while the response of the Japanese people commanded the respect and admiration of all. By contrast, the widespread damage to property and to balance sheets from the floods in Thailand last year was not immediately recognized and it is still, even now, being evaluated. The losses incurred by our industry have been exceptional not only in their sheer size and financial impact, but also in their nature, highlighting the need to improve not only the understanding of known risks, but also the need to capture exposures that were previously either unrecognized or insufficiently provided for.

Yet, in the face of these adverse events, the insurance and reinsurance industry has continued to demonstrate its qualities of resilience. While 2011 ranked as the second largest year in terms of the size of insured catastrophe losses, it ranked first for reinsured catastrophe losses. Nonetheless reinsurance capacity, measured by capital, returned to its previous record high of 470 billion U.S. dollars at the end of the first quarter of 2012. Insurers' capital too continued to grow to new records. There continues to be an excess of supply over demand for reinsurance globally.

Figure 1: Insured Catastrophe Losses

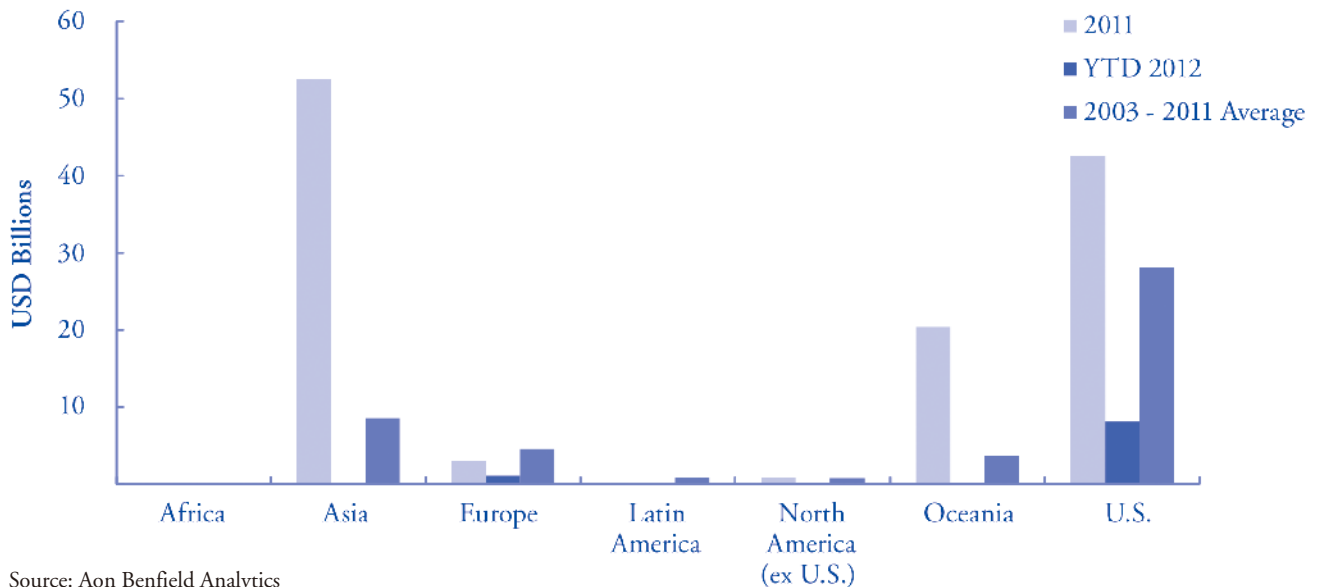


Source: Aon Benfield Analytics



The adequacy of reinsurance capacity has been demonstrated most recently at the renewals in the Asia Pacific region of property catastrophe reinsurance programs as at April, June and July 2012. Insurers in New Zealand, Japan, Thailand and Australia were and are extensive users of reinsurance and their reinsurance strategies in 2010 and 2011 protected their earnings and capital from very material direct losses, in spite of 2011 being a year in which, for the first time, the Asia Pacific region accounted for the majority – over 60% - of total global insured natural catastrophes. The renewals for 2012 proved to be orderly, and the reinsurance market has continued to provide the required capacity to insurers.

Figure 2: Insured Catastrophe Losses by Region



Source: Aon Benfield Analytics

Japan Treaty Renewals 2012

A key topic in pre-renewal negotiation was whether, and on what terms, Japanese non-life insurers would be able to renew their earthquake pro rata treaties, for many companies a core element of their reinsurance schemes. In the end, the substantial improvements achieved by Japanese insurers in the original rating and conditions of the underlying primary business meant that the capacity for Japanese pro rata treaties stood up well, supported by reductions in event limits and ceding commissions. Although tsunami risk was not included within the vendor model outputs, the actual loss from the Great East Japan Earthquake was generally well within the earthquake limits purchased by the Japanese insurers. With underlying commercial and industrial earthquake exposures not growing significantly there was limited need for additional earthquake excess of loss reinsurance. Upward pressure on pricing also influenced the renewal of wind/flood excess of loss programs, and capacity was sufficient to meet the demand.

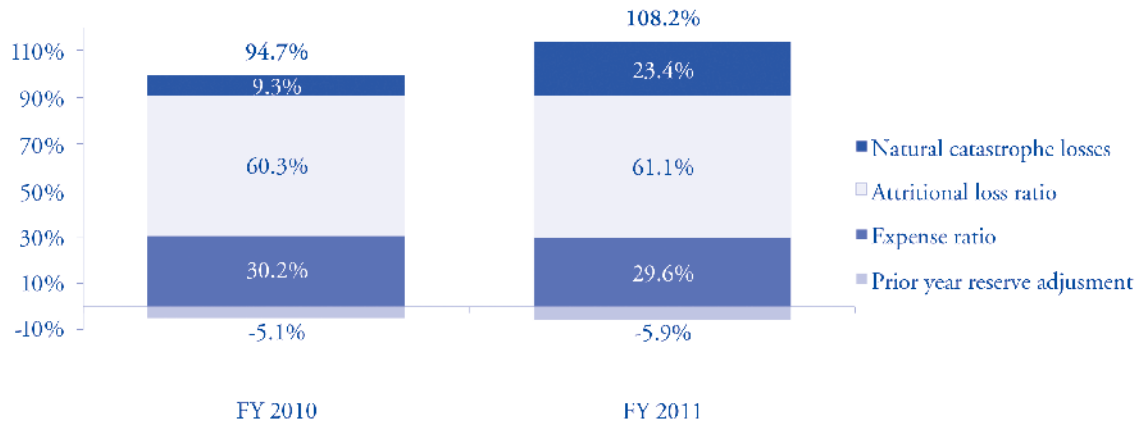
The impact of the 2011 flooding in Thailand led to very significant losses to the major Japanese non-life companies, resulting in substantial reinsurance recoveries. The scale of the Thailand losses was unexpected not only for insurers, but also for reinsurers who had previously not considered flood in Thailand as a peril that would give rise to a loss of this scale. The response of reinsurers at renewal included requiring amendments in treaty terms and conditions, and a requirement for higher granularity of information to ensure that all exposures are properly understood and priced for. Reinsurers required details of improvements in primary underwriting and accumulation control of natural perils and business interruption (including contingent business interruption), along with a well-articulated strategy as to how clients will achieve this. Without detailed exposure data, capacity was limited or pricing was loaded for uncertainty. Even with it, there were substantial rate increases for loss-affected contracts, as well as tighter reinstatement conditions and a restriction on the cover available for natural perils.

The combination of two such major loss events, in less than a year, reinforced the value of the reinsurance product, as well as the need for a robust process to ensure a clearer understanding of the potential for global catastrophe losses. There were substantial variations in the response and the renewal appetite of individual reinsurers, with some reducing their level of commitment in Japan while others found that increased pricing and improved transparency allowed them to step up their support for the Japanese market at renewal. Substantial reinsurance capacity continued to be available for Japanese programs and the market remained in balance. The successful completion of renewal was facilitated by appropriate adjustments to treaty terms and conditions, but it also owed much to the strength of the relationships built up over many years between Japanese non-life insurers and their leading reinsurers. The supply of capacity was sufficient to meet Japanese insurer demand and an orderly renewal was achieved, albeit at increased prices.

This is not to say that significant challenges do not lie ahead. The size of the region's losses in 2011 has caused many reinsurers fundamentally to re-evaluate their strategies in Japan and the Asia Pacific region. The combined ratio of the group of reinsurers monitored by Aon Benfield (in our Aon Benfield Aggregate analysis) increased to 108.2 percent in 2011, an increase of 13.5 percentage points compared to 2010, with a 14.1 percentage point increase in natural catastrophe losses. Reinsurer returns on equity in 2011 dropped to 3 percent due to catastrophe losses and lower investment yields; although analyst consensus earnings for public reinsurers show returns on equity recovering to the 10 percent range for 2012 and 2013.



Figure 3: Aon Benfield Aggregate Combined Ratio Comparison



Source: Individual Company Reports, Aon Benfield Analytics

Evaluation of risk, and more comprehensive risk management, to include formerly “non-modelled” perils, will be a major area of focus in the near term, and with revised vendor models expected to be released in 2013 we expect that significant resources will need to be dedicated to this subject. It is apparent that the enhancement of their risk management function has already been made a priority by insurers. The importance which we place on understanding risk ourselves is underlined by our own preparedness to make a significantly increased investment in our analytics capabilities in the Asia Pacific region. We shall continue to develop catastrophe models proactively as well as in response to major industry events: for instance, following the Thailand floods in 2011, we are creating a Thai flood model, which will assist insurers better to understand their exposures, while assisting analysis of the appropriate pricing for the transfer of risk through reinsurance.

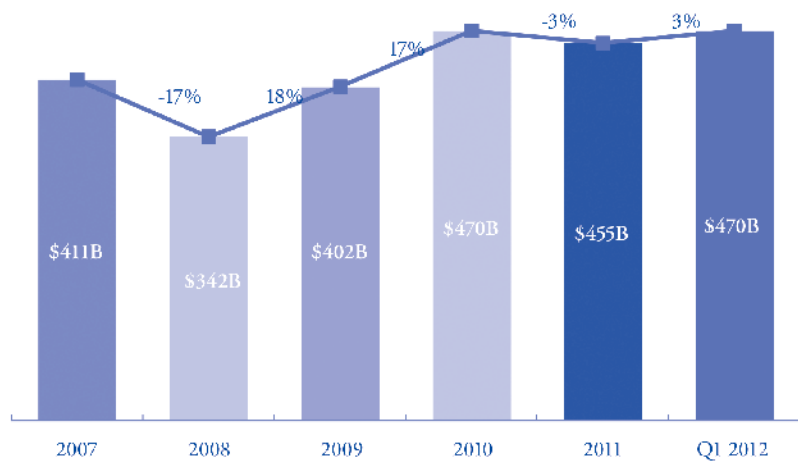
In the last decade and more, market consolidation and merger and acquisition activity in the Japanese market has led to the creation of major insurance groups with global interests, and substantial reinsurance programs, in some cases among the largest catastrophe programs in the world. In future, the expectation is that further market consolidation will ensure that Japanese demand for capacity continues to grow, even before allowing for potential growth in the demand for protection against natural perils in the primary market, or for changes in original policies which may be introduced in the future to expand the cover given.

In spite of these challenges, there is I believe good reason to be positive about the prospects for the insurance and reinsurance industry in Japan.

Capital Strength

Our industry has once again demonstrated its ability to regenerate capital quickly following significant market events. Reinsurance capacity increased to 470 billion U.S. dollars by the end of the first quarter of 2012—back to 2010 peak levels. Lower than average global catastrophe losses through the first quarter of 2012, and increased premiums at 2012 renewals have also assisted reinsurers in increasing capital. At the time of writing, low catastrophe loss activity in the second quarter is expected to result in further increases of capital for the first half of 2012.

Figure 4: Change in Reinsurer Capital



Source: Individual Company Reports, Aon Benfield Analytics

This essentially stable capital position underlines the point that, despite the exceptional number of large global natural catastrophes in 2011, losses to reinsurers were substantially contained within earnings, rather than eating too far into capital bases. Nonetheless, it can clearly be seen that reinsurers are being driven by the losses towards a greater determination to understand the breadth of coverage provided under treaties, raising concerns about issues including data transparency, event limits, catastrophe cover under per risk XL treaties, and exposure to CBI risks.

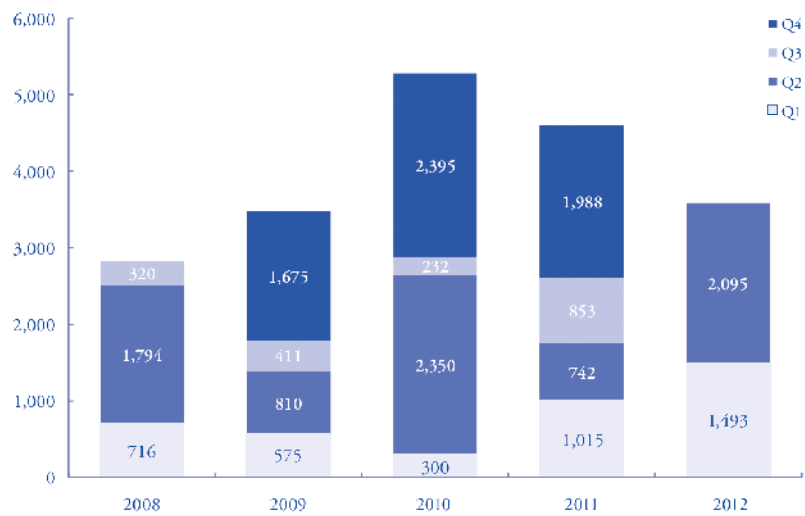
Capital Markets

Traditional reinsurance providers have indeed been severely tested but, as the robustness of their capital position demonstrates, it is clear that they have responded well to the challenges. At the same time, we have seen significant development of the Insurance-Linked Securities (ILS) market in the first half of 2012. Catastrophe bonds continue to enjoy an expanding market position and continue to influence the market by adding a meaningful alternative to traditional reinsurance. The issuance in recent quarters has been very strong, and growing interest from investors has provided insurers better price visibility and multiple year commitments. Both features are important to insurers and new demand continues to flow to this market. Following a record 1.493 million U.S. dollars in catastrophe bond issuance in the first quarter of 2012, the second quarter saw seven catastrophe bonds successfully closed, providing 2.095 million U.S. dollars of new capital to repeat and new sponsors. As of June 30, 2011, there was 14.9



billion U.S. dollars of catastrophe bonds on risk, up 3.4 billion U.S. dollars compared to the same period in 2011. Following such strong activity in the first half of the year, annual issuance for 2012 is anticipated to reach 6 billion U.S. dollars. Sidecar issuance also continued to gain momentum in the second quarter of 2012, with New Point Re V, AlphaCat Re 2012, Upsilon Re and Timicuan Re III all successfully raising capital, and existing facilities, such as Accordion Re, also raising additional capital.

Figure 5: Catastrophe Bond Issuance by Quarter (USD Millions)



Source: Aon Benfield Securities, Inc.

Conclusions

The rapid response and quick settlement of dwelling earthquake related claims by the General Insurance Association was widely reported, and the extent of the payments made continues to be well documented. This is an immense credit to the Japanese non-life insurance industry.

In the aftermath of the major events of the past year and a half, billions of dollars of claims have been collected – at least 10 billion U.S. dollars by our company alone - and been paid on to primary insurers, helping them in turn to meet their own obligations to pay policyholders.

The insurance and reinsurance industry has shown itself, taken as a whole, to be sufficiently robust to weather the storm of recent events, and to be able to maintain or even increase the level of capital deployed even after such a sequence of major loss events.

Global financial markets as a whole have experienced a turbulent period over the last 4 or 5 years and, looking ahead, it is possible to foresee a difficult period for the economy and for financial services for a few years more. And yet, the insurance and reinsurance industry, in Japan and globally, has demonstrated its power of resilience and its durability to good effect, even in the most adverse circumstances. The fact that reinsurance capital is at an historic high provides a reason to believe that the industry is on the right track: it indicates a belief in the industry, and in its core investors, that a sustainable return can be achieved through good management and improved understanding of risk. Not only has our industry performed strongly in surmounting the difficulties of the recent past; it is also robust and resilient enough to face future challenges with confidence.



5. Trends in Japan's Non-life Insurance Industry

Underwriting & Planning Department

The Toa Reinsurance Company, Limited

Overview of Business Results of Non-Life Insurance Companies

The twenty-six non-life insurers comprising the members of the General Insurance Association of Japan recorded the fiscal 2011 business results described below.

Net premium income in all lines of business increased to 7,116.1 billion yen, up 145.1 billion yen from the previous fiscal year, as changes in premium rates increased premium income from Compulsory Automobile Liability Insurance and automobile insurance and a rise in earthquake insurance contracts following the Great East Japan Earthquake led to growth in premium income from earthquake insurance.

Net claims paid increased to 5,505.8 billion yen, up 1,187.1 billion yen from the previous fiscal year, due to payments related to the Thailand floods and the Great East Japan Earthquake, as well as to typhoons and other natural disasters that occurred in Japan. The loss ratio increased by 15.9 % to 83.4%.

Operating and general administrative expenses related to insurance underwriting declined to 1,162.7 billion yen, down 29.5 billion yen from the previous fiscal year, due to reductions in both non-personnel expenses and personnel expenses. As a result, the net expense ratio decreased by 0.8% to 33.8%.

Net underwriting profit declined by 155.9 billion yen from the previous fiscal year to 339.1 billion yen in the red, the largest loss to date, mainly due to additions to loss reserves for the Thailand floods. Claims paid for the Great East Japan Earthquake had a limited effect on net underwriting profit for fiscal 2011, because the associated loss reserves were recorded in the previous fiscal year.

Ordinary profit including return on asset investments was 80.1 billion yen, down 154.2 billion yen from the previous year, and the net loss was 262.1 billion yen.

Effects of a Series of Natural Catastrophe Losses Including the Great East Japan Earthquake and Thailand Floods

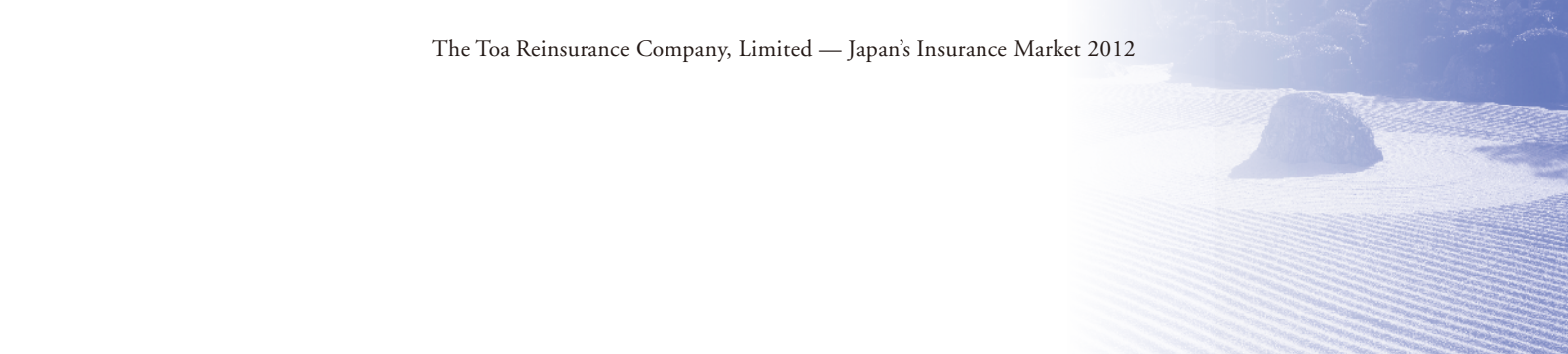
(1) The Great East Japan Earthquake

The magnitude 9.0 earthquake that occurred on March 11, 2011, the largest in recorded history in Japan, and the accompanying large tsunami caused unprecedented damage to a widespread area of the Pacific coast in eastern Japan.

In Japan, insurance policies against earthquake risk generally consist of two types: earthquake insurance policies for personal dwellings (earthquake insurance policies subject to the "Act on Earthquake Insurance") and earthquake insurance policies for companies (earthquake coverage endorsements).

A. Earthquake Insurance Policies for personal dwellings (Earthquake Insurance Policies Subject to the "Act on Earthquake Insurance")

An earthquake insurance policy is a contract attached to a fire insurance policy. It is entered into for between 30% and 50% of the insured amount of the fire insurance policy with the aim of stabilizing the living conditions of people whose homes are damaged. In addition, private insurers and the central government jointly run a reinsurance system. Private insurers and the central government share responsibility for earthquake insurance policies. The system requires the central government to bear a higher percentage of the loss caused by an earthquake when the loss exceeds a certain



amount. After the Great East Japan Earthquake, the reinsurance scheme implemented in May 2011 raised the amount borne by the central government and reduced the amount borne by private insurers. The amount borne by the central government was increased again in April 2012. The number of consumers holding earthquake insurance policies has increased, mainly in regions that suffered the most damage in the Great East Japan Earthquake.

According to an announcement made by the General Insurance Association of Japan, almost all insurance claims for earthquake insurance policies had been paid as of April 2, 2012. Claim payments amounted to more than 1.2 trillion yen, about 16 times as much as those made for the Great Hanshin Earthquake, the largest payment event before the Great East Japan Earthquake occurred. To evaluate losses and pay out on insurance claims as soon as possible in areas that suffered the greatest damage, the non-life insurance industry took prompt actions such as certifying the total loss areas utilizing aerial and satellite photos.

B. Earthquake Insurance Policies for Companies

Most earthquake insurance policies for companies are fire insurance policies, and are secured by the endorsement of indemnifications for losses caused by earthquakes and tsunami. According to an announcement made by the Financial Services Agency (FSA), the amount of claims payments related to the Great East Japan Earthquake (across all 5 major non-life insurers), other than those made under earthquake insurance policies for consumers described in A. above, is estimated at approximately 600 billion yen (net claims paid: about 200 billion yen).

Given the scale of insurance claims and the rise in reinsurance premiums following the Great East Japan Earthquake, non-life insurers increased their primary premium rates for earthquake insurance policies for companies. The amount of the rise depended on the conditions of individual policies, such as the policyholder's location and the number of years since construction; however, in some cases involving insurance policies on the Pacific coast side of the Tohoku area, which was damaged by the Great East Japan Earthquake, the premium rate increased to about double its previous level. This is one of the largest rises ever recorded.

(2) Thailand Floods

Floods gradually spread from Northern Thailand to Southern Thailand between July and October 2011 to submerge 8 industrial parks near the Chao Phraya River, an area where major Japanese company plants are concentrated, and forced many companies to halt operations for long periods. In relation to direct damage caused to buildings, production facilities and stock, etc., it is estimated that profits lost due to long-term shutdowns and contingent business interruption losses resulting from shutdowns among suppliers and others will result in payouts for a large number of insurance claims. According to results for the year ended March 2012, three mega groups are expected to pay total net insurance claims of more than 500 billion yen for the Thailand floods.

The Thai government, as well as insurers and reinsurers, had traditionally regarded the risk of natural disasters in Thailand as low. Such extensive, long-term floods had not been foreseen. Given the damage caused by the floods, the Thai government is conducting projects to build infrastructure including drainage facilities, and is considering establishing a publicly and privately funded reinsurance scheme covering floods, wind disasters and earthquakes. The terms and conditions of insurance policies had traditionally been to cover all risks including those of natural disasters. However after the flood loss, terms and conditions for underwriting such risks are being tightened by measures including setting up sub-limits and deductibles and increasing insurance premiums. Furthermore, insurers and reinsurers are taking actions including improving their data to enhance concentrated risk management.

(3) Renewal of Japanese Reinsurance Treaties

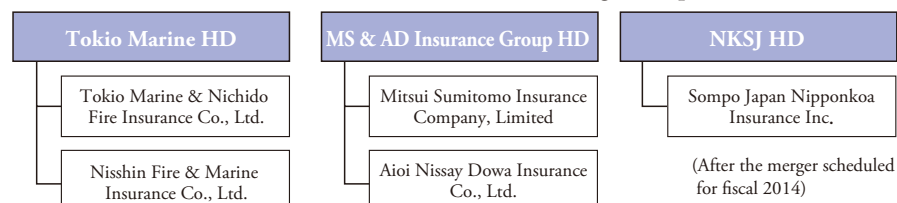
During the April 2012 round of Japanese reinsurance treaty renewals, we saw a large rise in reinsurance premium rates for non-proportional treaties due to the effects of the Great East Japan Earthquake and the Thailand floods, a reduction in reinsurance ceding commissions for pro-rata treaties, the introduction of/reductions in event limits for natural disasters, limits on overseas natural disaster risk, etc. In addition, premium rates for excess of loss cover (ELC) for wind and flood, etc. have been increased because of the hardening market. Given the Thailand floods, treaties covering overseas risks must disclose detailed exposure information to enhance their transparency.

*Industrial
Reorganization*

It was reported in March 2012 that a merger between NIPPONKOA Insurance Company, Limited and Sompo Japan Insurance Inc., which fall under the umbrella of NKSJ Holdings, Inc., one of three mega groups in the Japanese non-life insurance industry, was scheduled for the first half of fiscal 2014 to establish Sompo Japan Nipponkoa Insurance Inc.

The following shows non-life insurers that will fall under the umbrella of the three mega groups after the merger.

Main Non-life Insurers under the Umbrella of the Three Mega Groups





Business Expansion into Overseas Markets

Given the mature state of the non-life insurance market in Japan, non-life insurers have been expanding their overseas businesses around the world, mainly in Asian emerging countries where growth rates are remarkably high. Major recent overseas initiatives are summarized as follows.

Date	Company Name	Recent Overseas Initiatives
May 2011	Tokio Marine Holdings, Inc.	Announced establishment of Tokio Marine North America, a holding company managing insurance business in the U.S.
June 2011	Tokio Marine Holdings, Inc.	Made an equity investment in U.S.-based agency WNC through group company Kiln Ltd., a U.K.-based Lloyd's insurance company
June 2011	Sompo Japan Insurance Inc.	Completed acquisition of additional shares in Malaysia-based Berjaya Sompo Insurance
July 2011	Aioi Nissay Dowa Insurance Co., Ltd.	Opened a Zhejiang branch of Chinese subsidiary
August 2011	Tokio Marine Holdings, Inc.	Opened a Jiangsu branch of Chinese subsidiary
August 2011	Tokio Marine & Nichido Fire Insurance Co., Ltd.	Reached a basic agreement on acquisition of shares in U.S.-based First Insurance Company of Hawaii, Ltd.
November 2011	Tokio Marine Holdings, Inc.	Gained approval to prepare for the establishment of a Beijing branch of Chinese subsidiary
May 2012	Tokio Marine Holdings, Inc.	Completed procedures for acquiring Delphi Financial Group, Inc., the U.S.-based life and non-life insurance group
June 2012	NIPPONKOA Insurance Co., Ltd.	Opened a representative office in Cambodia

Product Trends

(1) Automobile Insurance

The Non-Life Insurance Rating Organization of Japan, which determines loss cost for automobile insurance, has revised the classified rating system for non-fleet automobile insurance. The new system defines 20 policyholder classes and extra/discounted rate coefficients applicable to policyholders to reflect in rates risks corresponding to their accident history. It was introduced in April 2012 with a communication period of a year, and contracts will be entered into from April 2013 based on the new classes/coefficients.¹

1. New classes and coefficients are applicable to renewed contracts when an accident occurs within the term of a contract entered into after April 2012 and the contract is renewed during the communication period.

The revision is designed to apportion the burden of rate payment more fairly between policyholders. More specifically, there is a large difference in actual risk status between policyholders involved in no accidents during the term of the previous contract and those involved in accidents, even when they are classified into the same class. The class coefficients are divided into those for policyholders with no accidents (accident-free coefficient) and those for policyholders with accidents (accident coefficient), then all the class coefficients are reviewed given the recent actual risk status. Coincidentally, after the revision, the rule whereby the policyholder's class remains unchanged in the following fiscal year in cases where their accidents satisfy certain conditions has been abolished.

Regulation Topics

(1) Trends in Solvency Regulation

As a result of the revision of the regulations implementing the Insurance Business Law, new calculation standards have been applied to the solvency margin ratio — an indicator of the financial health of insurers — since the fiscal year ended March 2012. The new standards include a limit on items included in margin, an increase in the risk coefficient confidence level for general insurance risk, price fluctuation risk, and subsidiary risk, and a requirement that earthquake disaster risk for fire insurance be calculated through a risk model. In addition, the solvency margin ratio, which had previously been calculated for non-consolidated insurance companies, has also been calculated for all insurance groups on a consolidated basis from the fiscal year ended March 2012.

Furthermore, the FSA is considering introducing an economic value-based solvency margin ratio.

(2) Trends in Regulations on Co-operatives

As a result of revisions made to the Insurance Business Law in 2005, it was decided that from a policyholder protection perspective, legal regulations would apply to co-operatives, which had previously been beyond their scope (so-called “unregulated co-operatives”) and for which there was no legal basis for their regulation, and mutual aid associations were deemed to fall into the “insurance company”, “small amount and short-term insurance provider” or other categories. Pursuant to the revisions, a maximum amount of sum insured was imposed on small amount and short-term insurance providers for insurance policies that could be underwritten² through the transitional measure taken up to March 2013. However, the Insurance Business Law was revised in March 2012, and after a partial amendment, the transitional measure was extended by 5 years to March 2018.

2. Providers to underwrite only small amount and short-term insurance policies within a certain scale of business.



Many associations are having difficulties satisfying the regulations immediately. In November 2010, the Insurance Business Law was revised as a temporary measure to relieve these associations so they can maintain their activities on an exceptional basis as “authorized specific insurance organizations” under certain conditions.³

(3) Introduction of System for Evaluating Insurance Inspections

The FSA has announced the introduction of a system for evaluating insurance inspections.

The system's introduction is designed to promote insurers' efforts to make voluntary and continuous improvements in management and reciprocal discussions between inspectors and insurers by evaluating the results of inspections in stages in accordance with the Insurance Inspection Manual, as well as to make inspections more efficient by relating evaluation results to optional administrative actions to improve the transparency of financial administration.

Life and non-life insurers subject to FSA supervision will be evaluated and graded A-D on eight items: “business management (governance) system and basic factors”, “compliance system”, “insurance solicitation management system”, “customer protection management system”, “integrated risk management system”, “insurance underwriting risk management system”, “asset investment risk management system” and “operational risk management system”.

3. It has already been decided that the temporary measure will be revised in 5 years.



6 Trends in Japan's Life Insurance Industry

Life Underwriting & Planning Department
The Toa Reinsurance Company, Limited

Main Topics in the Market

(1) One Year after the Great East Japan Earthquake

One year has passed since the Great East Japan Earthquake resulted in 15,858 deaths and 3,021 missing people (as of May 16, 2012), as well as tens of trillions of Japanese yen in economic losses. We are now beginning to recover step by step from the earthquake and to look to the future.

Looking back over the last one year, almost all the topics that have occupied our attention are linked to the earthquake.

Even if largely motivated by daily news reports, a huge amount of donations, exceeding 340 billion yen from domestic sources alone, was sent to the damaged area, and a mood of support for the recovery became dominant across the country, although culpability for the nuclear accident in Fukushima was consistently pursued, with criticism focusing on the central government's risk management system and its over-dependence on nuclear power for the supply of electricity.

Amid such an environment, the insurance industry was under close scrutiny by society, because of the important role it plays in supporting the earthquake victims. As a matter of fact, I believe we can say that the industry did not attract criticism at all for its actions after the earthquake.

The Life Insurance Association of Japan initiated a number of actions immediately after the earthquake.

The association established a disaster countermeasures office on March 11, 2011, the day of the earthquake. On the following day, it announced an extension of the grace period for premium payments and that some documents would not be required in order to obtain claims payments on victims' policies. Three days later, on March 15, the association announced non-application of the earthquake exclusion.

At the beginning of April, the association launched a Damaged Area Life Insurance Policy Check System and engaged vigorously in confirming the safety of policyholders. This was done so that insurance companies could be proactive in paying out insurance benefits without waiting for policyholders to demand claims payment, given the victim's situation. This was realized through the life insurance industry voluntarily asking administrative authorities and the police to cooperate. According to the association, as of March 14, 2012, one year after the earthquake occurred, the safety of 99.97% of the 2.93 million policyholders in the three prefectures of the Tohoku region that suffered the most serious damage had been confirmed. The industry clearly demonstrated its mission to society and how to fulfill it through these actions.

In addition to these actions taken by the whole industry, employees of life insurance companies who themselves suffered damage in the earthquake visited the homes and shelters of policyholders throughout the damaged areas, providing victims with various forms of support and services beyond their firms' contractual liability, and their actions also enhanced the industry's reputation. This was not only appreciated by many people, but is also likely to provide many people engaged in the industry with a chance to review their work.

The association reported that the industry had paid 154.3 billion yen of insurance benefits and estimated total payments of 167.0 billion yen in 20,256 cases related to the earthquake as of April 30, 2012. Given that the industry usually pays approximately 19 trillion yen of insurance benefits and approximately 3 trillion yen of death benefits (including accidental death benefits) per annum in Japan, it can be said that claims payments related to the earthquake had a limited effect on the financial bases of insurance companies.

Even now, Japan faces a number of onerous issues, such as supporting victims and ensuring electricity supply. On the other hand, a central government report estimates the economy will grow 2.2% in fiscal year 2012 on an actual GDP basis, rebounding from negative growth of 0.1% in the last year, ironically backed by demand due to reconstruction from the earthquake, etc. So the Japanese economy is beginning to enjoy a gradual revival.

Amid such circumstances, the industry performance also remains solid. As for actions related to the earthquake, the Chairman of the Life Insurance Association of Japan has stated that the “objectives of emergency actions have almost been achieved,” adding that “under the ordinary system, the industry will make payments of insurance benefits and provide follow-up services for policyholders, will continuously improve the crisis management system taking large-scale disasters into account, and will enlighten society on the meaning of life insurance.” The industry is turning its attention towards the next stage following its actions in response to the earthquake.

(2) Impact of the European Debt Crisis

As the European debt crisis triggered by the Greek financial troubles has become more severe, there have been concerns that Japanese life insurance companies, which are known as large, globally active institutional investors, could also be affected by the debt crisis. However, it seems that losses caused by the European debt crisis are, somewhat surprisingly, limited to small amounts.

According to interim results reported by eight major life insurance companies for the half year ending September 2011, their outstanding investments in and loans to the PIIGS (five heavily indebted countries in Europe: Portugal, Italy, Ireland, Greece and Spain) totaled 876.4 billion yen, including government bonds and public and corporate bonds. Given that the total assets of these companies amounted to about 160 trillion yen for the same period, the direct effect of the PIIGS' debt problems is estimated at less than 0.5% of total assets in the whole industry.

By company, Nippon Life Insurance Company posted the largest balance in the industry at 489.9 billion yen, followed by The Dai-ichi Life Insurance Company, Limited with 160.3 billion yen, Meiji Yasuda Life Insurance Company with 120.8 billion yen, T&D (consisting of Taiyo Life Insurance Company & Daido Life Insurance Co.) with 37.1 billion yen, Mitsui Life Insurance Company Limited with 27.4 billion yen, Fukuoku Mutual Life Insurance Co. with 21.4 billion yen, Sumitomo Life Insurance Co. with 19.5 billion yen and Asahi Mutual Life Insurance Co. with a zero balance. After announcing their interim results, the companies have accelerated plans to reduce outstanding investments and loans following an expansion of the

crisis; as a result, the eventual effect will probably amount to less than 1% of total assets, even for each of these companies.

However, some sources have expressed concerns that the European debt crisis may not be resolved at the PIIGS level and may spread to Germany and France, both of which have a large amount invested in and loaned to the PIIGS. There are also concerns among Europe-based life insurers entering Japan that some foreign life insurers may be affected by the financial crisis of their parent companies, though no specific news has yet been reported.

Trends among Life Insurers

(1) Overseas Initiatives of Major Japanese Life Insurers

In recent years, we have seen a rapid increase in the overseas business expansion-related activities of major Japanese life insurers. The following outlines activities undertaken in the last six months:

Overseas Business Expansion among Major Japanese Insurers

November 2011: Dai-ichi Life announced it would form a joint venture with China Huadian Corporation in fiscal year 2012, with an investment of 12.0 billion yen and a 50% investment ratio.

November 2011: Meiji Yasuda Life announced it would acquire Poland-based Europa Group with its Germany-based business alliance partner, Talanx AG.

January 2012: Tokio Marine Holdings, Inc. announced it would acquire U.S.-based Delphi Financial Group, Inc. for a total acquisition cost of 205.0 billion yen.

January 2012: Meiji Yasuda Life announced it would acquire Poland-based Warta Group with its Germany-based business alliance partner, Talanx AG with an investment of 22.0 billion yen and a 30% investment ratio.

February 2012: Nippon Life announced an investment in India-based Reliance Capital Asset Management Limited with an investment of 22.0 billion yen and a 26% investment ratio.

N.B. In 2011, Nippon Life invested 58.0 billion yen in Reliance Life Insurance Company Limited, a member of the same group as Reliance Capital Asset Management Limited.

March 2012: Nippon Life entered into a business cooperation memorandum with AIA Group Limited, which conducts business in 15 countries and regions in Asia and Oceania. Nippon Life is also a 1% stockholder of this group.

April 2012: Mitsui Sumitomo Insurance Company, Limited announced an investment in India-based Max New York Life Insurance Company Limited with an investment of 45.0 billion yen and a 26% investment ratio. After the investment was made, the investee was renamed Max Life Insurance Company Limited.



May 2012: Meiji Yasuda Life announced an increased investment in PT Avrist Assurance, its Indonesian capital tie-up partner, taking the investment ratio from 5% to 23%.

It goes without saying that these activities are designed to make up for the trend toward a diminishing equilibrium in the domestic market. On the other hand, many of these deals also seemed to be long-term prior investments or test cases, and they are unlikely to be deemed dynamic acquisitions that will determine the fate of the insurers concerned.

We expect the pattern of active overseas expansion among Japanese life insurers to continue increasing, partly due to the recent trend of yen appreciation; however, in our view, it will take some time before these acquisitions become indispensable to Japanese life insurers.

(2) Unavoidable Reform of the Sales System

In recent years, the sales results of Japanese life insurers have shown a more noticeable trend of depending on bancassurance.

Among the 8 major life insurers during the first half of fiscal year 2011, Meiji Yasuda Life and Nippon Life grew annualized premiums due to an increase in sales of whole life insurance with single payment, while Sumitomo Life and Fukuoku Mutual Life, which were unwilling to sell the above products and maintained a lower level of bancassurance sales at the earlier stage, posted insurance premium results below those for the same period of the previous year. As a result, this first-half performance was dependent on each company's attitude towards bancassurance.

However, there is some doubt about how to understand and evaluate the above results as they stand.

Whole life insurance with single payment is not a protection type of insurance product expected to be highly profitable, the traditional core product of major life insurers, but is a savings type of insurance product with the motto "small profits and quick return." In selling the product, incentives work better at banks than at life insurers.

Furthermore, it is doubtful whether it is possible to achieve investment performance exceeding the assumed interest rate during a prolonged period of low interest rates. In fact, Meiji Yasuda Life subsequently cut its assumed interest rate for the product, and has maintained its bancassurance sales at an almost constant low level. All life insurers are taking a passive stance toward sales of this type of product.

On the other hand, in the salesperson channel, the core channel for life insurers in all products excluding bancassurance, the total number of sales representatives employed by the eight major life insurers was 203,671 at the end of the first half, slightly down from 204,265 at the end of the previous fiscal year. Sales from this channel remain almost flat.

Life insurers have the same issues of improving the efficiency and productivity of the existing sales representative channel, and are focusing on increasing over-the-counter outlets, while being forced to keep bancassurance sales low.

Specifically, among major life insurers, Nippon Life increased its number of over-the-counter "Nissay Life Plaza" outlets to about 100. Similarly, Dai-ichi Life also increased its number of over-the-counter "Shogai Sekkei Park" outlets and extended its business hours. Sumitomo Life increased the number of over-the-counter outlets operated by a multi-company agency that is a wholly owned subsidiary of Sumitomo Life, while Meiji Yasuda Life is increasing both its company-operated outlets and multi-company outlets.

On the other hand, we are seeing a rapid increase in the number of outlets operated by major independent over-the-counter agencies. "Hoken Ichiba," which means The Insurance Marketplace, operated by market leader Advance Create Co., Ltd., has about 270 outlets, and "Hoken no Madoguchi" and 3 other brands operated by market follower Hoken no Madoguchi Group Inc. have about 250 outlets or more in total. This trend is currently unstoppable.

In the past, theory has supported us in saying that it is difficult to make a success of over-the-counter outlets in Japan. The time may come when actions taken to develop over-the-counter outlets and the online channel, in which achieving success has been deemed to be as difficult as in over-the-counter outlets, will largely determine the results of life insurers.

Overview of Business Results for Fiscal Year 2011

The fiscal year 2011 business results for 43 life insurance companies in Japan were as follows:

- **Total Amount of New Business**

During fiscal year 2011 the total insured amount of new business for individual life increased to 64.2 trillion yen, up 1.9% from the previous fiscal year due to an increase in whole life insurance in foreign and major life insurance companies. Regarding individual annuity, the total insured amount of new business increased to 7.6 trillion yen, up 11.5% from the previous fiscal year, a rise attributable to a growth in policies in major life insurance companies due to increased interest in individual annuity driven by an aging society with a declining birthrate and the national financial problems.

- **Total Amount of In-force Contracts**

As of the end of fiscal year 2011, the total insured amount of in-force business for individual life declined to 865.3 trillion yen, down 1.6% from the previous fiscal year, a fall attributable to weak growth in major life insurance companies in spite of a continued trend of solid growth in subsidiaries of non-life insurance companies. On the other hand, the total insured amount of in-force business for individual annuity increased for the ninth consecutive year to 98.9 trillion yen, up 3.3% from the previous fiscal year, mainly due to steady growth in major life insurance companies.

- **Annualized Premiums**

The total of annualized premiums from new business increased to 2.8 trillion yen, up 5.1% from the previous fiscal year, as a result of the increase in both individual life and individual annuity. As for in-force business, annualized premiums totaled 22.7 trillion yen, up 4.6% from the previous fiscal year, due to the increase in both individual life and individual annuity.

- **Premium Revenues / Total Assets**

Total premium revenues increased to 36.6 trillion yen, up 4.4% from the previous fiscal year, due to strong sales of savings-type products in major life insurance companies. Total assets rose to 326.9 trillion yen, up 2.0% from the previous fiscal year, as a rise in unrealized capital gains increased the value of investment assets.

Product Trends

(1) Medical Insurance Difficult to Differentiate

It is not an exaggeration to say that most of the products developed/launched domestically in fiscal year 2011 were dominated by medical insurance products. However, companies seem to have difficulty in giving their products distinctive features and identification to enable successful marketing.

As for the details of medical insurance, it has been noticeable recently that “advanced medical treatment” benefits are becoming standardized. These benefits were developed based on the concept of preparing for the high medical costs incurred under some circumstances in the treatment of cancer, the leading cause of death in Japan. Some companies offer benefits for “irradiation therapy” and “anti-cancer drug therapy”, which are similar to “advanced medical treatment” benefit.

Companies are making efforts to differentiate their medical care protection benefits from those of others through the scope of protection and maximum benefit payments. However, they also appear to have been put in a situation where it is difficult to differentiate between products more efficiently through marketing.

With companies seeking new ideas on benefits, Tokio Marine & Nichido Life Insurance Co., Ltd. launched a “Medical Kit”, with a “disability benefit rider for five injuries and diseases” attached, in January 2012. This is the first product in Japan to pay benefits when policyholders are prevented from working for more than 30 days as a result of injuries or diseases. It will be worth noting whether such differentiation enables the product to create a stir in the inactive new product development space in the future.

Regulatory Trends

(1) TPP Talk Makes Passage of a Bill to Revise the Postal Service Privatization Law More Uncertain

Progress on the bill to revise the Postal Service Privatization Law includes expansion of the maximum amount of benefits per life insurance policy and the business scope of Japan Post Insurance Co., Ltd. remains static pending for the start of the Diet session.

Japan Post Insurance, which is well placed to provide universal services, has been invested in by the central government since it was a public corporation. At the same time, to prevent it from putting pressure on private businesses, it has been subject to regulations on the scope of its business and on the maximum amount of benefits per life insurance policy.

Now that 4 years has passed since its privatization, the central government is making an attempt to lift these regulations to encourage Japan Post Insurance to become independent, while the life insurance industry has often repeated its opinion that it could not approve the bill unless the government withdrew its investment and ensured a “level playing field” for Japan Post Insurance and private life insurers. In addition, the TPP talks with the U.S. have also begun to affect the case in recent times.

Despite the divergence of opinions between the central government and private life insurers, both sets of views fundamentally point in the same direction towards creating a level playing field. However, the U.S. has taken a stance opposed to the intention described above.

Clearly, the U.S. objects to the bill, with the intention of preventing Japan Post Insurance from decisively entering the so-called “third sector,” in other words, the medical field where U.S. life insurers now have a dominant market share. It is also clear that this is an additional problem for the central government, which has been displaying a positive stance towards the TPP talks. Whether the bill will be passed by the Diet after negotiations to revise it, or will instead be abandoned, seems to be quite uncertain.

(2) New Regulation of Tax Deductions for Life Insurance Premiums to Be Applied

The regulation of “the tax deduction of life insurance premium” was revised in January 2012. Under this regulation, a certain amount of premium paid by a policyholder during a year is deducted from his/her taxable income.

The first point of this revision is the establishment of a new “nursing-care insurance premium deduction” in addition to the “general life insurance premium” and “individual annuity insurance premium deduction” already available. The new deduction consists of an income tax deduction capped at 40,000 yen and a resident tax deduction capped at 28,000 yen.



The second point is to leave the limits of the “general life insurance premium” and “individual annuity insurance premium deduction” for existing policies unchanged, and to reduce those for new policies from 50,000 yen for income tax deduction and 35,000 yen for resident tax deduction for existing policies, respectively to 40,000 yen and 28,000 yen.

The third point is to increase the income tax deduction limit from the current 100,000 yen to 120,000 yen, including the newly established nursing care insurance premium deduction, as a result of expanding the size of income tax deductions at the system-wide level. However, for resident tax, the maximum deduction remains 70,000 yen, even when the three deductions are combined.

The revision against the background of an aging society is likely to be designed to promote self-reliance in people, preparing for an expected increase in demand for both nursing care insurance for the elderly and medical care insurance. Therefore, at the next stage, it will draw attention to how the life insurance industry takes advantage of this favorable wind and utilizes the business opportunities presented.

(3) Regulations on Asset Investment Ratios to Be Lifted

In February 2012, the Financial Services Agency published a bill for a Cabinet Office ordinance revising part of the ordinance enforcing the Insurance Business Act. The bill was issued and came into force on April 18, 2012.

The asset investment ratio regulations, which are designed to maintain healthy assets among life insurers, limit excessively speculative asset investment by setting a maximum amount for each type of holding assets calculated by multiplying total assets by a certain ratio. Because the regulations set asset ratios of 30% for domestic stocks, 30% for foreign currency-dominated assets, and 20% for real estate, they have commonly been referred to as the “3-3-2” regulations.

The regulations were recently lifted by bringing the bill into force with the aim of responding to indications that regulations limiting holdings of foreign currency-denominated assets hinders the globalization of domestic financial institutions and reduces their global competitiveness against U.S. and European financial institutions despite the global trend of financial globalization.

Enforcement of the bill will enable domestic life insurers to invest flexibly in overseas assets and benefit from extending their core business overseas. However, the specific issue domestic life insurers face in their core business is to reduce the gap in global business experience between themselves and their U.S. and European life counterparts.

Supplemental Data: Results of Japanese major non-life insurance groups (company) for fiscal 2011, ended March 31, 2012 (Non-Consolidated Basis)

(Unit: Millions of yen, %)

	MS & AD Holdings		Tokio Marine Holdings		NKSJ Holdings		Fuji	Toa Re	
	Mitsui Sumitomo	Aioi Nissay Dowa	Tokio Marine & Nichido	Nisshin	SOMPO JAPAN	NIPPONKOA			
Net Premiums Written	FY 2011	1,265,997	1,074,631	1,783,009	136,602	1,281,155	630,605	264,870	134,079
	FY 2010	1,232,945	1,097,341	1,742,746	134,063	1,256,639	620,615	265,451	125,354
Net Claims Paid	FY 2011	1,000,737	805,026	1,370,750	95,260	939,541	493,011	199,109	130,682
	FY 2010	765,938	692,854	1,094,259	81,582	817,961	397,444	159,439	74,212
Underwriting Profit (Loss)	FY 2011	(170,026)	(20,008)	(1,153)	(3,048)	(24,994)	(41,188)	(9,317)	(38,076)
	FY 2010	(50,399)	(33,369)	(31,118)	(5,868)	(9,716)	(24,991)	(9,609)	(2,877)
Ordinary Profit (Loss)	FY 2011	(130,177)	9,233	212,120	4,211	3,964	(7,737)	3,384	(7,060)
	FY 2010	31,770	16,079	145,754	2,517	20,541	(319)	14,833	4,647
Net Profit (Loss) for the Year	FY 2011	(130,607)	(43,549)	23,206	(4,759)	(37,518)	(22,584)	(15,741)	(15,522)
	FY 2010	22,881	(11,417)	100,713	1,520	12,124	(6,437)	7,735	3,807
Total Assets	FY 2011	5,646,816	3,141,142	8,368,009	408,959	4,600,592	2,337,631	858,001	497,910
	FY 2010	5,799,005	3,364,309	8,670,008	428,509	4,786,371	2,459,190	918,361	482,194
Ratio 1 Loss Ratio (%)	FY 2011	85.1	79.7	81.6	76.4	80.6	84.7	79.6	97.5
	FY 2010	68.3	68.2	67.5	66.2	72.5	69.6	64.8	59.2
Ratio 2 Expense Ratio (%)	FY 2011	33.4	35.1	32.0	34.9	33.0	35.0	34.4	29.4
	FY 2010	33.9	35.6	33.5	37.3	33.7	35.8	35.0	30.2
Ratio 3 Yield on Investments (Income) (%)	FY 2011	2.22	2.16	2.21	1.32	2.13	2.12	1.56	3.35
	FY 2010	2.37	2.36	2.00	1.53	2.21	2.08	1.87	2.56
Ratio 4 Yield on Investments (Realised Gains / Losses) (%)	FY 2011	1.99	1.85	4.39	2.49	1.86	2.59	2.55	9.50
	FY 2010	3.05	2.97	3.93	3.14	2.07	2.40	4.72	2.66
Ratio 5 Solvency Margin Ratio (%)	FY 2011	486.8	442.6	629.7	570.4	502.5	470.8	535.4	638.3
	FY 2010	534.7	508.7	603.4	633.1	562.5	521.8	587.7	700.4

Note: Solvency Margin Ratio both in FY 2010 and FY 2011 calculated under the revised standard applied from March 31, 2012

Sources: Each company's Financial Statements of FY2011

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