

# Risk Management Thinking and Case Studies for Creating Business Resiliency

## – Possibilities for Soft Control and Social Capital –

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*<Abstract> Nowadays companies have less of a chance of survival. A meager 6.3% of Japanese businesses are still in operation 10 years after their incorporation. Regardless of company size, Japanese and European businesses last an average of only 12.5 years. While representing the difficulties of management for modern businesses, these numbers also teach us the importance of making a quick turnaround to recover from our managerial failures, whatever their cause. Corporate failure rates far surpass corporate success rates; there is great meaning in viewing the causes, background, and countermeasures to these failures from a risk management perspective. A few factors are crucial to increasing business resilience and sustainability. First, a business must understand how their corporate vision, corporate objectives and risks relate. Next, they must mix risk control and financing abilities effectively while both adjusting their internal culture and adapting to external circumstances. The ultimate goal of this paper is to clarify what it is that risk management can do to increase business resilience and sustainability.*

*Key words: resiliency, sustainability, soft control, hard control, social capital, corporate vision, risk finance*

### 1 . Introduction

In the Age of Exploration in the 17th century, English playwright William Shakespeare in his play *Timon of Athens* refers to life as an “uncertain voyage.” Keeping in mind that a fleet sent to the Spice Islands in those days was lucky to return with a third of its crew intact, it is easy to understand why he felt so.

Compared to a crew member's odds of returning in the Age of Exploration, however,

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modern day companies have even less of a chance of survival. A meager 6.3% of Japanese businesses are still in operation 10 years after their incorporation (survey by Japan National Tax Agency, 2005). Regardless of company size, Japanese and European businesses last an average of only 12.5 years.<sup>1</sup>

There is a world of difference between the risks of the Age of Exploration 400 years ago and those surrounding modern day businesses. Even allowing for the great impact new risks have on corporate value, the bankruptcy rates for modern day businesses show us that corporate management is an even more uncertain voyage than life. The discontinuity of risk and opportunities is constant.

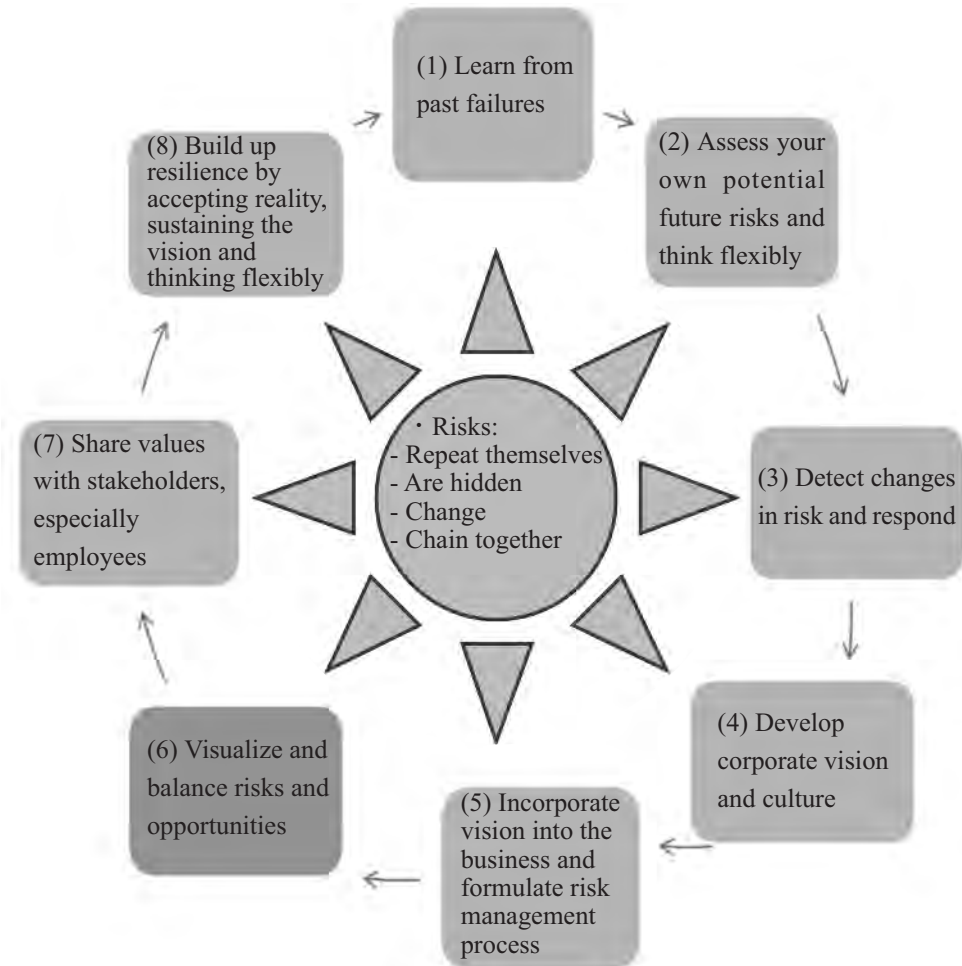
While representing the difficulties of management for modern day businesses, these numbers also teach us the importance of making a quick turnaround to recover from our managerial failures, whatever their cause. Corporate failure rates far surpass corporate success rates; there is great meaning in viewing the causes, background, and countermeasures to these failures from a risk management perspective.

A few factors are crucial to increasing business resilience and sustainability. First, a business must understand how their corporate vision, corporate objectives and risks relate. Next, they must mix risk control and financing abilities effectively while both adjusting their internal culture and adapting to external circumstances. The ultimate goal of this paper is to clarify what it is that risk management can do to increase business resilience and sustainability.

There are a number of key concepts in making risk management for corporations and organizations more effective to increase business sustainability and resilience. These concepts were mainly conceived by the author upon viewing past failures in corporate management and governance with an understanding of the nature of the risks involved. First, we shall briefly overview these eight key concepts. (see Figure 1)

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<sup>1</sup> Arie De Geus. *The Living Company*, Harvard Business School Press (1997). Japanese translation by Ichiro Horide (2002). P. 19.



**Figure 1: Eight key concepts to building corporate resilience and sustainability**

First, the tendency of risk to repeat itself is an important point, leading us to the first point of risk management: learning from past failures. Corporate fraud and misconduct are examples of risks which repeat themselves, and with increasing frequency in recent years.

The second point is the importance of assessing one’s potential future risks and thinking flexibly to cover them with risk management. In predicting potential future risk and establishing a corresponding risk management structure, it is important to learn the lessons of the past and leverage clever and flexible thinking.

A relevant example is the response of Tokyo Disneyland to the Great East Japan Earthquake last year. Their way of handling park visitors from March 11 through March 12 was full of activity suggesting a developed risk management strategy and flexibility.

The third point is to continuously be aware of the frequency and changing impacts of risk,

as well as the changing face of a risk's impact on corporate value, and respond accordingly. This is important because risk changes and can chain into other risks. This implies an awareness of past, present and future risks in risk management thinking.

The fourth point of risk management thinking is what gives a business resilience and sustainability. In it, the first question is whether top management has settled on a management vision mutually understandable with its employees and manages based on that vision. The second is whether they understand risk management and their risks within the management vision and have their ideas on risk management trickle down throughout the company.

The fifth point of importance is that corporate management decisions are reflected in a modern risk management process. A business settles on a corporate vision as given in the fourth point above will mean nothing if management fails to act upon it. The business needs to capitalize on their vision within the modern risk management process and incorporate this process into their management decisions.

The sixth point is to assess the overall risks and opportunities in relation to management as a whole, visualize and map these out, and balance them from an overall management perspective. This will involve minimizing losses and maximizing opportunities.

Seventh, how well employees develop their trust, bonds and other intangible elements with other employees, their supervisors and stakeholders is key to the risk response of a company on the verge of crisis. This point deals with how risk control is a focal point of a company's risk response, and how risk management problems focus on the intangibles listed above for the company's most important asset: its people.

The eighth point relates to company resilience. It deals with what the elements comprising that resilience are and how it is cultivated. This final point brings together the ideas from the first seven points, including corporate philosophy, vision, and flexibility, which are important pieces in developing resiliency. This point give a comprehensive view of the framework of resiliency and involves discussing concrete measures that can be taken.

## **2 . Learning Risk Management Thinking from Case Studies**

One of the characteristics of risk is that it changes. Risk changes in terms of its frequency, causes, and strength of its impact. Thus, a risk manager must constantly be learning from past risks, thinking flexibly to predict current and future risks, and making preparations on how to respond to these risks. We will now look at three examples based on this perspective.

### **2 - (1) Tokyo Disney Resort: Flexibility in employee responses during the Great East Japan Earthquake**

The first example is how Tokyo Disneyland responded to the Great East Japan Earthquake on March 11, 2011. On March 11, Tokyo Disneyland had about 70,000 visitors when the earthquake hit. Disneyland's response was a sight to behold. In addition to regular training assuming the worst-case scenario, the staff were quick-witted, not confining themselves to the manuals and coming up with their own measures. Such things are vital in terms of resilience.

At just past 2pm on March 11, 2011, there were approximately 70,000 visitors in Tokyo Disneyland. It was then that a magnitude 9.0 earthquake hit with a wide epicenter stretching from offshore Iwate Prefecture down to offshore Ibaraki Prefecture. The quake registered a 5.0 on the Japanese scale for measuring surface seismic intensity in Urayasu, Chiba where Tokyo Disneyland is located. The park made an earthquake announcement 40 seconds after the earthquake hit.

On that day, I personally had just left my home on my way to Narita Airport for an overseas business trip. When the quake hit, I was on a train on the Yamanote Line that had just stopped at JR Sugamo Station. I felt the earthquake and immediately got off the train. Afterward, JR's response was to get the passengers out of the station and just close the shutters. With no way of knowing how exactly the quake had affected transportation and everything else, I started a labored trip back home.

As previously mentioned in the introduction, I mentioned that risk response involves risk financing and risk control. Risk financing means to determine preset monetary responses for once a risk has occurred. Meanwhile, risk control refers to attempts to restrict the impact and frequency of a risk. Risk controls range from facilities, buildings, equipment, manuals and other tangible or "hard" measures to methodology, training, emotional, mental, and other intangible or "soft" measures. While the importance in risk control of such soft controls are highlighted in this paper, having proper hard controls in place will increase their effect. Now, back to the flexible responses of the soft controls in Tokyo Disneyland.

#### **Soft controls: soft, flexible responses**

In contrast to JR's response, Disney Resort did not force visitors out of the property and, roughly 30 minutes after the earthquake hit, it had set up an earthquake command headquarters. As for the part-time staff, or cast members, who go through emergency drills 180 times a year based on the assumption that there are routinely 100,000 visitors in the resort, began taking various actions.

First, they informed everyone to take cover outside of facilities to prevent anyone from being trapped under buildings. They proceeded to explain that they were passing around stuffed animals from their own stores to use in place of safety hoods to take cover with. In brisk 10°C weather, they distributed heat pads, cardboard as windbreaks, and unlimited souvenir bags to everyone, telling them to lay the cardboard across the ground and take a seat. Stores passed out their snacks for free. Cast members assured scared children that they would keep everyone safe and that everything would be fine. They took any number of measures not found in any of the manuals.

The management at Disneyland is dedicated to the safety and security of its visitors, and even the cast members, composing 90% of its staff, thought flexibly and responded on their feet to protect that ideal. A simple philosophy in action. In times of crisis, snap judgments and flexible thinking are two elements of resilience, and the Disney cast put them into practice.

While JR just shut its doors and turned its passengers away, Disney Resort headquarters

had to move only 1,500 of its 20,000 visitors in Disneyland to DisneySea, starting in the early evening after confirming everyone's safety. It was past midnight by the time all the visitors unable to get home found shelter indoors on restaurant floors, in theater seats and in passageways. The park then began passing out warm soy and hijiki- seaweed rice, soup, bread and other foods for the 20,000. Prepared for the worst, Disney Resort had an emergency stock with enough for its standard 50,000 visitors to last for 3-4 days. A bowl of rice prepared with just hot water and served in 15 minutes was a relief to all their visitors.

Despite the late hour, the Disney cast continued posting up road information and bus and train service information. The park visitors grew to trust the staff as they continued cheerfully assisting them through to the morning. The next day, the cast confirmed that public transportation was moving and saw them safely off to the nearest station with a warm farewell.

Group behavior in times of crisis is a research field in disaster psychology. This includes both overestimating risk and panicking, and the reverse case of underestimating risk and staying put without doing anything. Both of these are mind traps that we must be careful of in times of crisis. Disney Resort, and especially their cast members, however, responded appropriately on March 11 without falling into either of these traps.

### **Hard controls: structural preparations**

The following contributions are not to be overlooked in terms of hard controls:

- Having designated rescue vehicles
- Precautions for liquefaction: As management had taken measures for liquefaction, the Disney Resort escaped without any major damage to their buildings and facilities other than a certain portion of their ground level parking lot. This is due to them pre-loading the foundation to stabilize it as a liquefaction measure during construction and improving the ground down to 10-15 meters across the entire resort.
- Seismic design and prevention measures: Each of the Disney facilities exceeds national seismic safety standards. There were appropriate measures in place to prevent anything from falling. The glass in each building and facility has a shatterproof film, and there are safety wires on all lighting fixtures and decorations.
- Private electric generator installed: Management installed a private power generator using solar and natural gas power. The power generated is used around the theme park.

### **Risk finance response**

In addition to these hard and soft controls, Oriental Land (the company that manages Tokyo Disneyland) had set up risk financing in 1999 to cover any great earthquake disaster in the Tokyo metropolitan area as a risk management measure. In line with the corporate culture at Oriental Land, they worked with financial institutions to implement this measure, taking a lesson from the Great Hanshin-Awaji Earthquake of 1995.

The fund issued was an earthquake bond worth approximately USD 200 million. If an

earthquake hits within a set radius centered on Disney operations in Maihama, the fund covers the reduced operational cash flow from any indirect damage. This allows Disney to efficiently receive the fund in a timely fashion after an earthquake. The point of risk management is to minimize losses with risk controls and passing risk onto a third party with planned risk financing. Oriental Land established a good mix of these approaches.

### **Management policies contribute to flexible response**

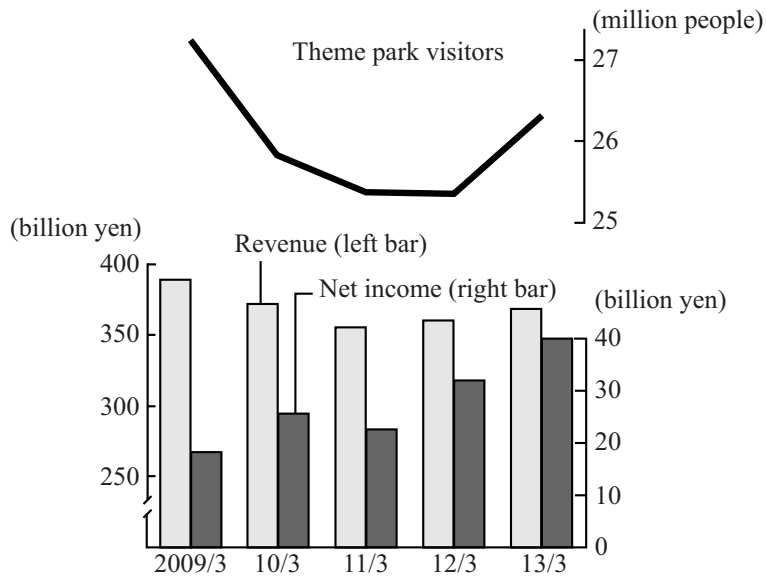
Oriental Land normally held drills assuming emergency situations, which gave way to the many flexible responses from Disney cast members as discussed above. The power of behavioral soft controls sprouted from individual judgment. Oriental Land's business mission statement is as follows:

“Our mission is to create happiness and contentment by offering wonderful dreams and moving experiences created with original, imaginative ideas.”

The flexible responses taken at the Disney Resort over March 11 and 12 in a time of crisis are tied into the “original, imaginative ideas” of this corporate philosophy. The Disney crew was highly hospitable while masterfully performing this mission, even in an emergency situation.

### **Impact on Performance**

According to Oriental Land's annual report, the financial impact of the Great East Japan Earthquake is outlined below. “With regard to the impact on operating results for the fiscal year ended March 31, 2011, the business lost due to the theme parks closure for the 20 days after the earthquake resulted in a ¥ 6.7 billion decline in operating income from the forecast announced in February 2011. In addition, we recorded extraordinary loss due to the earthquake damage, which comprised ¥ 5.3 billion in such fixed costs as personnel expenses and depreciation and amortization during temporary closure of the theme parks, and ¥ 4.4 billion in such items as recovery-related expenses, including repairs of parking lots, and merchandise disposal losses, for a total of ¥ 9.7 billion. Consequently, the impact of the earthquake on income before income taxes and minority interests was approximately ¥ 16.4 billion.”



**Figure 2: Oriental Land visitors and profits**

Source: Nihon Keizai Shimbun, April 26, 2012

Despite the impact of closing the park, Oriental Land reported its highest operating margin ever in the fiscal period ending March 31, 2011, with a significant increase to 15.1%. They saw an increased share of theme park business sales with high profit margins in addition to lowered variable costs in terms of products, food and drinks as well as greatly reduced fixed costs in terms of labor costs, fixed expenses and depreciation.

The April 26, 2012 edition of the Nihon Keizai Shimbun stated that Oriental Land's net profits was its highest ever based on a flexible strategy which included lowered entry fees, a varied event strategy, appeal for visitors from far-off regions and sales of Disney merchandise. The report is as follows:

*Oriental Land announced its consolidated financial statements for the fiscal year ending March 31, 2012 on the 26th. They recorded net profits of 32.1 billion yen, up 40% from the previous year and their highest ever, topping their previous high recorded in 2010. They overcame reduced leisure consumption following the Great East Japan Earthquake with selective price reductions for entry fees and an event marking the 10th year anniversary of the opening of Tokyo Disney Sea in Urayasu, Chiba.*

*“Seeing how few visitors there were following the earthquake created a sense of crisis that pushed us to our record profits,” said Wataru Takahashi, the Executive Officer at Oriental Land who announced the company earnings.*



*One of the driving forces in these figures was the strategy of preemptively dropping prices. After being affected by the earthquake, Tokyo Disneyland and Tokyo Disney Sea reopened in late April, but initially had visitor counts two orders of magnitude lower than usual.*

*Then, they released half-price children's tickets for the summer starting last July. Attracting visitors from the Tokyo area and the slowly recovering regional areas alike, the rush of visitors from July to September recovered profits to record levels. Oriental Land management shared that it was also a case of "latent needs that were suppressed in the subdued mood following the earthquake coming to surface."*

*Another driving force was the Disney Sea 10-year anniversary event which started in September. After months without commercials following the earthquake, Disney increased its TV advertising to attract customers. With the subdued mood of the country lifting, 14.6 million visited the Disney parks in the second half of the fiscal year, an 18% increase over the same period the previous year and record high.*

*According to a survey by the Japanese Ministry of Economy, Trade, and Industry, the number of visitors to amusement parks and theme parks from October to December 2011 increased nationally by 1.5% over the previous year, and numbers were almost even with the previous year going into the new year. The drawing power of Oriental Land stands out.*

*On the strength of this drawing power, Oriental Land also increased its sales of high-margin merchandise of Daffy Duck and other popular Disney characters. Profits rose as sales grew to a record 10,336 yen per park visitor.*

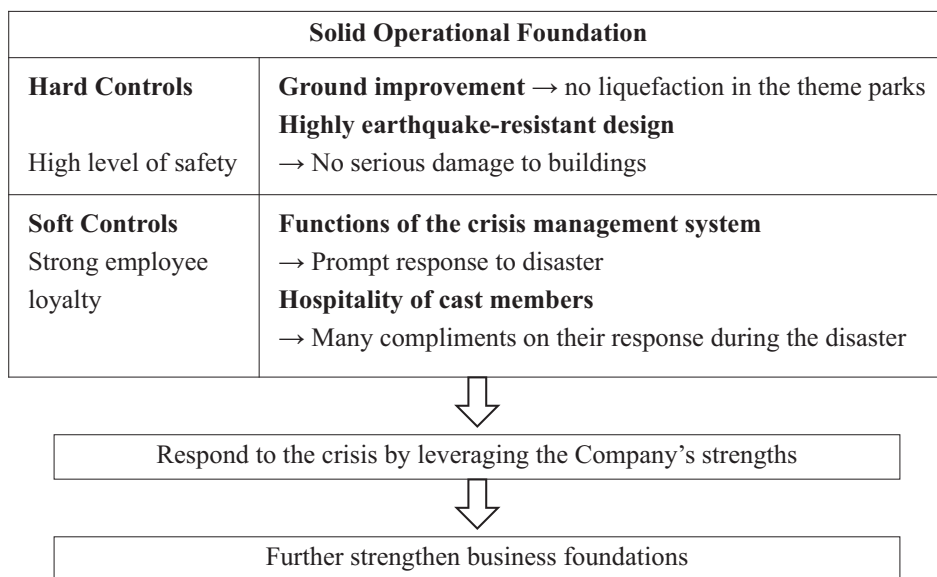
*While ordinary profits are reduced 3% for the period ending in March 2013 due to lower unit prices, Oriental Land expects to eliminate earthquake losses with record net profits for the second year in a row. They anticipate a year-to-year increase of 4% in park visitors. The key question will be whether they can keep their drawing power moving forward, leveraged on new attractions like Toy Story Mania!, a large attraction with 11.5 billion yen total invested.<sup>2</sup>*

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<sup>2</sup> Nihon Keizai Shimbun, April 26, 2012

### Summary of Oriental Land’s disaster response

In the company’s annual report, impact from the Great East Japan Earthquake is summarized as follows:



**Figure 3: Oriental Land response to Great East Japan Earthquake**

Source: Oriental Land 2011 annual report

In the figure above, the influence of the corporate mission is apparent from the onset. This influence is most important; it is the source not only of management actions, but also behavior in times of crisis. Permeating the corporate structure, the corporate mission acts as the ballast keel to keep actions stable during crises. It is precisely this mission that allows for the following responses, hard and soft controls, and risk financing. The underlined portions in the figure are all soft actions and response; they are frequent training, learning from the Great Hanshin-Awaji Earthquake, and enacting flexible, voluntary responses with soft controls. These actions and responses all stem from the corporate mission.

In the 2011 annual report for the Disney Resorts, the Oriental Land CEO noted the following under the heading “Matters on which there is no room for compromise.” As it appears he is hinting at the importance of soft control, I shall close the section with this:

***Matters on which there is no room for compromise***

*We believe that in the theme park business there is no room for compromise over matters of quality and safety. Since we opened Tokyo Disneyland in 1983, we have remained faithful to this philosophy.*

*In striving to enhance quality, we recognize not only the importance of facilities and other physical infrastructure but also the key role of people—in particular the hospitality provided by our cast members. Put simply, the product we provide is the contentment of our guests. At Tokyo Disney Resort, when we come into contact with guests, that is the moment when our product is created and simultaneously consumed by guests. These products vanish in an instant, and, since they have no physical form, they cannot be set aside as inventory. It also means that quality is much more difficult to manage than is the case for a business that deals in physical goods. On the other hand, the greatest source of joy and motivation for cast members is being part of a business where providing contentment for guests is itself the essence of the business.*

*With regard to safety, in addition to the physical infrastructure, such as buildings and facilities, Disney has defined what is called the “SCSE” principle as the standard for the services we provide within the theme parks, and apply our utmost efforts to ensure this principle is honored. “SCSE” is an acronym comprising four words in a specific order—Safety, Courtesy, Show and Efficiency. Within our operations, safety always takes precedence. This is followed by the courtesy of our cast members and the strong awareness that in every situation we are providing a show for our guests, which is essential to maintaining a consistently high level of quality. Finally, we aim to carry out our services efficiently. If the order of priority of these four elements were not adhered to, we would cease to be a Disney theme park.*

The second example case is that of Komatsu from the construction machinery industry. Komatsu exhibits administrative risk management based on realistic and flexible thinking. To Komatsu, one part of flexible thinking is always having a viable alternative, no matter the situation. In a day when any number of risks can negatively impact corporate management, Komatsu's management style is based on flexible thinking while keeping a careful eye on where management is headed. Komatsu risk management stands up strong in the face of adversity.

## **2 - (2) Komatsu: Risk management through flexible thinking and improved trust from stakeholders by being realistic, standardizing parts and using IT**

In a day when any number of risks can negatively impact corporate management, management is wont to blame corporate crisis on a cruel outside world. Komatsu, however, has amazingly overcome two crises in the past 10 years by facing the facts and thinking flexibly.

### **Deficit of 13 billion yen in the 2001 fiscal year**

Established in 1921, Komatsu is currently the largest construction machinery and heavy machinery manufacturer in Japan, second worldwide only to Caterpillar in the U.S. Komatsu

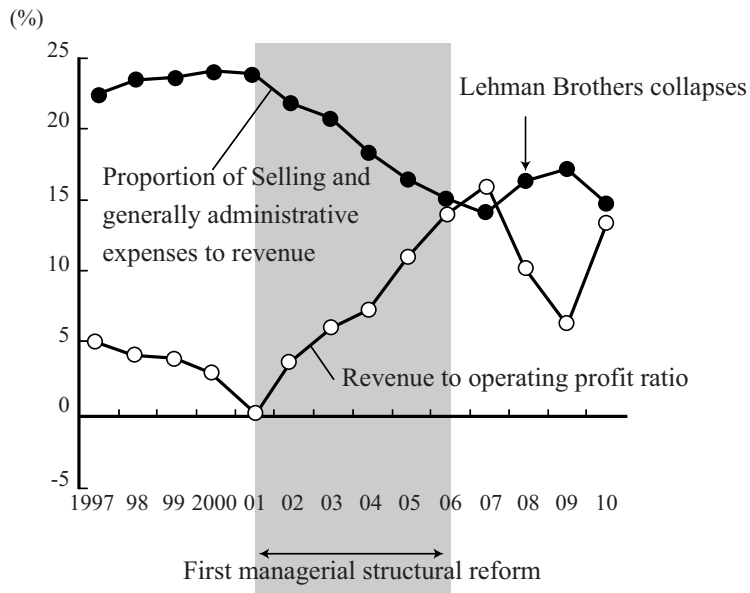
makes a business of developing, producing and selling bulldozers, hydraulic excavators, dump trucks and other machinery used in development for buildings, dams, roads and other infrastructure. Their dealings in these infrastructural development products predates a great period in economic development around the world. For these reasons alone, they cannot manage administrative risks without keeping constant tabs on the global and national demand trends, as well as the chances of anything that could negatively impact management, and improvising to deal with them.

The first Komatsu crisis of the past 10 years was a deficit of 13 billion yen in the fiscal year ending in March 2002. This was in the wake of a number of outside factors: the collapse of the IT bubble in 2000, the 9/11 terrorist attacks in 2001, declining prices in crude oil, and increasing restrictions in Japan on investment in public works projects. Having just taken office in 2001, then Komatsu president Masahiro Sakane refused to simply blame the deficit on external factors. Instead, he carefully dug through the costs of their factories worldwide, discovering that their labor costs, equipment amortizations and other fixed costs were too high. Pointless projects and actions beget the high fixed costs that Sakane deemed to be the cause of their deficit. Next, we will touch on the measures taken by Komatsu.

Specifically, Sakane determined that the Komatsu corporate structure was too lenient on subsidiaries running chronic deficits. He reviewed its unprofitable projects and businesses and embarked on a major overhaul of the woeful company. In a year and a half's time, Komatsu consolidated its 300 subsidiaries to just 110 and enacted voluntary retirements of nearly 15% of its 20,000-strong force, with 1,100 employees retiring and 1,700 seconded to subsidiaries.

This is the proper way to deal with things in Komatsu, especially in terms of senior management. In all its decisions, senior Komatsu management prefers to face their internal problems and deal with them head on without simply blaming their management difficulties on external factors. They also prefer decisions which avoid forcing their external part suppliers to lower prices or cutting costs in their strength, the R&D sector, to make up for deficits. As it dealt with the high fixed costs and the resulting deficit, Komatsu also deftly executed measures in rapid succession to put the company back on course, largely by making internal risks and management transparent. This involved bringing the reality of wasteful projects and actions to light and quantifying the delays in subsidiary aggregate balance sheets in efforts to accelerate company earnings reports.

Referring to these measures as structural reforms, Sakane, currently the Komatsu Chairman, successfully cut 10 billion yen in labor costs and 40 billion yen in fixed costs over a very short period in 2001 and 2002. With no change to the external factors gripping Komatsu over this period, Komatsu turned its deficits in 2001 into a 30 billion yen surplus just one and a half years later in 2002.



**Figure 4: Results of Komatsu management structural reforms**

**Notes: Graph figures are for construction and mining sectors. Numbers for FY2010 are for April to December.**

Source: Masahiro Sakane. “Unrivaled Management,” Nihon Keizai Shimbun (2011). P. 78.

From a risk management perspective, these responses all started by calmly searching for the truth about the company's internal situation with analysis of their corporate environment. Every time Komatsu is assaulted with a crisis of greatly changing external factors it gives a companywide effort to improve its corporate structure internally and gradually store up its strength as a global company.

In the modern risk management process, these efforts relate to the first stage: establishing the context. Companies must perform tasks like defining a philosophy, reaffirming their goals, analyzing their strengths and weaknesses and analyzing their stakeholders. Still, it is amazing to think that Komatsu was able to go through this process, identify their risks in wasteful company projects and actions and turn a large deficit into surplus in short work with such surgical precision.

**70% decrease in demand due to the 2008-2009 world financial crisis**

The collapse of Lehman Brothers in 2008 had a great impact worldwide, knocking even the mighty Toyota into deficit. With the construction machinery market being so highly sensitive to the economic climate, construction machinery sales plunged from late 2008 to 2010. Demand in the fourth quarter of 2008 fell 70%, resulting in Komatsu's second financial crisis following the 2001 crisis.

In response to the situation, Komatsu took several measures. Their short-term response was to adjust stock for manufacturers and dealers, specifically by stopping production. They then turned their efforts to finding flexible, visible recovery as outlined below.

Their first response was to streamline the production line. A specific example of this would be production for wheel loaders, made to load earth and sand onto dump trucks, and motor graders for road leveling. Each previously having its own production line, they gained their first success in adjusting to the financial crisis by making it so both could be almost completely produced on the same main line, greatly increasing production efficiency.

Their second response was to improve standardizations for product design plans and specifications as implemented in the mid 1990s. Both design plans and part specifications are now standardized, with only one copy shared worldwide. This had the advantages of not only cutting costs for development and parts procurement, but also allowing for shipping destinations to be freely changed upon confirming country and regional demand and exchange rates. More than simply cutting costs, this point is a huge advantage in terms of risk management in improving flexibility in terms of constructing compatible parts and products.

Komatsu's third response involved KOMTRAX, the data system standardly equipped on Komatsu construction machinery since 2001. This system features GPS and communication functions to send positioning information, operating conditions, operating time, fuel economy and more to the Japan data center for inventory control and asset management. This allows for production planning and demand forecasting from Japan. Equipment operating conditions are impacted by national economies, policies and many other factors. With the information from KOMTRAX, Komatsu can assess situations faster, acting as a form of early risk detection. With this system and the product and specification standardizations above, Komatsu made itself more impervious to economic fluctuations by making production easier. KOMTRAX also represents a fusion of IT, business management and business risk management.

Since the financial crisis, Komatsu has used the second and third measures given above to assess the world market and manage risk. For instance, KOMTREX detected a steep drop in demand in the North American market early and reduced operation at the North American plant. Meanwhile, Komatsu had the Thailand plant increase production of now standardized products to concentrate production in Asia. If the weak Euro continues with the current European debt crisis, many of the hydraulic excavators at the U.K. plant will be transferred to North America. Such free and flexible mutual supply of shipping destinations based on national and regional demand, currency trends and rival company actions works to lessen the negative impacts of financial crisis.

Take a look at Komatsu 2009 sales by region and it will be apparent just how much of a world player they are with their corporate behavior. Working to spread their risks, Komatsu sales figures by market are as follows: Japan 18%, North America 11%, Europe 7%, Asia and Oceania 22%, China 19%, Latin America 13%.<sup>3</sup> In the event of an occurrence anywhere in the

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<sup>3</sup> Masahiro Sakane. "Unrivaled Management," *Nihon Keizai Shimbun* (2011). P. 25.

world with undesirable effects, Komatsu is equipped with the hard controls and information power to detect it early and effectively commute their interests. This makes Komatsu resilient and strong.

The fourth measure is a factor related to product development. Upon taking the office of Komatsu president, Sakane issued a companywide order that all future development for new products had to be “unrivaled.” His criteria for an unrivalled product included the following: 1) bold features the competition cannot surpass in 3-5 years, 2) improved fuel economy and noise levels (fuel economy in particular had to improve by 20%), 3) safe, IT-ready and environmentally friendly. Thus, Komatsu had taken its focus on fact finding and applied it to product development. From 2003 onward, Komatsu enjoyed the success with its unrivalled product line. In 2008, sales for unrivalled products comprised 50% of new vehicle sales.

Yet one more factor makes Komatsu stronger. This soft factor is the fifth measure Komatsu took in response to the latest world financial crisis.

The fifth measure is the trust and bond with the Komatsu Midori-kai of partner companies that supply Komatsu parts. Composed of 160 companies, Green Club companies produce more than 70% of the parts for Komatsu products. The trust relationships between Komatsu and Midori-kai members helps gives it the power to overcome crises. The partner companies are mostly in sheet metal or metalworking and have a net sales profit ratio of 7%. This high number exceeds the 5.4% average for Nikkei listed companies.

Komatsu has built strong ties with its partner companies by actively outsourcing to them, disclosing sufficient information in the form of guidance and shared management plans, and allowing them a reasonable profit. The years following the fall of Lehman Brothers were an ordeal for both Komatsu and its partners, but they weathered the storm through support in the form of Komatsu equipment and parts purchases to the order of 3.3 billion yen in total.

Figure 4 shows how Komatsu remarkably overcame two crises in a 10-year period with routine use of soft and hard controls.

Former Komatsu president Masahiro Sakane wrote that every time Komatsu is assaulted with a crisis of greatly changing external factors it gives a companywide effort to improve its corporate structure and gradually build up its strength globally. In terms of risk management, he also makes it clear that Komatsu does not wait around to deal with risks. He also emphasizes the importance of early detection to get bad news to management quickly, swift risk mitigation, and risk transfer. Komatsu is a good example of flexible thinking from a company as a whole, based on good management. For Komatsu, this flexible thinking resulted in a variety of risk measures which helped them overcome their crises.

## **2 - (3) Imabari Towel: Reconstruction by facing risk, having vision and thinking flexibly Ikeuchi Towel**

### **A new president takes over immediately following the first owner’s passing**

Imabari in Ehime Prefecture is a small city with a population of 180,000 known for its shipbuilding and towels. Just out of university, I worked for a major insurance provider in their

Imabari branch office. Here, I visited many a towel factory as they were clients for our fire insurance. The example I've taken up for discussion here is that of Ikeuchi Towel, a victim of chain bankruptcy due to its prime wholesalers going under amidst harsh external conditions. With the small, rural city and the towel industry itself in decline, they were subjected to fierce price wars.<sup>4</sup>

Established in 1953, Ikeuchi Towel is currently on its second president. The first president, Tadao Ikeuchi, passed away suddenly in 1982 due to illness. Tadao's son, Keishi, worked for Matsushita Electric in Osaka for 12 years and had just decided to take over the family business when Tadao passed. Keishi took over as president of Ikeuchi Towel in 1983.

About 60% of the towels produced nationally in Japan are Imabari towels. At one time there were 500 towel factories, but this hit its peak around 1976. Now, 140 different companies carry the Imabari Towel name. I worked at Yasuda Fire Insurance right at the peak of towel production.

### **The towel industry**

With more than 70% of Japan's towel demand being in the specialty gift market, consumers choose the product that is more attractive. This contrasts with American consumers, who buy towels in line with their own tastes, going with simple towels and focusing on their own preferences in terms of color or material quality. Currently, the Japanese towel industry is facing its biggest crisis to date. Japanese business numbers dwindle and production is falling as imports of lower-priced products from China and other Asian competitors surge. With the large influx in low-priced products, the percentage of imported towels in the domestic market jumped to 81.5% in 2010 from its 2000 mark of 57.5%. One of the reasons things got to this point is a lack of the kind of initiative in decision-making pointed out in previous examples. Insiders will tell you that the biggest cause is that towel vendors were slow in adjusting to the times—they neglected to develop products that met end user needs or work to reform their distribution.

### **Facing crisis**

When Keishi took over the family business, around 20% of Ikeuchi Towel sales were from exports to the U.S. and abroad with the remainder being domestic sales. Under this business model, Ikeuchi Towel was a commissioned manufacturer for wholesalers who outsourced most all their work to low-cost Chinese and Vietnamese sources. In 2003, however, the wholesaler they were dependent on for 70% of annual sales went bankrupt. At the end of the day, this left Ikeuchi Towel with an uncollectable 240 million yen in their accounts receivable and a total of 1 billion yen in debt. Just before the bankruptcy, the Ikeuchi brand sold roughly 7 million yen in 2002, accounting for 2-3% of their overall sales that year. On top of that, their production was as an original equipment manufacturer (OEM) for another brand. They were taking a big

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<sup>4</sup> Keishi Ikeuchi. "Pervasive management," *X-Knowledge, Nikkei Business* (May 3, 2010). PP. 52-54.



risk, keeping their own sales largely dependent on another company.

In general, there are three situations under which using an OEM is most effective:

- 1 . When a market is starting up. If a company does not have the technology or a production line, they can make up some time between other companies going to market and starting their own production with an OEM supplier.
- 2 . When the market is reaching a growth phase. Production is outsourced when one's own production cannot keep up.
- 3 . When the market is declining. The company stops in-house production, allowing them to supply the market with product at low cost.

Also, smaller businesses with weaker sales capabilities can find some benefit in utilizing the sales capabilities of the outsourcing company as an OEM. In the times of its first president, Ikeuchi Towel probably depended on such thinking and chose to produce towels as an OEM. This is an extremely dangerous business model from a risk perspective, forcing you to rely on the original contractor. The OEM reasoning above makes them look like the saviors of weaker companies. The relationship is effective when the market is in decline; the outsourcing company can stop in-house production and supply the market with product at low cost, and smaller businesses with weaker sales capabilities can find some benefit in utilizing the outsourcing company's sales capabilities. This line of thinking is dangerous from a risk perspective, however, and the Ikeuchi chose to put an end to this seemingly miraculous business model. Another option is to diversify your OEM contracts and the associated risks, but Ikeuchi Towel decided to forego this path in favor of developing its own brand.

### **Overcoming crisis: From OEM production to selling their own brand**

In 1997 before the bankruptcy, Ikeuchi aspired to making the world's safest towel, looking to conceptually establish a brand on environmental-friendliness. He then established the IKT Brand of towels. IKT towels use organically grown cotton and are "woven with wind," using wind power to power their towel production. Winning the Best New Product Award at the New York Home Textiles Show in 2002 was great encouragement, but Ikeuchi says his motivation for the big shift in management policy to a business model of selling their own brand was "to make a product he actually wanted to make instead of just one he wanted to sell." He also knew that continuing OEM production of products carrying a different company's name would only pull them into price wars with low-priced Chinese and Southeast producers.

The company is also environmentally friendly in their water usage. They purify the gray water that results from dyeing the towels through a wastewater treatment facility jointly managed by seven towel companies. Completed back in 1992, they boast that the facility makes the water clearer than seawater.

Ikeuchi Towel has created a brand name based on environmentally friendly towels with wind, water and organic cotton. The words "Corporate Social Responsibility" appear in all industries, and many companies even put out environmental reports. While plenty of companies in the finance, insurance and other industries with low environmental burdens are vocal

proponents of social responsibility, their often poor performance and scandalous behavior can be enough to garner contempt from consumers. Meanwhile, the core business in industries such as automobiles, oil and towels is deeply connected to the environment. Ikeuchi Towel focuses on environmental issues not just to appear socially responsible, but to increase product sales, reduce costs and help improve profitability. They are truly a sustainable operation.

Ikeuchi Towel is truly a business that embodies the three main factors of this paper: it faces risk, sticks to its internal resources and in particular its vision and philosophy, and overcomes adversity with flexible thinking when faced with difficult external factors and crisis. In terms of facing risk, they avoided the price war with Southeast Asia, confirming the repeating chain of risk in producing outsourced product as an OEM. In terms of their vision and philosophy, they have set forth a clear management vision of environmental friendliness using water, wind and organic cotton. Ikeuchi Towel gives a clear message for its management vision as follows:

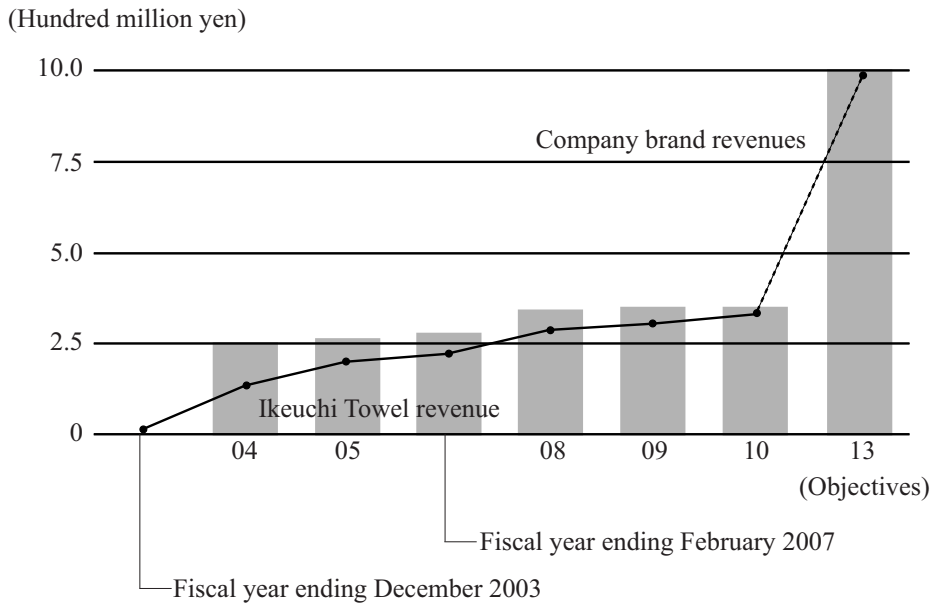
**Safe baby towels for all the mothers who put their baby's life before their own!**

Maximum safety and minimal environmental impact—our products are developed to be in harmony with the environment.

With originality in mind, our policy is to make products that all our employees can stand behind, not to make practical products that are easily replaceable.

In terms of flexible thinking, based on their vision and willingness to facing risks, Ikeuchi has implemented a strategy to move up market to higher price marks with their own brand. They went from machine-only production to manual procedures for cutting the organic cotton with scissors reduced defects. Also, they computerized the production process and focused on global market sales and online sales of small, single products. The leadership of Ikeuchi Towel's president played a large part in successfully blending these three factors together. It is Ikeuchi's appropriate blend of these three factors that has allowed the company to overcome crisis.

The proof is in the Ikeuchi Towel performance results. They recorded 360 million yen in sales for the fiscal period ending in February 2010 with 95% of sales coming from their own brand. Their sales before the bankruptcy were 800 million yen, but these figures do not show the whole picture. If they were not faced with a chain bankruptcy and did not think with the three factors listed previously, Ikeuchi Towel would not even exist today. With a risk management strategy able to handle crises, they are aiming for 1 billion yen in sales for 2013. Their growth also helps to revitalize the Imabari region.



**Figure 5: Ikeuchi Towel sales**

**Note: Filed for bankruptcy in the fiscal year ending in December 2003. Fiscal year ending in February 2006 is not included in the graph to account for change in financial statement period from ending in December to ending in February.**

**Author's note: Graph lines show sales for Ikeuchi brand items, and bars give sales for Ikeuchi Towel.**

Source: *Nikkei Business*, May 3, 2010, P. 53.

### 3 . Three elements of resilience

In this discussion of building up business resilience, we have already touched on how hard controls and manuals alone are insufficient to handle the risks of disaster. Corporate philosophies, visions and flexible thinking are the focus in this paper and are important elements in building resilience.

Diane Coutu gives the following three factors as those shared by highly resilient businesses and organizations:<sup>5</sup>

- 1) An acceptance of reality.
- 2) Deep beliefs and strongly held values.
- 3) Flexible thinking and the ability to improvise.

You can look at these as the three elements comprising resilience. The first, acceptance

<sup>5</sup> Diane Coutu. "How Resilience Works", *Diamond Harvard Business Review* (May 2011). P. 26.

of reality, must be examined through situational analysis of the risk management process. For disaster risks, this involves knowing the disaster history and mechanisms of disaster risk, understanding company vulnerabilities to disasters, learning more about your company's ties to the area and your suppliers, and training.

The second element are deep beliefs and strongly held values. In short, this boils down to taking a deep look at what your company can offer (its original roles and functions) and what ties you to society and reaffirming in social terms what your company has done to date and what it should do in the future. As previously mentioned, if a company expands its corporate behavior in a community, it cannot then turn a blind eye to community issues and still hope to sustain itself. Helping to solve social issues will serve to increase a company's resilience and staying power.

Of importance to company resilience is reaffirming your ties with the community and tackling the social issues that you should naturally pursue long-term. If a business that is firmly in demand hits a few bumps along the road, it will right itself quickly.<sup>6</sup> In his paper in 2011, Michael Porter<sup>7</sup> introduced the idea of Creating Shared Value, or CSV. CSV means to create shared value for society and the company by solving social issues and improving corporate profits and competitive power. This concept is useful in increasing company resilience.

As early as 1916, Eiichi Shibusawa, the father of Japanese capitalism, advocated in *The Analects and the Abacus*<sup>8</sup> the principle of ethical business and ethical corporate management. Here, he stressed that a company cannot enrich society in the true sense without balancing business and ethics and preventing runaway capitalism. In his 1974 book *Management: Tasks, Responsibilities, Practices*, Peter F. Drucker said that of all the people throughout history that have spoken on the social responsibility of corporations, none have made it more clear than Eiichi Shibusawa.<sup>9</sup>

Shibusawa also likened devoting oneself to the national community without being able to manage yourself and your own house to putting the cart before the horse. He goes on to list two means of governing a nation and society: rule of virtue and rule of law.<sup>10</sup> Rule of virtue is the Confucian principle of cultivating the people with virtue, and rule of law means to construct laws and punish those who disobey. Shibusawa clearly sides with rule of virtue. This is the concept behind soft controls—the idea championed throughout this paper. Meanwhile, the rule of law is about hard controls.

Coutu's third element, flexible thinking, is about independence and the ability to

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<sup>6</sup> Takehiko Mizukami. "CSV (Creating Shared Value)," Cre-en, <http://www.Cre-en.jp/library/opinion>, P. 2.

<sup>7</sup> Michael E. Porter, Mark R. Kramer. "Creating Shared Value," *Harvard Business Review* (January-February 2011).

<sup>8</sup> Eiichi Shibusawa. *Eiichi Shibusawa: Words that Survive Adversity*, East Press (2011), commentary by Hikaru Ikeda. P. 35.

<sup>9</sup> *Ibid*, P. 4.

<sup>10</sup> *Ibid*, P. 51.

improvise. The comments of Hiroaki Niihara in the third chapter of his book *Nihon no Yushu Kigyo Kenshu* (“A Study of Elite Japanese Businesses”) are relevant here. Niihara defines corporate culture as the informal code of conduct and values within the company that individual employees depend on to make judgments when the company faces unforeseen circumstances. Here individual employees working towards the same goal as management will judge for themselves the best action to take and act upon it.<sup>11</sup>

Also, James Reason emphasizes the importance of flexibility as part of having a safe culture. He defines a flexible culture as one that responds effectively to changing requirements<sup>12</sup>.

In the Great East Japan Earthquake, many of the things that occurred could not have been foreseen. It demanded that we expect the unexpected in normal times to allow us to think flexibly and not be totally dependent on manuals when faced with such situations. This line of thinking is not only important in disaster risk, but is an important basic idea for handling various other corporate risks.

### **3 - (1) Indicators and approaches to increasing corporate resilience**

Figure 4 shows the three indicators of corporate resilience and the five methods necessary to achieve each indicator in detail.

#### **(1) Situation awareness**

Be aware of the circumstances surrounding overall management and the crisis and think about how to handle it. In particular, this includes the following: 1) roles and responsibilities, 2) understanding the hazards and consequences, 3) connectivity awareness, 4) insurance awareness, and 5) recovery priorities. The first point involves confirming and understanding the chain of command and who has what authority. People cannot give rigid responses in the face of crisis. Second is understanding risks in context, the consequences they cause and the likelihood they will occur. Hazard maps and risk maps should be made but should not be wholly relied upon. Flexible thinking is required when dealing with crisis. Third, risks tend to have a chain effect. You need to know what negative spillover effects a risk could have and where. This requires simulations in normal times. The fourth point is to check your insurance policy details or prepare a policy as means of risk finance. Carefully examine and understand what risks are not covered, what proportion and amounts are insured, insurance premiums and other details. Taking solace in simply being insured is the worst attitude to have. Property losses can be covered by insurance, but using derivatives is another possibility in addition to insurance for loss of company revenue. In the case of Tokyo Disneyland from Section 2, derivatives were used for funding. Fifth, consensus must be reached on where reconstruction should begin first based on the expectations of stakeholders in terms of corporate management and company operation. Priorities must be

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<sup>11</sup> Hiroaki Niihara. *Nihon no Yushu Kigyo Kenkyu*, Nihon Keizai Shimbun (2003). P. 236.

<sup>12</sup> James Reason. *Managing the Risks of Organizational Accidents*, Japanese translation by Hiromu Shiomi, JUSE (1999). P. 303.

decided by always sharing risk information and exchanging opinions in terms of benefits to the stakeholders and society.

#### (2) Management of keystone vulnerabilities

Next, know what crises will have fatal impacts on management and discuss how to handle them. The approaches to this indicator are as follows: 1) planning strategies, 2) participation in exercises, 3) capability and capacity of internal resources, 4) capability and capacity of external resources, and 5) organizational connectivity. First, in light of the corporate vision and mission, you should consider your companywide priorities in reconstruction and what kind of risk management is preferable post-reconstruction. Second, employees who attend disaster training sessions only twice a year will not be able to deal with a crisis. Go through a cycle of knowing the risks, studying the countermeasures and training, leading to a new awareness and followed by response and more training. This will give the company resiliency and a real risk management culture which is good for the company. Third, the most important thing is to cultivate intangible assets in the form of internal resources such as managerial leadership, employee cohesiveness, a shared corporate vision and mission, reliability and ethics. Doing so is effective both in times of crisis and during normal corporate management. For the last two points, in some serious crises, internal resources alone may not suffice in terms of hard controls. In such times, contact, coordination and cooperation with external bodies is essential. It is best practice to establish cooperative arrangements between companies during a crisis. Whether a company or person, no one survives in a crisis alone.

#### (3) Adaptive capacity

These indicators for crisis and corporate culture include leadership and flexible response. The approaches to this set of indicators are: 1) silo mentality, 2) communications and relationships, 3) strategic vision and outcome expectancy, 4) information and knowledge, and 5) leadership, management and governance structures. First, the concept of partial optimization may permit partial survival in a crisis, but it will not work globally or restore the company. The corporate culture must be built such that risk information is shared smoothly. Nothing good will come of an airtight organization. Second, both communications and relationships are tied into the first approach above and are important in management during normal times as well. If a person cannot do something normally, they will not be able to do it under abnormal conditions. It is important to promote communications not only through risk issues but also hobbies, meals and other things in our daily lives.. Third, a corporate vision affords you room to think when reacting to a crisis, allows you to react flexibly and gives others peace of mind. Such a vision serves as an unshakeable foundation in the face of risks, even in normal business operation. Fourth, as mentioned in the discussion of training above, learning information and knowledge through training affords you flexible adaptability and will give the company resiliency and a real risk management culture which is good for the company. Fifth, corporate management should be prime models of corporate conduct. They must be realistic about social issues and the company's relation to these issues, understand what their stakeholders expect, properly understand risks, earn the trust of the stakeholders, and work to build shared values. This will all build up a strong

resilience against financial crisis and disaster risks.

|   |   |  |
|---|---|--|
| 1) Situation Awareness                        | 2) Management of Keystone Vulnerabilities         | 3) Adaptive Capacity                                 |
| (1) Roles and Responsibilities                | (1) Planning Strategies                           | (1) Silo Mentality                                   |
| (2) Understanding of Hazards and Consequences | (2) Participation in Exercises                    | (2) Communications and Relationships                 |
| (3) Connectivity Awareness                    | (3) Capability and Capacity of Internal Resources | (3) Strategic Vision and Outcome Expectancy          |
| (4) Insurance Awareness                       | (4) Capability and Capacity of External Resources | (4) Information and Knowledge                        |
| (5) Recovery Priorities                       | (5) Organizational Connectivity                   | (5) Leadership, Management and Governance Structures |

**Figure 6: Indicators and approaches to increasing corporate resilience**

Source: Sonia McManus et al, “Resilience Management: A Framework for Assessing and Improving the Resilience of Organizations,” *Resilience Organizations Research Reports*, Resilient Organisations (2007), P. 3.

Lastly, Figures 7 and 8 give the risk management process to make a company strong against risks. Points are given below.

As seen in Figure 7, risk management is not only about controlling the negative impacts of risk; it is a culture and process of making potential opportunities into reality. The process given in this figure is one of risk management to reform a company to be stronger against risk and to reform corporate structure in light of risks.

Companies have to be honest with themselves about their risks. As such, they need to self-inspect their own risks and risk management situation in line with the risk management process. Figure 7 is a check list for this self inspection.

Companies should ask themselves 48 questions total to take a cold, hard look and diagnose their own risks in the following order: A. Situational analysis (12 questions), B. risk detection and evaluation (12 questions), C. risk response (12 questions), D. sharing risk information (12 questions).

If, for example, you have not established a corporate philosophy or vision, you get a low score of 0 for that item. If you have created these after sufficiently talking through them, you get a high score of 4 or 5. You self-diagnose your company in this manner for all 48 items to evaluate its risk management ability. You can see where your weaknesses are once the table is filled out.

The points stressed in this paper are given in Figure 7. Next, Figure 8 gives an example

company risk diagnosis chart. Let us take for example Company X. Upon diagnosing themselves, they came up with the following scores for risk management groups A-D above:

A. Situational analysis = 36/60

B. Risk detection and evaluation = 24/60

C. Risk response = 12/60

D. Sharing risk information = 24/60

As can be seen from Figure 8, the results board for Company X's risk management diagnosis make it clear that they have normal situational analysis, are somewhat weak on risk detection and evaluation and risk information sharing, and are extremely weak on actual risk response.



| Large Items  | Medium Items                                       | Small Items   | Grade (1-5)  |
|--|--|---|--|
| <b>A. Present data analysis / situational analysis (12)</b>                        | 1. Shared corporate philosophy, mission and vision | (1) Understanding importance of philosophy, mission and vision  |  |
|  |  | (2) Talked out before creation? (with understanding from employees)   |  |
|  |  | (3) Vision and philosophy actively mentioned by management regularly? (frequency and method)  |  |
|  |  | (4) Degree of employee buy-in   |  |
|  |  | (5) Business model, personnel and grading system matching corporate philosophy  |  |
|  | 2. Company objectives                              | (1) Understanding importance of company objectives  |  |
|  |  | (2) Objectives defined quantitatively? (Feasibility)  |  |
|  |  | (3) Separate specific objectives for finances, infrastructure, reputation, marketing, soft control assets (trust, information sharing, etc.)? |  |
|  | 3. Stakeholder analysis                            | (1) Understanding   |  |
|  |  | (2) Clearly analyzed?   |  |
|  |  | (3) Stakeholder expectations analyzed?  |  |
|  |  | (4) Analysis of high expectation items in terms of stakeholders and work process?   |  |
|  | <b>B. Risk detection and evaluation (12)</b>       | 4. Risk detection   | (1) Company risks discussed?                       |
| (2) Only awareness of possible risk losses?  |  |   |  |
| (3) Awareness of possible risk losses and potential opportunities                  |  |   |  |
| (4) Risk map made and understood   |  |   |  |
| (5) Opportunity map made and understood  |  |   |  |
| (6) Detection of intangible risks (branding, reputation, teamwork, patents, etc.)? |  |   |  |
| (7) Consideration of unforeseen risks?   |  |   |  |
| (8) Discussed serious risks which could force interruption of operations?          |  |   |  |
| 5. Risk evaluation   |  | (1) Evaluated management risks?   |  |
|  |  | (2) Have statistical data for historical risks for the company and/or industry?   |  |
|  |  | (3) Quantitative and qualitative risk evaluations?  |  |
|  |  | (4) Risks prioritized?  |  |
| <b>C. Risk response (12)</b>   |  |   | (1) Framework set up for means to respond to risk? |
|  |  | (2) How advanced are manuals, regulations and other hard supports for risk control?   |  |

|   |                       |   |  |
|---|-----------------------|---|--|
|   |                       | (3) Recognize that formal rules and plans alone are insufficient for risk controls?   |  |
|   |                       | (4) How well is importance of shared values, information sharing, shared sense of mission, shared confidence and other soft controls recognized in terms of risk control? |  |
|   |                       | (5) How advanced are shared values, information sharing, shared sense of mission, shared confidence and other soft controls for risk control?                             |  |
|   |                       | (6) How well has corresponding insurance and other risk finance been checked?   |  |
|   |                       | (7) Rechecked coverage gaps, amounts insured and other insurance policy details?  |  |
|   |                       | (8) Using derivatives or other non-insurance financing?   |  |
|   |                       | (9) Have provisions in place and regularly discuss and share information on ethical risk response?  |  |
|   |                       | (10) Have tried to effectively combine various risk management methods?   |  |
|   |                       | (11) Discuss risk response budget revisions and effects?  |  |
|   |                       | (12) Current state of risk response is transparent?   |  |
| <b>D. Sharing risk information (12)</b> | 6. Risk communication | (1) Aware of who stakeholders are and their interests?  |  |
|   |                       | (2) Have site reporting system and inquiry structure for risk information?  |  |
|   |                       | (3) Have internal reporting system?   |  |
|   |                       | (4) Have department for centralized storage of risk information?  |  |
|   |                       | (5) Have different representation and forms for disclosed information of each stakeholder?  |  |
|   |                       | (6) Have flexible risk controls in place for stakeholder demands, whether legal demands or not?   |  |
|   |                       | (7) Corporate culture of voluntarily risk control?  |  |
|   |                       | (8) Understand importance of speed in risk control and disclosure?  |  |
|   |                       | (9) Management aware of relationship of company value to risk control and disclosure of risk information?   |  |
|   |                       | (10) Measures in place to increase risk sensitivity of management and employees?  |  |
|   |                       | (11) Have manuals for systems to spread information in an emergency, etc.?  |  |
|   |                       | (12) Have training for emergency press conferences?   |  |

**Figure 7: Company risk evaluation check list**

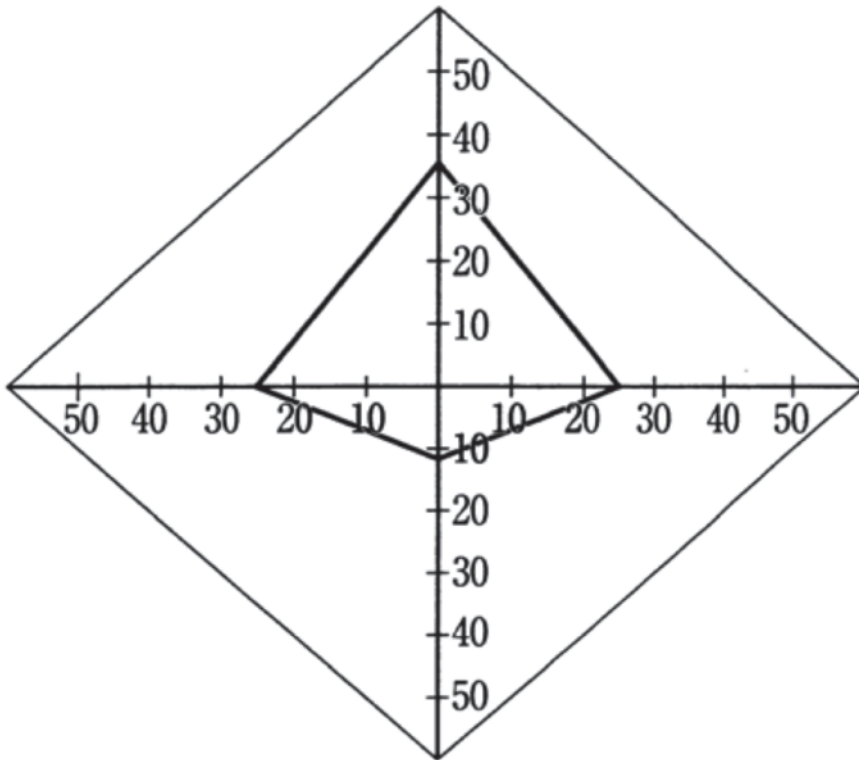


Figure 8: Risk management diagnosis chart for Company X

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## What We Have Learned from the Great East Japan Earthquake\*

Hiroo HARADA†

*<Abstract> This paper was originally read as a Presidential Address to the Second World Congress of the Public Choice Societies, in Miami, on March 11, 2012. In this address, I tried to point out the necessity for rethinking the conventional scope of public choice theory, in view of recent debates over social capital and of the course of events that had taken place in Japan since the Great Earthquake of March 11, 2011. The Great Earthquake left greater public awareness and perhaps even a new understanding of the bonds and ties along with volunteerism. It might be said that there was a transformation of bonding social capital into bridging social capital. This newly blossomed bridging social capital differs from market doctrines based on profits and losses in that it derives from mutual sympathy. Thus, I argue, a reaffirmation of Adam Smith's concept of 'sympathy' in his Theory of Moral Sentiments (1759) might be a key in rethinking public choice theory in relation to social capital studies.*

*Keywords: public choice theory, Great East Japan Earthquake, bridging social capital, volunteerism, mutual sympathy*

I am deeply honored to be given the opportunity to address this Second World Congress of the Public Choice Societies. I would like to share with you today my thoughts on some implications of public choice theory and what they mean in terms of coming to an understanding and dealing with the aftermath of the Great East Japan Earthquake, which occurred exactly one year ago today.

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\* The part of this paper, based on the research and discussion in the Center for Social Capital Studies, Senshu University, was addressed as one of three Presidential Addresses at the Second World Congress of the Public Choice Societies, in Miami, Florida, USA, on March 11, 2012.

† Dean, Graduate School of Economics; Professor of Public Finance, Senshu University; Former (Fourth) President, The Japan Public Choice Society

### **Events of the earthquake**

A video clip, entitled "Pray for Japan: Japan We are with You", was widely viewed throughout Japan when it appeared on the Internet in the days immediately following the earthquake. It's about six minutes long and you still can see it on YouTube. Indeed, when I first saw it myself, all the emotions that had been welling up inside of me for several days were suddenly released all at once. I think that even those Japanese who were not actually affected by the earthquake but—on many levels and for a variety of reasons—felt strong ties with those in the afflicted areas. These people were also caught in the dilemma of wanting very badly to help but not knowing what to do. Seeing these images and hearing this music helped them understand that people all over the world were dealing with those same feelings, and that we weren't facing this disaster on our own.

Exactly one year has passed since that day, and I must say that I am rather amazed at the coincidence of being here and giving this speech as part of the final day of this Second World Congress on what is the first anniversary of those events.

### **After the earthquake**

At the time of the earthquake, I was attending a meeting on the Senshu University campus in Kawasaki, just south of Tokyo. The building we were in was a steel-frame and mortar construction and looked to be one of the less-resilient structures on campus, but it withstood the shock surprisingly well. In fact, there was only one building on campus—a six-story, steel-framed concrete structure close to forty years old—that was declared unusable and torn down last summer. Actually, my own home, which is in a city called Tsuchiura in Ibaraki Prefecture, was at the southern end of the disaster area, and suffered considerable damage. It's a wooden structure that was built by my family one hundred and thirty years ago, and we've only just started repair work this past January. The repair work will ultimately cost at least as much as it would to build a new house, so you can imagine what a headache the whole thing has been for me and my family.

Be that as it may, at Senshu University, we were able to continue the academic year after just a two-week delay. And as many of you no doubt realize, although communities that suffered just earthquake damage were able to restore vital services and begin to rebuild relatively quickly, the tsunami was an entirely different story. Many of the cities that suffered a direct hit have yet even to finish cleaning up the rubble.

And in additions to damage from the earthquake and tsunami, the daily lives of ordinary Japanese in an even wider area were impacted by the Fukushima Daiichi nuclear disaster and subsequent issues such as shortages of electrical power, leakage of radioactivity, and other issues for which permanent solutions have yet to be found.

It would appear that the situation both at the disabled nuclear power plants and with radioactive contamination of surrounding areas has been stabilized and is of manageable proportions, which I suppose means that the situation is under control. In fact, on December sixteenth of last year, Japanese Prime Minister Yoshihiko Noda announced that the reactors at

Fukushima Daiichi had reached a state of cold shutdown.

As the fourth president of the Japan Public Choice Society, it falls to me to continue to grapple with issues related to last year's disaster until the end of my term in June of two-thousand twelve. This coincides with similar responsibilities I have as chair of the Senshu University Center for Social Capital Studies, a position I will hold until March of two-thousand fourteen. On a personal note, some of you may remember Professor Kazuyoshi Kurokawa of Hosei University, who served as the second president of the Japan Public Choice Society and who sadly passed away on February second of last year at sixty-four years old. Professor Kurokawa's death also provides me with much motivation in this regard.

### **In the disaster zone**

I had a strong desire to see for myself the devastation left in the aftermath of the earthquake and tsunami, but it was not until approximately fifty days afterward that I was first able to do so. In preparing for this visit, I needed to correlate my plans with a number of people already in the disaster zone. Many of them were themselves victims of the disaster and although they were not seriously injured, all were exhausted. Needless to say, it was not always easy to contact people or to make satisfactory arrangements for these trips.

I've been to Ishinomaki in Miyagi Prefecture a number of times and am familiar with the area and the people there, largely because of the university where I teach has a campus there, called Ishinomaki Senshu University. So I am sorry to report that Ishinomaki was one of the places hit hardest by this disaster, with three-thousand eight-hundred and thirty-seven confirmed or probable deaths. Now, Japan's National Police Agency places the region-wide death toll at close to nineteen thousand, so this is nearly twenty percent of all deaths, not to mention a full two percent of Ishinomaki's population.

One of the largest rivers in the Tohoku region is the Kitakami River, which reaches the Pacific Ocean at Ishinomaki. Near this river was an elementary school, named Okawa Elementary. The name, appropriately enough, means *big river*. This school became the site of the worst human tragedy in the entire disaster, when eighty-four of approximately one-hundred and twenty students and teachers were swept away by a tsunami while evacuating the school. I visited the site last year, and found that what had been a very stylish two-story school building remained relatively intact. But the insides of the building and the equipment and facilities surrounding it had been destroyed. I was there in the early afternoon, and for some reason a small flock of sparrows chose that moment to descend upon the rubble and scamper around noisily. Sparrows can be rather noisy, as you know, and I'm not ashamed to admit that the sound of their chirping where there should have been the voices of children at play was overwhelming. I have no words to describe how I felt at the sight and sound of these creatures who were chirping away merrily, heedless of the tragedy that had taken place.

In the days following the earthquake and tsunami, the disaster area received a quite a few relief supplies and much disaster aid. Many of us in Tokyo were still pondering how to make our way to the disaster area without rail service or other means of transportation, but foreign

journalists were hitching rides on gasoline lorries headed to the disaster area. And the US Armed Forces' Operation Tomodachi disaster relief efforts were astonishing. It was extremely moving to see relief supplies, donations, and messages of solidarity coming from people of all ages and all walks of life from Asia and around the world. More than anything, however, I have to say that I was simply grateful to the many volunteers both in Japan and overseas who took specific action to help out. If something good can be said to have come from this disaster, it is the enhanced public awareness in Japan of the efforts made not just by those who volunteered but by members of the Self-Defense Forces, local law enforcement, and local emergency service agencies.

I was also reminded of the importance of people who have the expertise to get the job done. It is often said of Japan, in reference to its remarkable economic growth after the Second World War, that it is a first-rate economy with second-rate political system. Another thing that is often said of Japanese organizations—and corporations in particular—is that the people on the ground floor are a lot more capable of thinking on their feet and responding capably to a given situation than management. Japanese managers do an excellent job of organizing and carrying out complex projects, but they have little experience or training in dealing with sudden changes in objective or direction. In contrast, the people on the ground floor of any Japanese company have specialized skills needed to carry out their regular job assignments, but in an emergency situation are also capable of action without waiting for coordinating instructions and will do whatever it takes as they coordinate with others to solve the problem at hand, even when those actions go beyond the range of their ordinary responsibilities. I myself was quite humbled when observing or interviewing people working on the front lines in the disaster area by their ability to put the needs of others above all else. I'm sure that many Japanese people, having seen on television the manner in which top officials of the Japanese government came to grips only slowly with the unfolding disaster, wished that our leaders would act as decisively as the emergency response teams.

I interviewed any number of people involved in emergency response activities in Ishinomaki. Among them were Takashi Sakata, president of Ishinomaki Senshu University, Hiroshi Kameyama, mayor of the City of Ishinomaki, and Kenji Takahashi, director of Ishinomaki Shinkin Bank. I also met with the staff of the Social Welfare Council, who were responsible for coordinating the local volunteer center. The ability of these people to make on-the-spot decisions was truly amazing. I presented the information gathered during these interviews in a presentation given on July sixteenth, two-thousand eleven at a Senshu University Center for Social Capital Studies symposium entitled *The Bonds and Ties of Restoration, Reconstruction, and Recovery*. One of the keynote speakers at this symposium was University of Tokyo Professor Takashi Onishi, a specialist in urban planning, president of the Japan Association for Planning Administration, a member of the government's Reconstruction Design Council, and—as of October of last year—current president of the Science Council of Japan. It was an extremely significant event for all of us who were there, the details of which can be found in the Yearbook of the Senshu University Center for Social Capital Studies, Volume Three,



published in March, two-thousand twelve.

### **An historical view of natural disasters in Japan**

I think it might be instructive to look briefly at earthquakes, volcanoes, tsunamis, typhoons and floods, and think about how natural disasters such as these are viewed historically in Japan. Especially in light of the fact that not only do they occur with alarming regularity but also tend to recur in certain areas. It should come as no surprise, given the wide-spread existence of hot springs and volcanoes throughout the Japanese archipelago, that Japan is a hotbed of geothermal activity. And these same factors also contribute to the frequency of earthquakes. Also, being situated in the temperate monsoon belt that covers the eastern parts of Eurasia, Japan has a humid climate that exhibits four distinct annual seasons and endows the land with abundant rainfall and rich forests. It is particularly suitable for agriculture, forestry, and fishery, and it's quite likely that the indigenous peoples of Japan more than two thousand years ago subsisted primarily on what they could hunt or fish. It is said that they led relatively prosperous lives, knew how to make tools and crafts for use in daily life, and lived in organized communities that provided a reasonably stable livelihood.

It was in such a society that the agricultural revolution occurred. And one major factor was the introduction of iron tools. Iron provided humans with the ability to work faster and more efficiently than ever before. It became practical to clear forests and fields, to raise crops in larger quantities, and to catch more fish. The increases were dramatic. But agricultural production is predicated on the community sharing a common livelihood, which, even more than hunting or fishing, forces individuals to take on clearly defined roles and responsibilities within their community. In other words, the freedom of the individual to undertake independent action became severely restricted, not just in the community but even in the home. The fact that some communities developed along these lines is not an indication that things were the same everywhere throughout the archipelago. As a historical trend, the agricultural revolution spread eastward from western Japan, in rough correspondence with the growing influence of the Yamato Imperial Court, which flourished in the sixth century.

In some respects, however, the organization of these communities can be seen as a means of protection against natural disaster. There is little that an individual or even individual family can do to protect themselves against the ravages of natural phenomena. It's possible that people of this era found that, as peaceful and beneficial as the natural climate in the Japanese archipelago normally is, the only way to withstand its full fury was as a community that shared a common livelihood. And perhaps this accounts for the Japanese people's traditional conception of nature as well as their fear and veneration of a pantheon of innumerable deities.

### **Hints from Japanese history**

I suspect that, irrespective of differences in time, place, and magnitude, this type of development is more or less common to all cultures worldwide. One historical aspect that Japan does not share with very many other countries, however, is its close proximity to that mightiest of nations:

China. As the crow flies, Japan and China are not so far apart. But neither are they directly connected, because they are separated by the sea. The importance of this fact cannot be overstated. Throughout history, Japan has been the recipient—either directly or indirectly—of technology, knowledge, and philosophy from China. But it also has been very eclectic in choosing what influences to accept. Avoiding blind acceptance of everything and anything that reached them from the continent, the ancient Japanese examined each and every aspect with great care before adopting any of it. After agriculture followed the Chinese writing system, and in the course of time Buddhism and Confucianism, as well. I don't think that this eclectic approach can be attributed, however, to any special powers of discernment peculiar to the Japanese people. Rather, I believe that there has always been a tension between progressive and orthodox factions within Japanese society, which means that it can take a considerable amount of time before any type of new influence is finally accepted. Or perhaps it would be more accurate to say that there is a general tendency to leave things undecided, which is often the case when people want to avoid any type of dramatic confrontation. As time goes on, opposing views gradually meld, and eventually both sides reach a position where compromise is possible.

In fact, historically speaking, we see such processes at work during the Azuchi-Momoyama period in the late sixteenth century, during the Meiji Restoration in the nineteenth century, and even after Japan's defeat at the end of the Second World War. In the latter half of the sixteenth century, for example, the Spanish, Portugese, and Dutch came to Japan, seeking to develop international trade and spread the Christian faith. Having only recently brought political unification to Japan at the start of the seventeenth century, the Tokugawa Shogunate declared Japan closed to the European powers. In some ways, this policy was intended only to ensure Japan's sovereignty.

Both the Tokugawa Shogunate and its exclusionary policies continued well into the nineteenth century. By this time, however, American and Russian whaling fleets had begun to approach Japan in search of food and supplies, but were repulsed by the Shogunate. Ultimately, in eighteen sixty-seven, disaffection among low-ranking samurai throughout Japan over this and other policies brought to an end two hundred and sixty five years of rule by the Tokugawa Shogunate. Although the defeat of Japan in August nineteen forty-five was brought about primarily by military superiority of the American Armed Forces, another contributing factor might have been the lack of a political entity capable of placating discontent within and countering the reckless ambitions of the Japanese military. Although it is often possible to take the time necessary to iron out domestic issues in a rational manner, the social costs are inevitably high once the situation is allowed to escalate into a life-or-death struggle with an implacable enemy. Hindsight is, of course, always twenty-twenty, but clearly, many of the tragedies that occurred just prior to the end of the war—including the Battle of Okinawa as well as the atomic bombings of Hiroshima and Nagasaki—might have been prevented had a more advanced political system been in place.

### **In the aftermath of the Great East Japan Earthquake**

Once again, we see the same characteristics and patterns of behavior emerging in the aftermath of the Great East Japan Earthquake. Anyone who has experienced an earthquake of significant magnitude knows that your first concern is the safety of your family and yourself. Once you have confirmed that, however, gradually you began to look around and, realizing the full extent of the damage, begin to see that this is no time to wallow in your own misfortune. Of course, your reaction is to feel grateful just to be alive. But almost immediately thereafter comes the instinct to provide help to anyone nearby who needs it. This pattern of behavior was seen all throughout the area affected by the earthquake.

In addition, I think that many of us in Japan noticed something quite amazing. Once we had recovered the wherewithal to begin to think about what we should do or what we could do either for our families or as a member of some group, organization, or system, we realized that in the nearly seventy years since the end of the Second World War, we have yet to create legislation that establishes a system of emergency services or that implements contingency plans necessary for ensuring operation during a disaster of this scale.

Obviously, emergency services must have contingency plans covering everything from large-scale natural disasters to attacks by foreign terrorists. And in this respect, it would be inaccurate to say that Japan was entirely unprepared. But given the overall law-abiding and remarkably safe nature of Japanese society as a whole, there has also been a tendency to underestimate both potential risks and the need to develop comprehensive contingency plans.

Bearing this in mind, it seems obvious that Japan can no longer afford to remain unprepared and must devise and implement national policies for dealing with emergency situations. Without such policies in place, discussions of the legality or relevance of actions taken during emergencies become little more than empty rhetoric. On the other hand, once clarified, we can begin to identify problematic aspects of implementation and, using simulations, begin what will necessarily be a trial-and-error process of enhancement. What we cannot do, however, is continue to trust that guidelines devised to facilitate things under ordinary conditions will suffice as long as we are able to think on our feet during emergencies.

Public choice theory has until now dealt primarily with issues exploring the reasons that decision-making processes of existing political systems so often result in outcomes that are at variance with the preferences of their constituencies. But in Japan, at least, there is a real need to expand our field of view by examining from a rational perspective the historical background and processes that inform our observations and opinions about establishing authority, entitlement, and justification for the contingencies necessary to deal with an emergency situation on a scale so vast that it happens only once in one hundred years.

The natural disaster that struck Japan on March eleventh, two thousand and eleven, left in its wake not just death and destruction but greater public awareness and perhaps even a new understanding of the bonds and ties along with volunteerism. I wonder if it might even be said that there was a transformation of bonding social capital into bridging social capital. In fact, this newly blossomed bridging social capital differs from market doctrines based on profits and

losses in that it derives from mutual sympathy. In this sense, I believe it to be a reaffirmation of Adam Smith's *Theory of Moral Sentiments* (1759).

You must forgive me for proffering so many uninformed opinions, but I very much wanted to share with you this feeling that my experiences over the past year in coming to grips with the aftermath of this most terrible natural disaster has, in fact, revealed to me my way forward. Thank you very much for listening.