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Real Estate Analysis Report

Japanese Property Market Quarterly Review

First Quarter 2011

～The Impact of the Great Eastern Japan Disaster～

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Introduction

In the wake of the Great Eastern Japan Disaster, the Japanese property market, which at long last was showing signs of growing improvement, now appears certain to suffer a widespread and long-term impact. In addition to the direct physical damage from the disaster, long-term concerns have arisen including the Tokyo over-concentration risk, nuclear accident risk, and possible downgrading of Japan's property market by foreign investors. Amid the limited availability of data on post-disaster market conditions, we assess the current outlook for the property market based on our *Special Property Market Survey* conducted soon after the disaster.

This is the English translation of Toru Matsumura, "http://www.nli-research.co.jp/report/misc /2011/fudo110426.pdf", NLI Research Institute, *Real Estate Analysis Report*, April 26, 2011.

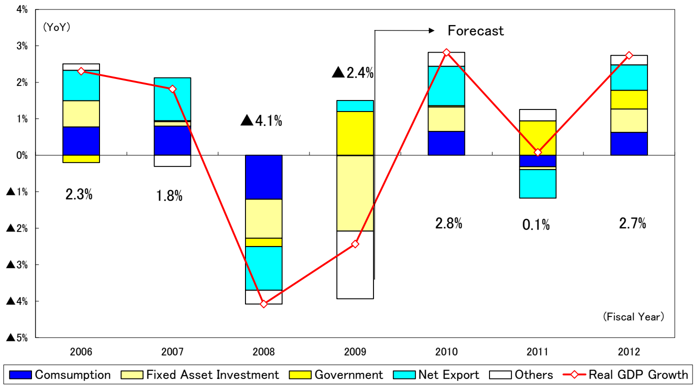
1. Downward Revision of Real GDP Growth

The disaster has put a great strain on the economy not only because of the massive scale of damage from the earthquake and tsunami, but also from radiation leakage and inability to quickly resolve the Fukushima nuclear crisis, and resulting electric power shortage in the Tokyo area. Japan now needs to review its nuclear-dependent energy policy, as well as long-term economic growth strategies of promoting tourism and exporting higher value-added agricultural products and nuclear power plants. Thus the economic impact will likely eclipse that of the 1995 Great Hanshin Awaji Earthquake, whose damage was more localized.

NLI Institute revised its 2011 real GDP growth forecast significantly downward from 1.7% to 0.1% based on concerns that the impact of the widespread electric power shortage will linger in the medium term (Chart-1).[1]

[1] Taro Saito, " Economic Forecast for 2011 and 2012: Disaster Prompts Sharp Downward Revision of Real GDP Growth Forecast," in *Weekly Economist Letter*, NLI Research Institute, March 30, 2011. The consensus forecast of private research institutes for GDP growth is 0.4% in 2011 and 2.7% in 2012.

Chart-1 Real GDP Growth Forecast

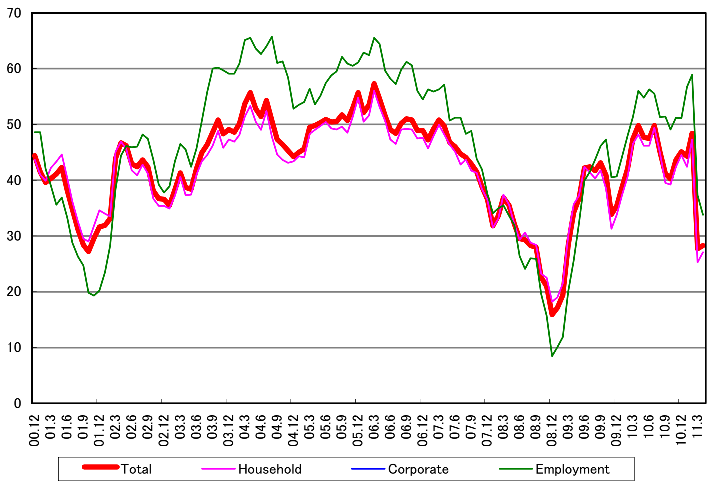


Source: Economic and Social Research Institute, Cabinet Office, Government of Japan "Quarterly Estimate of GDP", Taro Saito, NLI Research Institute "Weekly Economist Letter" 30, Mar, 2011

After the disaster, the DI of current economic conditions plunged by 20.7 points in March from the previous month in the *Economy Watchers Survey* released by the Cabinet Office on April 8, indicating that both corporate and household confidence plummeted (Chart-2).

Although the resumption of production and reconstruction demand should support the economy to some degree in the latter half of 2011, a full economic recovery will likely take a long time especially under the current unstable political leadership, as both the Fukushima nuclear crisis and widespread electric power shortage are certain to be long-term issues.

Chart-2 Economy Watchers Survey



Source: Cabinet Office, Government of Japan

2. Impact of the Disaster Based on the *Special Property Market Survey*

① Size of Impact on the Property Market

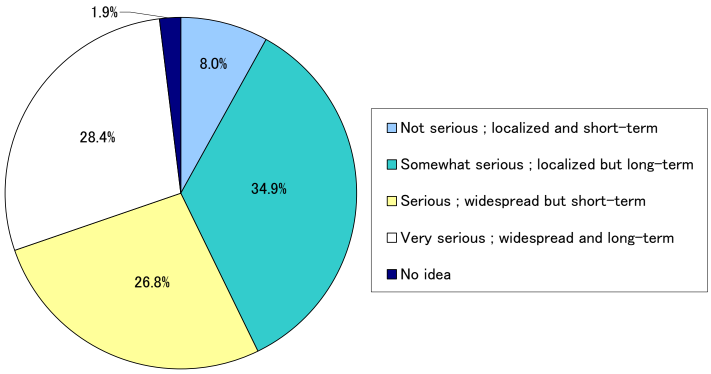
NLI Research Institute conducted a *Special Property Market Survey* immediately following the Great Eastern Japan Earthquake and Tsunami disaster of March 11, 2011. We sent out 1,051 questionnaires to Japan-based property professionals by email on April 11, and received

261 valid responses by April 18 (24.8% collection rate).[2]

Regarding the disaster's expected impact on the property market in Japan aside from the direct damage, the sum of responses for "somewhat serious; localized but long-term," "serious; widespread but short-term" and "very serious; widespread and long-term" reached over 90% of the total. On the other hand, the response of "not serious; localized and short-term" accounts for only 8.0% (Chart-3).

According to J-REITs and brokers, although office buildings and other investment-grade properties in eastern Japan were largely undamaged by the disaster, the overall property market including Tokyo is nonetheless concerned about the long-term impact of the unprecedented electric power supply shortage and radiation leakage caused by the nuclear crisis. Even among the "not serious" responses, many participants say the situation could become serious if the Fukushima nuclear crisis is not managed successfully.

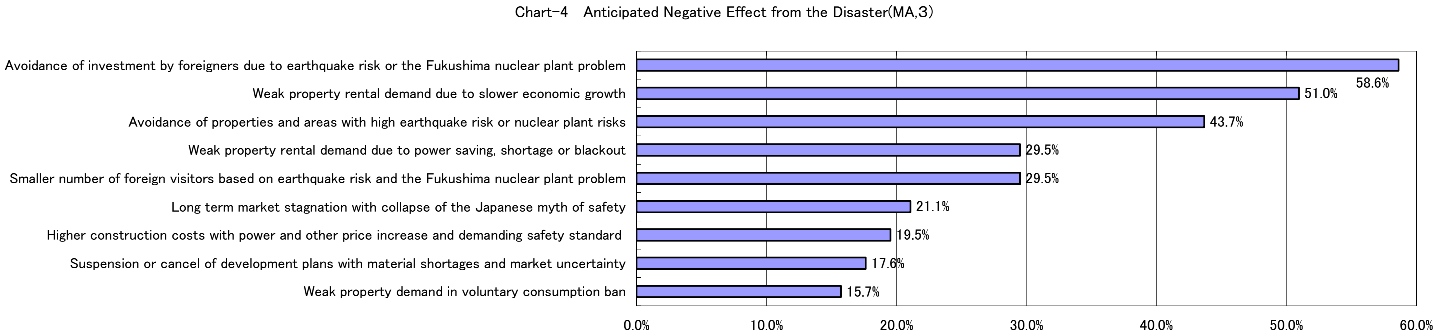
Chart-3 Impact of the Disaster on the Property Market (SA)



② Anticipated Negative Effects of the Disaster

When asked what specific negative effects are anticipated in the Japanese property market, the leading response was "avoidance of investment by foreigners due to earthquake risk and the Fukushima nuclear crisis," followed by "weak property rental demand due to slower economic growth," both of which are cited by more than half of respondents. These are followed by "avoidance of properties and areas with high earthquake risk or nuclear plant risk" and "weak property rental demand due to power saving, shortage or blackout" (Chart-4).

[2] Toru Matsumura and Mamoru Masumiya, "Impact of the Great Eastern Japan Disaster on the Property Market ～Special Property Market Survey After '3.11'," NLI Research Institute, *Real Estate Analysis Report*, April 19, 2011.

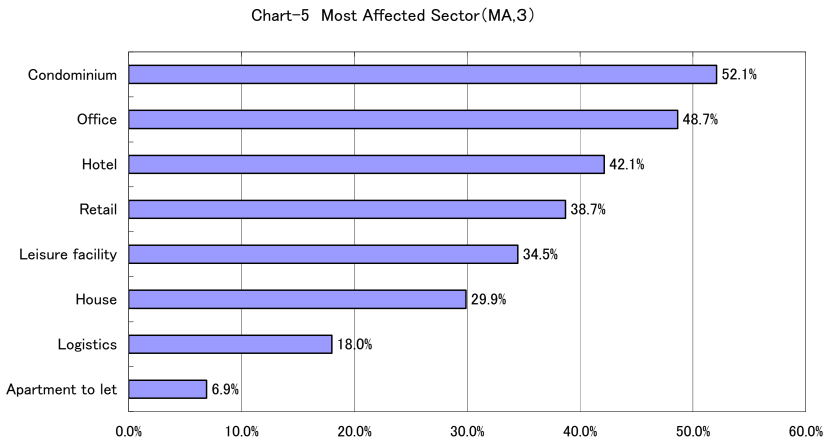


Source: NLI Research Institute, April ,2011

③ Most Affected Sectors

We next asked which sectors would be most affected by weaker or more selective demand. The leading response was the condominium sector, cited by more than half of respondents. Although actual physical damage in this sector was small compared with freestanding houses,[3] the strong response can be attributed to more subdued homebuyer motivation as consumer confidence wanes, and heightened awareness of risk factors such as elevators stopping in high-rise buildings and liquefaction of reclaimed land in the condominium popular Tokyo bay area.

The office building sector is ranked second based on the expected demand decrease from direct damages suffered by companies and from the economic impact of the disaster. Moreover, sectors with economically sensitive operational assets such as retail, hotel, and leisure facility sectors are also ranked high because they are directly exposed to deteriorating consumer confidence and decline of foreign visitors (Chart-5).



Source: NLI Research Institute, April, 2011

④ Risk Factors to be Considered

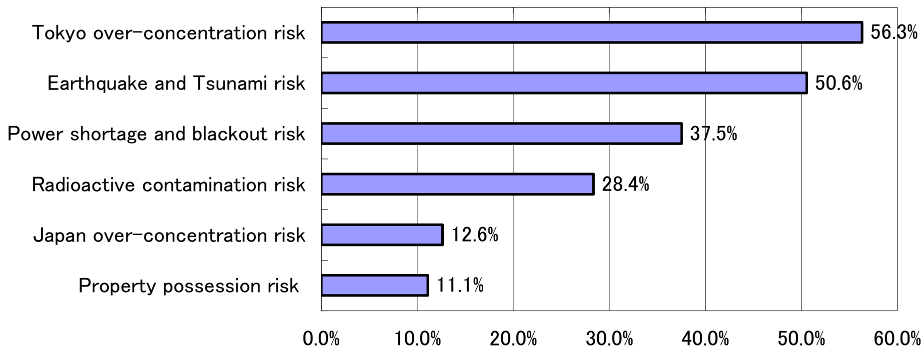
Regarding risk factors to be considered in the property market going forward, the leading response was "Tokyo over-concentration risk." Soon after the disaster, many foreign corporations

[3] According to the Condominium Management Companies Association, of the 1,642 condominium buildings under management in six Tohoku provinces, 283 buildings or 17% of the total were damaged and in need of reinforcement or repair, while 1,024 buildings or 62% showed no visible signs of damage such as cracks. No buildings were damaged beyond repair.

were seen evacuating their offices out of Tokyo to Osaka and other cities in western Japan. It is thus possible that companies will increasingly consider diversifying corporate functions away from Tokyo as part of their Business Continuity Plan.

These are followed by “earthquake and tsunami risk” and “power shortage and blackout risk,” while “nuclear accident and radioactive contamination risk” is cited by less than 30% of respondents (Chart-6).

Chart−6 Risk Facters to be Considered(MA.2)



Source: NLI Research Institute, April 2011

3. Sub-sectors

① Office

Earthquake damage to office buildings in Sendai City was limited (Chart-7) compared to the Great Hanshin Awaji Disaster. This is because the earthquake’s intensity of 6 on the Japanese seismic scale was lower than the intensity 7 recorded at the epicenter of Kobe City, and also because buildings have become more quake-resistant compared to 1995.

After the Great Hanshin Awaji Disaster, 12% or 120,000 square meters of office rental space in Kobe disappeared from the market, and the vacancy rate dropped temporarily. But the local economic slowdown and building reconstruction created an excess supply soon after, and the vacancy rate has been high since then (Chart-8).

Considering that Sendai City’s vacancy rate was as high as 20% prior to the disaster, the market will likely shrink further in the short term due to depressed demand. But there is still some hope that an innovative urban reconstruction plan could revive the market in the longer term.

Office buildings in Tokyo were mostly undamaged.[4] However, we should note that corporate behavior could change as a result of the disaster. Although the office vacancy rate rose again in March, the rise is not thought to reflect the disaster’s effect (Chart-9). This is because there were no notable changes of existing tenancy contracts coincidently right before the fiscal yearend in March, despite prominent office relocations by foreign corporations to cities in western Japan and many referrals for quake-resistant buildings. On the other hand, new tenancy contract

[4] Details are not reported yet, but the office building damage seen from outside is much less than that at the time of the Great Hanshin Aawaji Disaster when many buildings collapsed.

volume in March shrank significantly, which could reflect deteriorating corporate confidence.

Last year, we forecast that the office market in the Tokyo central three wards would rebound in 2011.[5] In the wake of the disaster and lowered economic growth expectations, the rebound will inevitably be postponed.[6] However, demand will likely become more selective due to heightened awareness of the importance of quake-control and quake-absorbing structures, emergency power generation systems,[7] energy saving, lifeline utilities, access to transportation and foundation strength, which are further accelerating the market's polarization. As a result, although overall rents are in decline, we expect that high–grade high-safety buildings located in the city center will enjoy a clear rent premium, while low-quality buildings will suffer from high vacancy rates and declining rents. By office space, one-fourth of office buildings in the Tokyo five wards were built prior to the introduction of the 1981 quake-resistance standard. Of these, the least quake-resistant buildings will likely be forced out of the office leasing market (Chart-10).

Just after the disaster, the conspicuous relocation of many foreign corporation offices from Tokyo to western cities such as Osaka and Nagoya caused the demand for monthly-lease office space in Osaka to surge. While some regard this development to be an overreaction to the Fukushima nuclear crisis, it could instead be viewed as the bold execution of a well-prepared risk management plan. Considering that many of them returned to Tokyo soon afterward,[8] the relocation trend will have only a temporary and limited effect on the market, assuming that the Fukushima nuclear crisis is resolved according to the TEPCO timeline.

On the other hand, few Japanese corporations moved their offices after the disaster. But now that managements have been made keenly aware of the importance of business continuity plans (BCP) and the Tokyo over-concentration risk, they too will likely consider diversifying not only production functions but main office back-up functions to other areas. Osaka, with its large office market and solid urban infrastructure, is regarded as the leading destination, and while the city can expect to benefit from such post-disaster additional demand, we should also note that existing demand could weaken due to lowered economy growth.

In Tokyo, while supply disruptions have caused some delays to ongoing projects, it is unclear yet how planned projects will be affected. Considering the heightened corporate awareness of BCP, large-scale planned projects will likely incorporate additional safety functions such as enhanced quake-resistance (particularly resistance to low frequency quakes), full-time power generation, and enhanced energy saving equipment, thereby accelerating the polarization between new high-grade buildings and old standard buildings.

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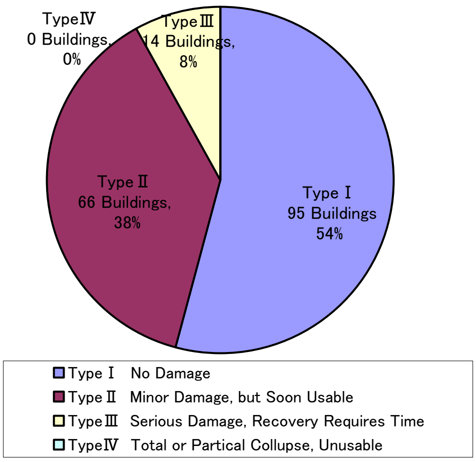
[5] Kazumasa Takeuchi, "Forecast for Office Rent Prices in the Tokyo CBD," NLI Research Institute, *Real Estate Analysis Report*, February 16, 2010.

[6] After the disaster, DTZ and Jones Lang LaSalle predicted that office rent would rebound in 2012.

[7] Mori Building's Roppongi Hills is currently the only office lease building in Japan housing a full-time electric power generator. Although the massive investment cost of JPY 10 bn is too large for most buildings, such generators are under consideration in future large-scale urban development projects.

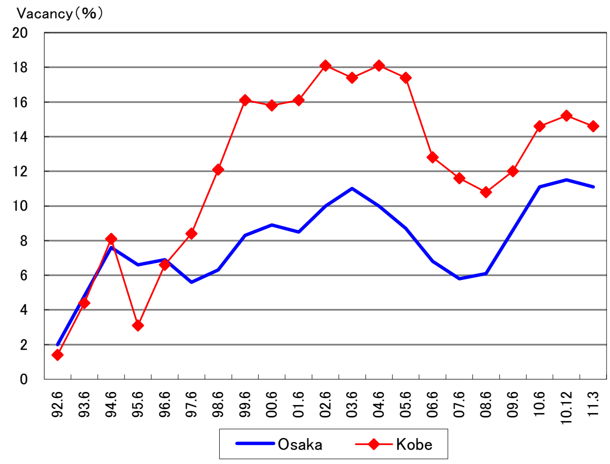
[8] BASF Japan moved its main office temporarily to Nagoya on March 15 and returned to Tokyo on April 11. BMW Japan also closed its Tokyo main office and moved to Kobe.

Chart-7 Office Building Damage in Sendai City



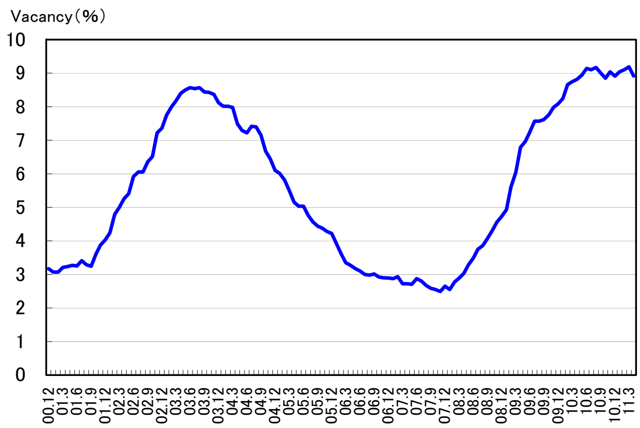
Damages were only checked from outside, as contacting owners was difficult after the disaster.
Source: Miki Shoji "Office Report (Fax, Extra) Mar 14, 2011"

Chart-8 Office Vacancy Rate in Kobe before and after the Great Hanshin Awaji Disaster (1995)



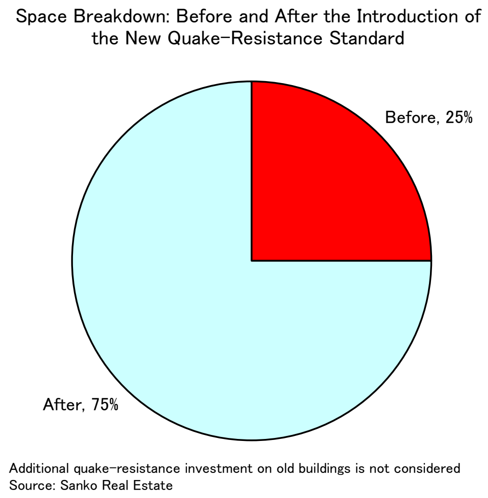
Source: CBRE

Chart-9 Office Vacancy Rate in the Tokyo Five Wards



Source: Miki Shoji

Chart-10 Office Stock by Quake-Resistance in the Tokyo Five Wards



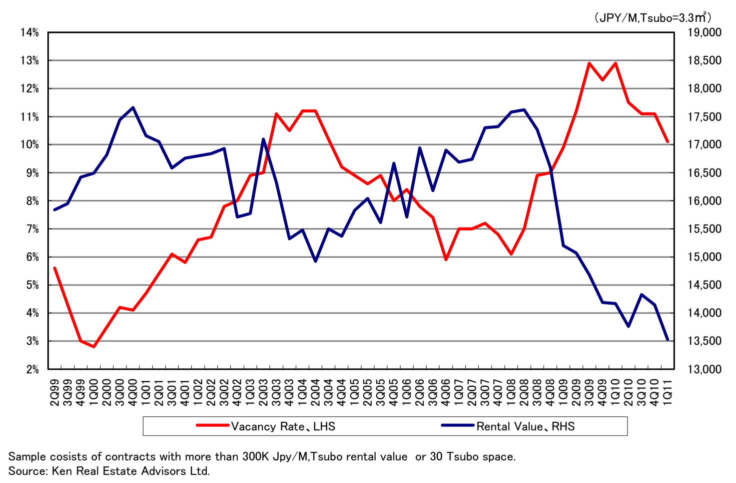
② Rental Apartment

The Sendai rental apartment market tightened as quake damage rendered some space unusable.[9] With some corporations in the disaster area relocating operations to western cities, rental demand for affordable short-lease apartments in Osaka and Fukuoka increased rapidly.

In Tokyo's high-grade rental apartment market, expatriates temporarily returned to their home countries with their families but did not terminate leases, and later returned to Tokyo alone. They will likely terminate contracts for family-type apartments and move down to single-person apartments, reversing the recovery of the Tokyo rental apartment market prior to the disaster.

Rental apartments owned by J-REITs and investment funds are largely undamaged and maintain high occupancy rates. Thus aside from the high-grade segment serving expatriates, the rental apartment sector has been least affected by the disaster.

Chart-11 Luxury Apartment Rent and Vacancy Rate



[9] A large rental apartment building containing over 200 units near JR Sendai Station was damaged by the quake, and all residents were advised to evacuate, according to the Nikkei BP website (April 5, 2011).

③ Retail, Hotel, and Logistics

Retail sales plummeted after the disaster, due in part to the aversion of foreign tourists and foreign business persons to Japan in response to the nuclear crisis, electric power blackout in the Kanto area, and plunge of consumer confidence.[10] The impact on super-markets that sell daily goods was limited and convenient stores even saw a temporary sales increase, while restaurants and department stores suffered a serious sales decline.

The voluntary consumption ban following the disaster is expected to be temporary. However, the retail sales stagnation could linger over the long term if the nuclear crisis drags on and causes more radiation leakage and electric power shortages, thereby raising consumer fears, eroding consumer confidence, and dampening sales of luxury goods, while also discouraging Chinese tourists from visiting Japan.[11]

The hotel market, in which the average occupancy rate was stable and some room rates were actually rising before the disaster, took a turn for the worse. Many party events, seminars and room bookings by foreigners were canceled in Tokyo, and some international hotels were forced to halt operations because their foreign staff had left Japan. On the other hand, in Osaka, where the temporary relocation of offices from Tokyo as well as that of displaced families led to high occupancy rates in the hotel market, the average room rate surpassed that of Tokyo for the first time, although this was a very short-lived phenomenon.

However, evacuation related demand subsequently waned. Nationwide, the number of foreign tourists plummeted by 50.3% to 352,800 in March from a year (Chart-13). In addition, both business and tourist demand declined due to the stagnation of domestic business operations and waning consumer confidence, and while Sendai hotels were packed with reconstruction workers, the nationwide hotel occupancy rate declined by 14.8% in March from a year ago (Chart-14).[12]

In general, the hotel sector is highly susceptible to event risks ranging from SARS and avian influenza to terrorist attacks (Chart-15). The hotel market will likely take a long time to recover from the disaster, as the prolonged nuclear crisis and Japan's faltering reputation as a safe country have shattered the foreign tourism promotion policy (Chart-16, 17).

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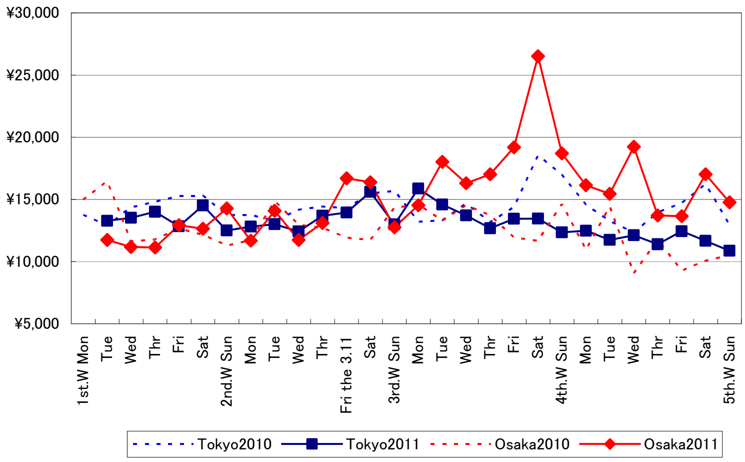
[10] The consumer confidence index (Cabinet Office) declined by 2.6 points to 38.6 in March from the previous month.

[11] A possible tax increase to cover the cost of the disaster could be another burden to the economy.

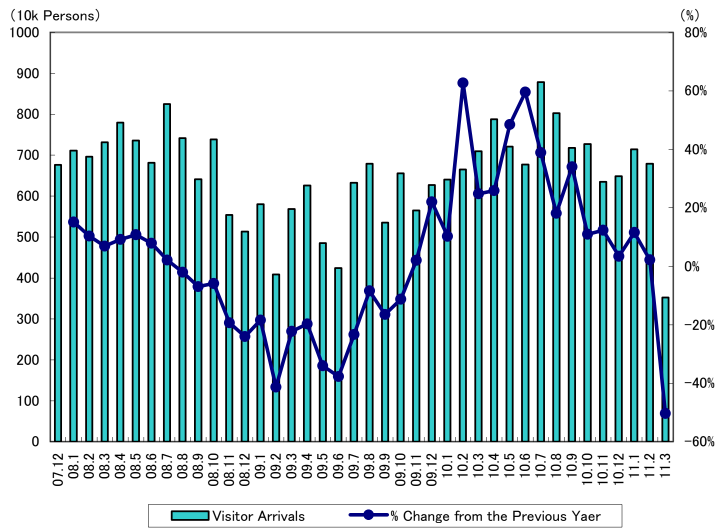
[12] The occupancy rate of 19 major hotels in Tokyo was 49.8% in March, down 33.6 ppt from a year ago, the worst ever. For 15 major Osaka hotels, the occupancy rate was 75.4%, down 5.4 ppt from a year ago (Nikkei Shimbun April 19, 2011) for the second month.

Chart-12 Hotel Room Rate Before and After the Disaster



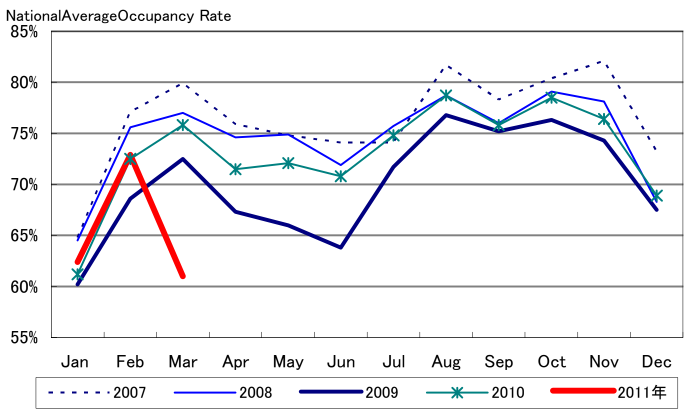
Source: Kakakucom "YoyaQ.com data"

Chart－13 Visitor Arrivals



Source:Japan National Tourism Oganization (JNTO)

Chart－14 Hotel Room Occupancy Rate

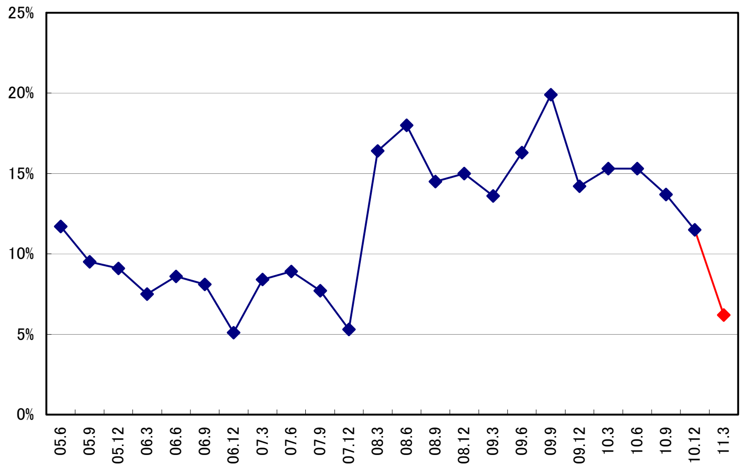


Source: Ohta Publications "Weekly HOTERES"

Regarding logistics sector, the vacancy rate in Tokyo fell significantly supported by the replacement demand from damaged facilities in the Tohoku and the Tokyo Bay areas (Chart-15). But there is a risk that the damage of the logistics network, electric power shortage, and waning consumer confidence could depress overall logistics facility demand.[13] Ichigo Real Estate Service Co., Ltd. downgraded its forecast for the vacancy rate and rent price, and predicted the rent recovery would be delayed for one year to 2012 (Chart-15, Chart-16).

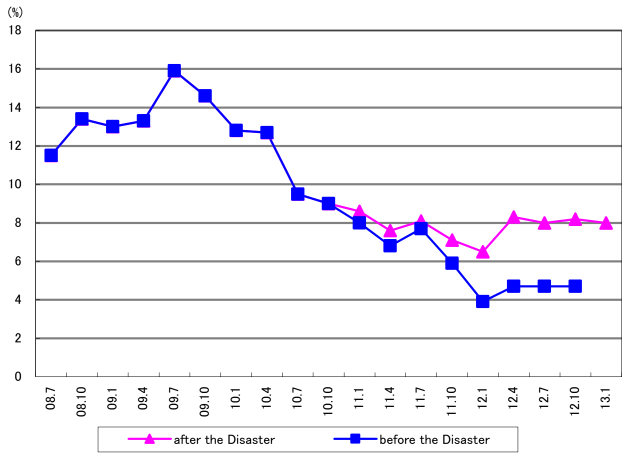
But the long-term growth trends of on-line shopping and third-party logistics are still intact. Large-scale logistics facilities favored by J-REITs and investment funds can expect to see an early demand recovery compared to other property sectors, once the disaster-stricken facilities and infrastructure recover and the economy stabilizes.

Chart－15 Large Multi Tenanted Logistics Vacancy Rate in Greater Tokyo Area



The sample consists of large malti-tenanted logistics with space 10k tsubo or larger
Source: CBRE

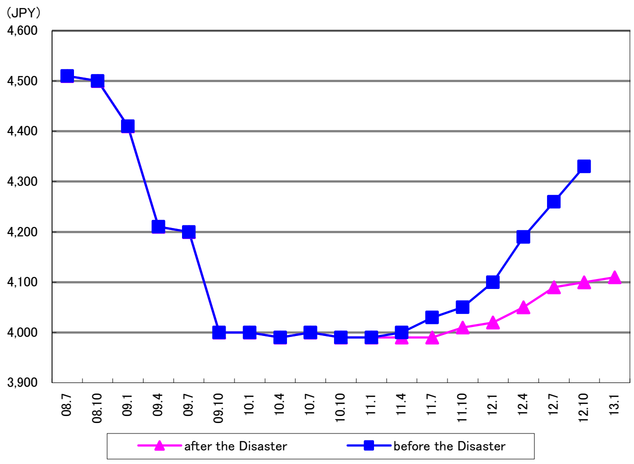
Chart－16 Logistics Vacancy Rate Forecast (Tokyo Area・Provisional)



Source: Ichigo Real Estate Service Co., Ltd.

[13] According to Ichigo Real Estate Service Co, Ltd., because logistics facilities in the greater Tokyo area largely serve the consumer sector, the Tokyo logistics market is more sensitive to consumer confidence.

Chart－17　Logistics Rental Forecast (Tokyo Area; Provisional)



Source: Ichigo Real Estate Service Co., Ltd.

4. Property Investment and J-REIT Markets

Land prices primarily in the largest cities, which had been strengthening, are expected to decline again due to the economic impact of the disaster. The decline could be relatively large in eastern Japan if the radiation risk and prolongation of power shortages lead to the diversification of corporations and residents to western Japan.

Moreover, having seen the devastation of the disaster, the general public will likely become more selective in choosing residential locations to reduce the risk of damage from tsunamis, nuclear accidents, and reclaimed land liquefaction. Such a tendency would accelerate the bipolarization of land prices.

Several forthcoming surveys will be closely watched to better grasp post-disaster real estate investment trends, including the April *CBRE Quarterly Review*, the *Japanese Real Estate Investor Survey*, which will report on expected cap rate (investment return) changes in April,[14] and the MLIT annual public land price survey in July, to be released in September.

The TSE J-REIT index plunged by 22% immediately after the disaster, but rebounded quickly to end March with a -5% dip from the previous month because owned buildings largely escaped damage, while the BOJ announced an expanded plan to purchase JREITs. But the acquisition activities by J-REITs were suspended and will be quiet for sometime, though they were very active until the disaster. J-REITs proved that their current portfolio were quite safe with well-diversified and good quality buildings, and it is likely that they diversify their portfolios more, considering that some are still over-exposed to Tokyo over-concentration risk.

Among private fund players, some transactions were suspended or cancelled, and some properties were damaged in Sendai.[15] But they have healthy cash management supported by banks and are not being forced to sell assets. On the other hand, TEPCO is attracting attention in the property market, as it is considering selling buildings, company residences

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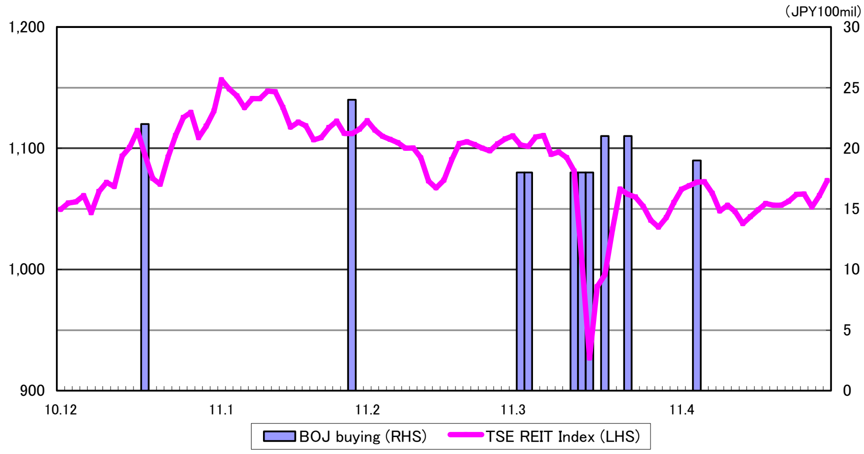
[14] It is largely anticipated that the expected cap rate (investment yield) will remain stable so soon after the disaster as investment decisions are deferred, but some foreign investors may apply an additional risk premium.

[15] Association for Real Estate Securitization (ARES) special survey of member companies on March 31, 2011.

and land properties to pay for the remedy related to the Fukushima nuclear crisis.

The *Special Market Survey* revealed very strong concerns about the possible flight of foreign investors out of the Japan market. But since no other Asian market compares in size or stability, no clear signs have yet been detected of foreign investors withdrawing investment funds and pulling out of Japan.[16] We expect them to continue to wait and see as they closely monitor the progress of the nuclear crisis cleanup process and economic reconstruction. In this regard, we cannot overlook the fact that disclosures of the nuclear accident and radiation leakage by the government and TEPCO have thus far been too little and too late, confounding even the Japanese public with doubts and rumors. Clearly, the government needs to do a better job of keeping the Japanese public and foreigners adequately informed.

Chart－18 TSE REIT Index and BOJ Purchases



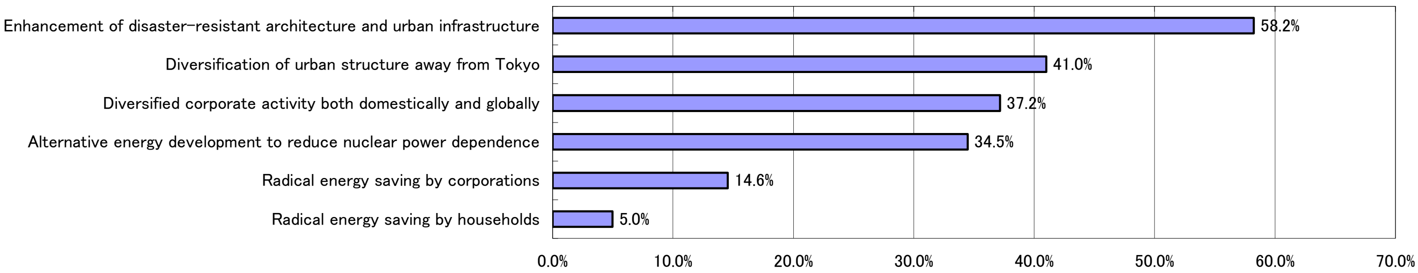
Source: Tokyo Stock Exchange, BOJ

5. Confronting Disaster Risk: From Reconstruction to National Regeneration

Finally, our survey asked what measures are most needed to prepare for large-scale disasters in the future. The leading response was "enhancement of disaster-resistant architecture and urban infrastructure," cited by more than half of respondents. This is followed by "diversification of urban structure away from Tokyo" and "diversification of corporate activity both domestically and globally." Meanwhile, "alternative energy development to reduce nuclear power dependence" is ranked fourth, even though the topic has received extensive media coverage recently. Moreover, considering the low response rates of the other two energy saving responses, market participants do not appear to be very keen about radical energy policy reforms which could significantly affect corporate and household activity (Chart-19).

[16] Union Investment in Germany suspended fund redemptions to investors, citing the need to revalue Japanese assets, according to the Nikkei BP website on March 24, 2011.

Charty-19 Required Measures to Prepare for Large-Scale Disasters(MA.2)



Source: NLI Research Institute, April, 2011

The disaster has not only forced Japan to review its nuclear-dependent energy policy, but has seriously damaged the Japan's brand of safety and security. As a result, Japan must also review such key economic growth strategies as promoting foreign tourism, exporting the value-added agricultural products and advanced technologies such as nuclear power plants.

The disaster's impact on the Japanese property market will inevitably be widespread and long-term for many reasons, including not only the direct economic impact, but factors such as Tokyo over-concentration risk, nuclear accident risk, behavior changes of corporations and consumers, and possible downgrade of the market outlook by foreign investors. As seen in the *Special Property Market Survey*, many respondents see the disaster as an economic and social crisis with far-reaching implications for the entire property market including the Tokyo area.

However, the disaster is not entirely without a silver lining for Japan's economy and society. Indeed, it offers an invaluable opportunity to push the reset button on the old Japan, which now suffers from institutional fatigue of the social security and fiscal systems from rapid aging, and reconstruct the whole country from scratch.

For example, the nuclear accident and electric power shortage present the opportunity to create momentum to overhaul Japan's energy supply and consumption structure. Radical and constructive discussion would rapidly facilitate the shift to energy saving technologies and practices spanning all areas from business innovations to lifestyles, industrial structures, and urban structures. Now is the time to lead the world in the realization of a compact and smart city concept that features smart power grids, disaster resistance, energy saving, and harmony with the environment.

The future can be changed through our own efforts. We look forward to the implementation of a bold Japan regeneration project led by younger generations who support Japan's reputation of world class quality.

In closing, we would like to extend our deepest condolences to the thousands of disaster victims, and our sincere gratitude to all the workers persevering under grim and sometimes hazardous conditions in the disaster areas.

