Section 4 East Japan Great Earthquake Disaster:

The World Economy, Stabilization efforts by Coordination of Nations

1. The world economy appeared an unaffected by the earthquake disaster

It is not so clear how the East Japan Great Earthquake Disaster affects the world macro economy at the present stage. According to the published summary of minutes of a meeting of the US Federal Open Market Committee (FOMC) on March 15, which said, “for instance, meaning of impact caused by the Japan’s tragedy on the world supply chain has not yet been clear”. This is a typical viewpoint of the economic community.

On the other hand, examining some of the indexes over a period before and after March 11, it has been found that most of the indices remained calm due to coordinated intervention by G7 on March 18 and a consensus within the major countries of the world to mitigate the impact caused by the earthquake disaster. Prices of resources including crude oil and iron ore did not change clearly before and after the earthquake disaster. Markets such as grain and stock exchanges in major countries clearly shifted downward after the earthquake disaster, but recovered to the level existing before the disaster at the beginning of April.

After April, while Anglo-Saxon nations and Japan continued the monetary easing policy, People’s Bank of China and European Central Bank increased their interest rates. With the expectation of a strong US economy in future, the course seemed to be corrected in the direction to overcome the inflation spreading not only in the emerging economies but also in Europe. As a result, nominal exchange rate of Japanese yen, which drastically increased after the earthquake disaster, became stable at around ¥84 afterward. It can be said that generally stable world macro economy has worked in favor of Japan in its efforts for restoration from the earthquake disaster.

In the section below, we discuss the movement of (i) exchange rates, (ii) stock prices and (iii) commodity prices in major countries during the period from March 11, the day of earthquake occurred, to April 30.

Meanwhile, there were movements in markets like the United States of America during this period for reasons other than the earthquake impact.

In USA, changes were detected in the following sectors:

- Movement of economic indices (unemployment rate, housing market and business survey index, etc.);
- Announcement[1] of Bernanke, the Chairman of Federal Reserve Bank (FRB), to maintain large-scale monetary easing policy.

In Euro zone;

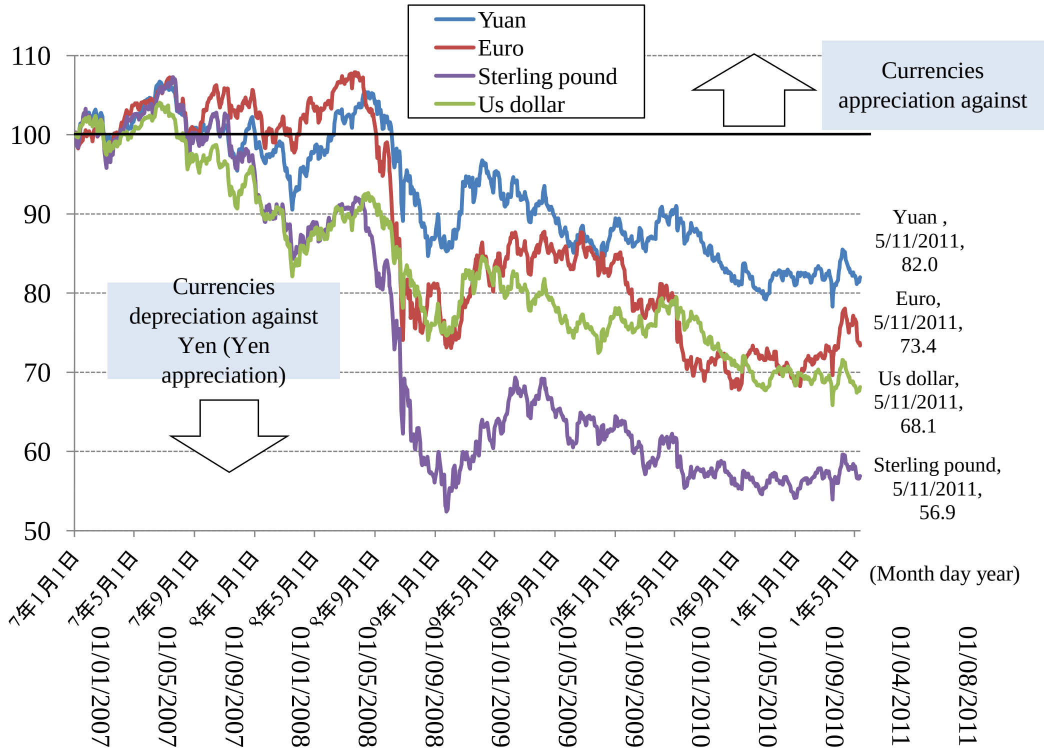
[1] Bernanke, Chairman of Federal Reserve Bank clearly confirmed that the funds supply program (also generally known as Quantitative Easing (QE 2)) by purchasing US$600 billion long term US bonds continued from November 2010 would be terminated at the end of June as initially decided; however, odds increased to maintain the exceptionally low interest policy for long period; the balance sheet of FRB would be maintained at current level after July by reinvesting funds from MBS redemption of maturity and others to the medium and long term US bonds; and the stance to maintain the current monetary easing policy as declared at the press conference after the Federal Open Market Committee (FOMC) meeting on April 28, 2011.

• Restructuring of Greece's debt and concern for Portugal's financial crisis;

• Raising interest-rate for the first time after the monetary crisis;

• Market expectations s for additional raising of interest-rate and the stance of European Central Bank making the time of the raise unclear. It can be clearly said that these factors have a major impact on the movement of the exchange rates, stock prices and commodity prices worldwide.

Figure 1-4-1-1 Exchange rates of major currencies against Yen



Sources: Reuters 3000 Xtra

(1) Movement of exchange

<Long term trend>

The yen/ dollar exchange has experienced appreciation of the yen against US dollar through the year of 2010. Entering 2011, appreciation of the yen was advanced by the earthquake disaster[2] on March 11 and the yen rose to record high of ¥76. However, the G7's coordinated intervention prevented yen from further rise. The yen was once weakening compared with the prices existing before and after the earthquake disaster. Then again it returned to the level existing before the earthquake disaster. In the dollar/Euro exchange market, Euro appreciated against Dollar in 2011 (Figure 1-4-1-5). Chinese Yuan

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2 It was pointed out that the reasons for the rise in yen were that the yen was originally recognized to be a safe asset, and that the domestic companies' demand for funds in yen was accelerated by the earthquake disaster and that they sold their overseas assets (dollar sales) and purchased the yen. However, the short-term capital balance did not rise in the balance of payments statistics in March. Therefore, it is thought that the fact is yen bought by non-skilled persons who expected the rise in yen by the domestic companies' real demand for the yen rather than the actual demand.

remained at a certain level from the second half of 2008, but then, it began to appreciate against the Dollar after People's Bank of China announced the flexible exchange rate of Yuan on June 20, 2010 (Figure 1-4-1-3).

Meanwhile, many countries changed their attitude on monetary policies from easing to tightening to prevent inflation and overheating of the economy in the worldwide economic recovery process after spring of 2010. These monetary policies in many countries continued after the earthquake disaster. In Europe, the interest-rates were raised ahead of other advanced economies for the first time since the monetary crisis. In the United States of America, FRB clearly confirmed termination of its additional monetary easing policy at the end of June. Additionally, the raising of interest-rates was accelerated in China and Asian emerging economies. Consequently, the world economic unrest was calmed down and the escalation of high value of yen after the earthquake disaster was mitigated. In addition, stable crude oil prices derived from the monetary tightening policy enabled Japan to avoid the worsening of trade conditions.

< Movement before and after the earthquake disaster >

In the section below, we discuss the movement of the Yen, Yuan, Won and Euro against US dollar.

(1) Japanese Yen

After the earthquake disaster on March 11, 2011, Yen suddenly rose against the US dollar and Euro and attained the level of ¥78.35 against the US dollar on March 17, which was the highest value exceeding ¥79.75 in April 1995. On the same day, Yen also rose to a value of ¥109.33 against the Euro. The situation pushed the value of Yen to a prominently high level (Figure 1-4-1-2). It was pointed out that the Yen value rose due to buying Yen to avoid risk factors like steep fall in share prices caused by the earthquake disaster, unstable Middle East situation and expectation[3] that Japanese insurance companies, being institutional investors, would return their overseas assets to Japan to prepare for the payment of insurance claims related to the earthquake disaster.

However, sudden rise in Yen value was checked and the exchange rate of Yen subsequently calmed down, and remained at a level around ¥84 against the US dollar. This was due to coordinated intervention on March 18, 2011 by G7 for the first time in ten and a half years[4]. This was done by tightening the monetary trends aiming at calming down inflation, and filling the gaps in interest rates between the United States and Japan, and especially lessen the Yen selling / Dollar buying pressure by raising the interest rate., The Yen selling / Dollar buying pressure was caused by FRB's decision to raise the interest rate backed by relatively healthy economic indices in the United States of America.

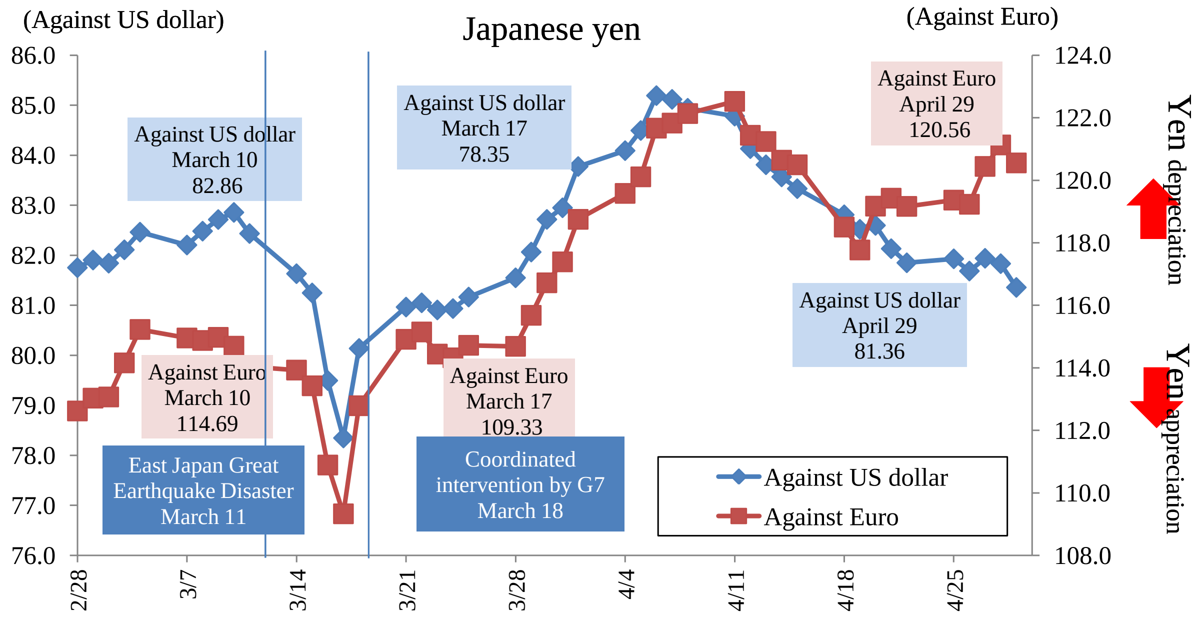
Afterward, the high yen pressure was considered weakened by gaps in monetary policy stances in Europe that started raising the interest-rate in April 2011. This was also due to brisk economic activities in USA and delayed economic recovery in Japan. The Yen exchange rate dropped to a lower

[3] However, there was no truth in the fact that Japan's insurance companies sold their overseas assets to prepare for the payment of insurance claims related to the earthquake disaster.

[4] The previous coordinated intervention by G7 was implemented on September 22, 2000. The background was sudden fall in Euro value caused by monetary factors (active inflow of investment and speculation funds) at the time of introduction of Euro in 1999.

value and showed steady movement around the ¥84 level against the US dollar. After middle of April, the Yen exchange rate both against US dollar and Euro showed upward trends, but it was lower than the level existing before the earthquake disaster and thus, the sudden rise in Yen value was controlled.

Figure 1-4-1-2 Movement of Japanese yen before and after the earthquake disaster



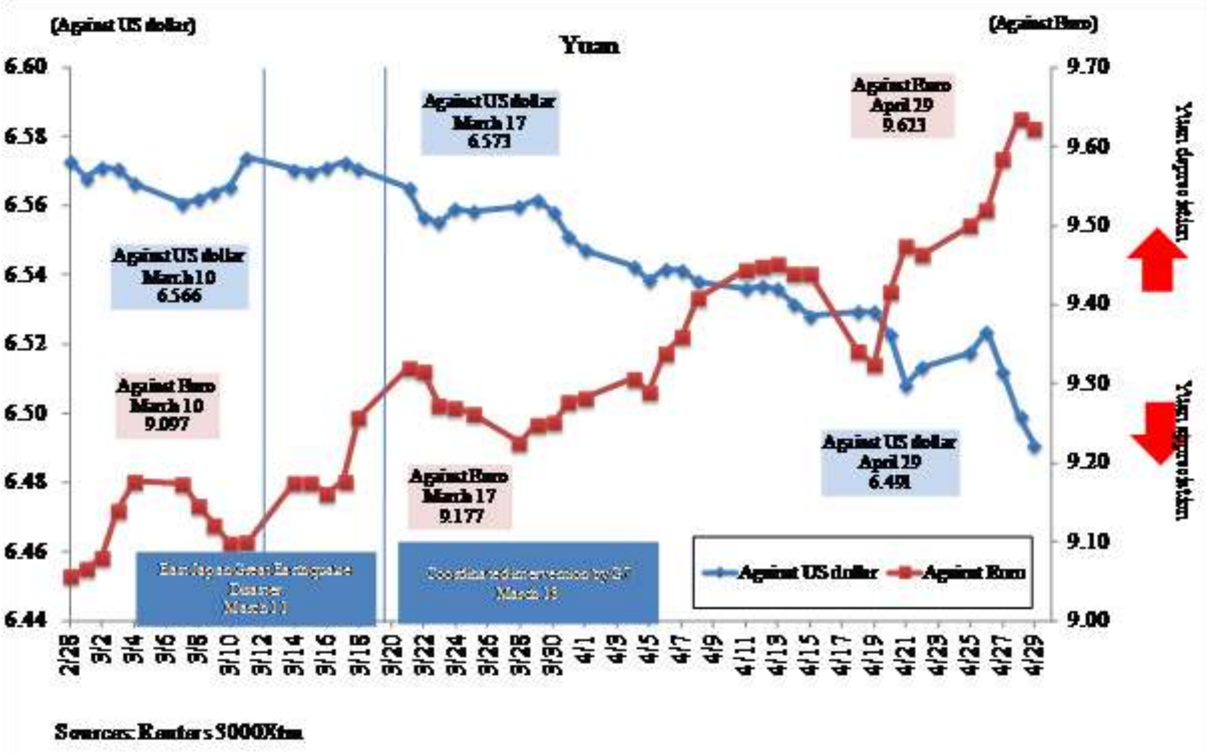
Sources: Reuters 3000Xtra

(2) Chinese Yuan

Immediately after the earthquake disaster, the Yuan registered a lower value both against the US dollar and Euro, but this trend changed to higher value of the Yuan after coordinated intervention by G7.

While there were concerns over Greece's debt restructuring plan, a sharp appreciation of the Euro against the Yuan was seen in late April, 2011. This was due to the rising prediction that the interest-rate might be raised further by ECB. On the other hand, a sharp appreciation of the Yuan against US dollar occurred late in April and the exchange rate of Yuan against US dollar exceeded the level of 6.5 Yuan for a US dollar on April 29. This happened for the first time in July 2005 and the exchange value temporally rose up to 6.4892 Yuan for one US dollar (Figure 1-4-1-3).The acceleration of prices in China was behind this situation, which prompted the Chinese authority to control the export prices through moderate appreciation of the Yuan.

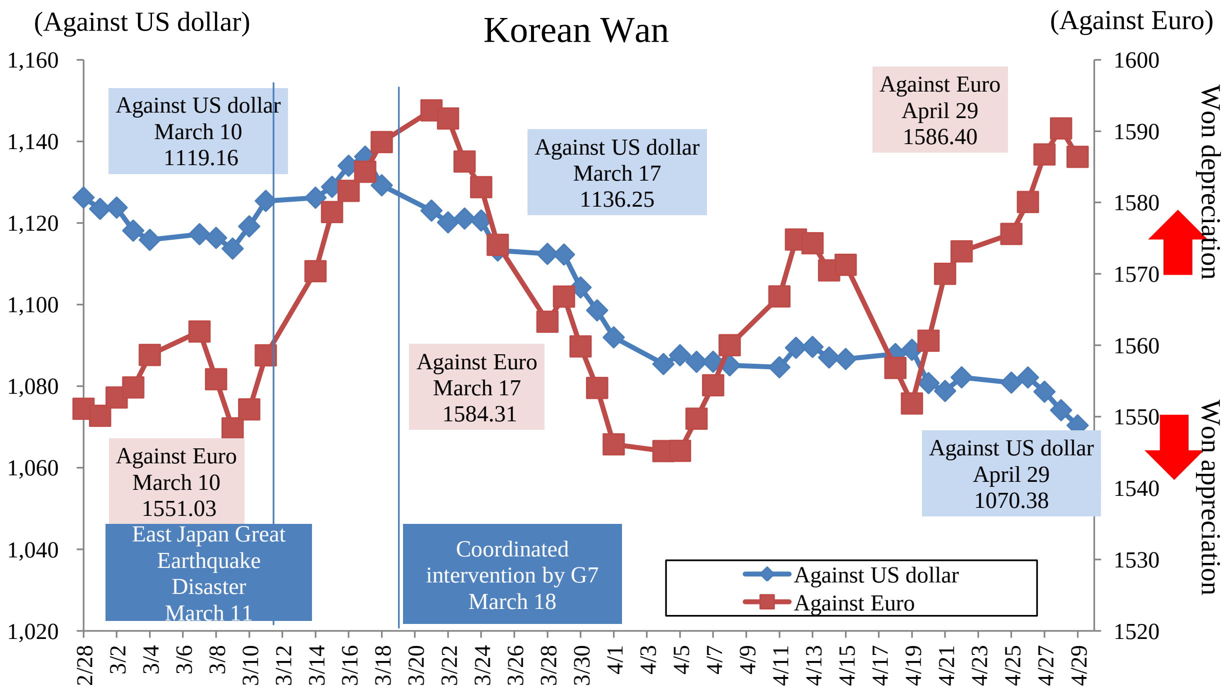
Figure 1-4-1-3 Movement of Yuan before and after the earthquake disaster



(3) Korean Won

Immediately after the earthquake disaster, the Won was traded at a lower value against both US dollar and Euro, but the trend changed to higher value of the Won after coordinated intervention by G7 (Figure 1-4-1-4). This was mainly because, the Korean Central Bank raised the policy interest (0.25%) on March 10 responding to the increasing inflation pressure. And this was also because the possibility of appreciation of Won existed. Additionally, a clear possibility of depreciation of US dollar existed due to downgrading of US bond on April 18, instability in the Middle East, and reexamination on safe assets responding to Japan’s earthquake disaster and accompanying nuclear plant accident.

Figure 1-4-1-4 Movement of Korean Won before and after the earthquake disaster



Sources: Reuters 3000Xtra

Afterward, the Won continued to be appreciated against the US dollar moderately. On the other hand, starting from the beginning of April, the Won exchange rate l fluctuated against the Euro. This was due to the raising of interest-rate by ECB for the first time after the monetary crisis, and there was also a possibility that the interest-rate might be raised again. Besides, there were concerns over debt restructuring in Greece. But the Won depreciated against Euro[5] in late April due to downgrading of US bond by Standard & Poor's.

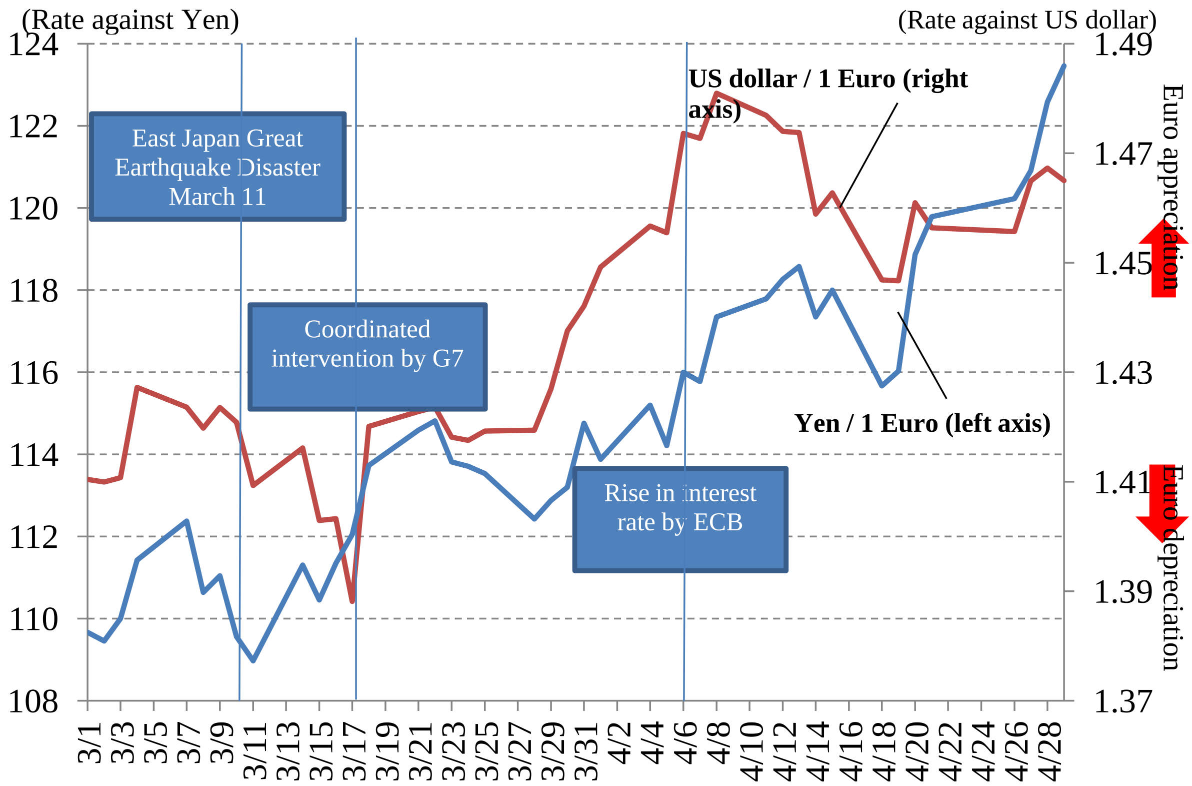
(D) Euro

Before the East Japan Great Earthquake Disaster, the Yen has been depreciating against the Euro due to acceleration of inflation in the Euro zone and the prospect for another raise in interest-rate by ECB. The Yen's appreciation against the Euro progressed temporarily due to earthquake disaster, but Euro returned to the level existing before the earthquake disaster at the end of March due to coordinated intervention by G7 on March 18. On April 7, the Yen depreciated against the Euro due to the raise in interest-rate by ECB for the first time after the monetary crisis. However, due to the possibility of another rise in interest-rate and concerns over restructuring of Greece's debt on April 18 led Euro to

[5] There is a viewpoint on the background of the depreciation of Won against the Euro. ; A series of movements was reported such as; the increased selling of US dollar due to degradation of US bond; currencies of Asian countries were bought with the funds from the selling the above bond.; The Asian central banks implemented buying of US dollar by intervention to act against the high value of their currencies. The purchased US dollars were exchanged into the Euro or Australian dollar market again as hedge risk. In case of Korea, the central bank exchanged their purchased US dollar into the Euro market and it led to Won's depreciation against the Euro and Won's appreciation against the US dollar.

depreciate. Afterward, as the expectation for an additional rise in interest-rate increased and FRB decided on April 28 to maintain the monetary easing policy, the Euro began to appreciate again (Figure 1-4-1-5).

Figure 1-4-1-5 Movement of Euro before and after the earthquake disaster



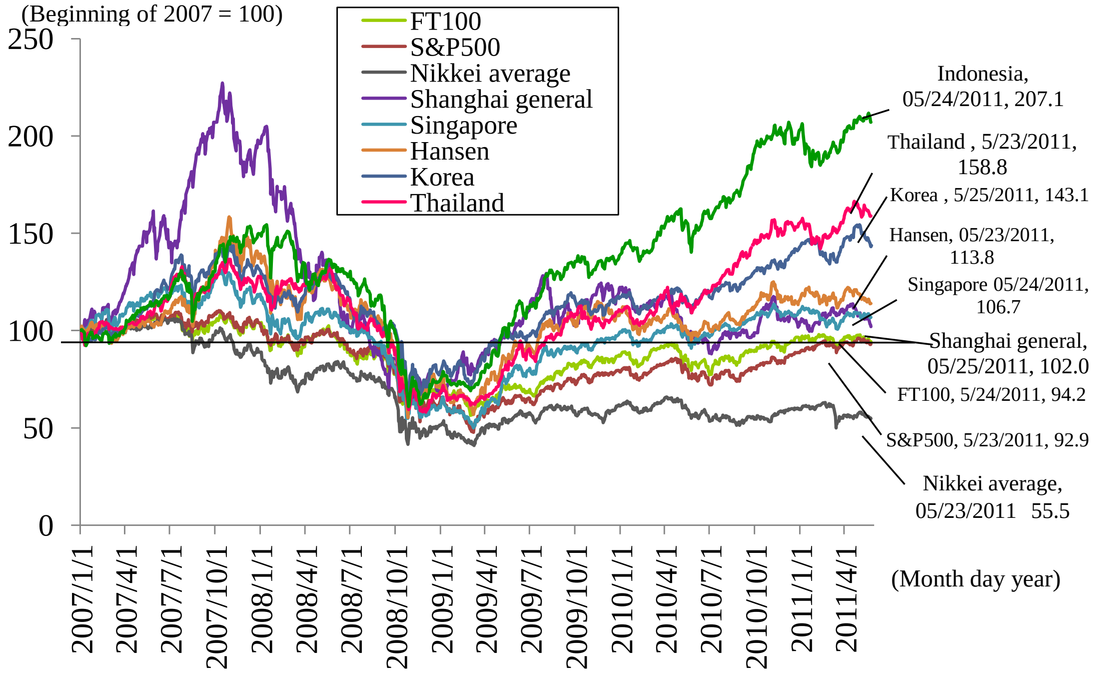
Sources: ECB

(2) Movement of share prices

<Long-term trends>

As for share prices in major countries in the world, it was moderately rising from the bottom at the beginning of spring in 2009. At the end of 2010, United States of America and UK recovered their share prices to the level before the world economic crisis. Japan and Europe recovered to the said level at the beginning of 2011, but the share prices remained stagnant. China and the emerging countries made significant recovery in their share prices compared with those of the advanced economies (Figure 1-4-1-6).

Figure 1-4-1-6 Transition of world major stock price indices



Sources: DATASTREAM; Reuters 3000Xtra

<Movement before and after the earthquake disaster>

In the world's major stock exchange markets, the share prices simultaneously declined immediately after the East Japan Great Earthquake Disaster, but afterward it recovered to the level existing before the earthquake disaster backed by economic recovery in the United States of America and expected economic expansion of the emerging economies. In the middle of April, the share prices had a declining trend due to concerns over performances of US companies in the face of crude oil prices amounting to US$112 per barrel and depreciation of US bonds in long-term forecast. However, share prices in major countries recovered again on April 20 responding to the positive feelings generated due to positive US corporate financial statements and improvement in sales of resalable housing in the United States in March. In addition, the share prices continued to rise responding to the statement by Bernanke, the Chairman of FRB at a press conference after the FOMC meeting on April 28 to maintain large-scale monetary easing policy.

The recovery trends of share prices before and after the earthquake disaster may be classified into two groups.

Group one includes countries such as Korea, India, the Philippines, Thailand and Indonesia where recovery of share prices have rapidly reached the level existing before the earthquake disaster and the prices have continued to rise afterward. The share prices of these countries showed good performance exceeding the MSCI index[6], and the general world index of share prices, before the earthquake disaster.

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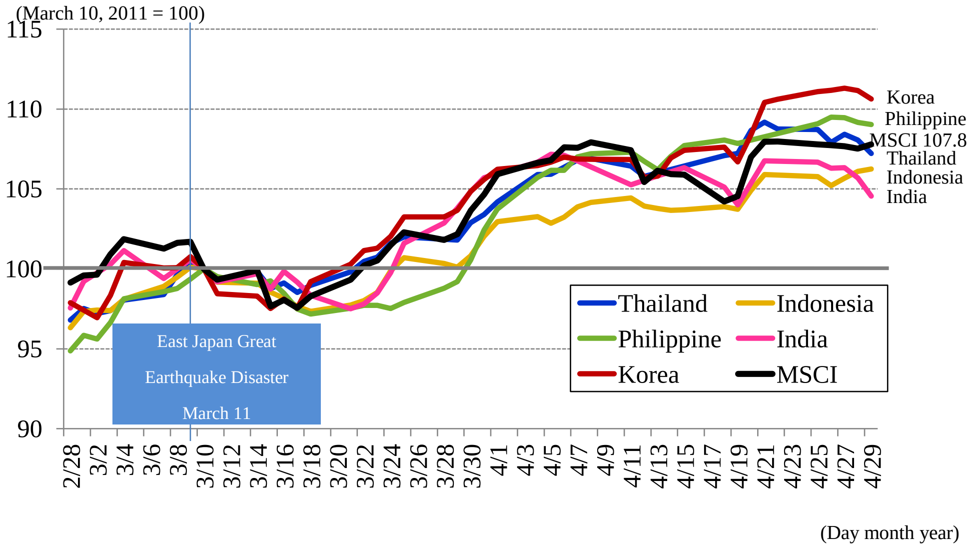
[6] The MSCI stands for Morgan Stanley Capital International. MSCI index is a name of the world share

The share prices recovered rapidly from the influence of earthquake disaster and returned to the level existing before the earthquake disaster within a short period in about 10 days (Figure 1-4-1-7).

Figure 1-4-1-7 Conditions of recovery to stock prices existed before the earthquake disaster (countries recovered fast and the stock prices rose afterward)



Sources: Reuters 3000Xtra

Another group includes countries/ regions such as Singapore, Hong Kong, Shanghai, Russia, Brazil, Vietnam, France, Spain and Japan where recovery of the share prices have been slow to reach the level existing before the earthquake disaster and the prices have continued to hover at low levels (Figure 1-4-1-8). In Spain, Hong Kong and France, the share prices once recovered to the levels before the earthquake disaster, then declined again to the levels lower than those existing before the earthquake disaster. In Brazil, Shanghai, Russia and Singapore, the share prices recovered to the levels existing before the earthquake disaster, but grew at sluggish paces[7]. Especially, the share prices remained stagnant[8] in Vietnam after the earthquake disaster. However, all these prices recovered to the level

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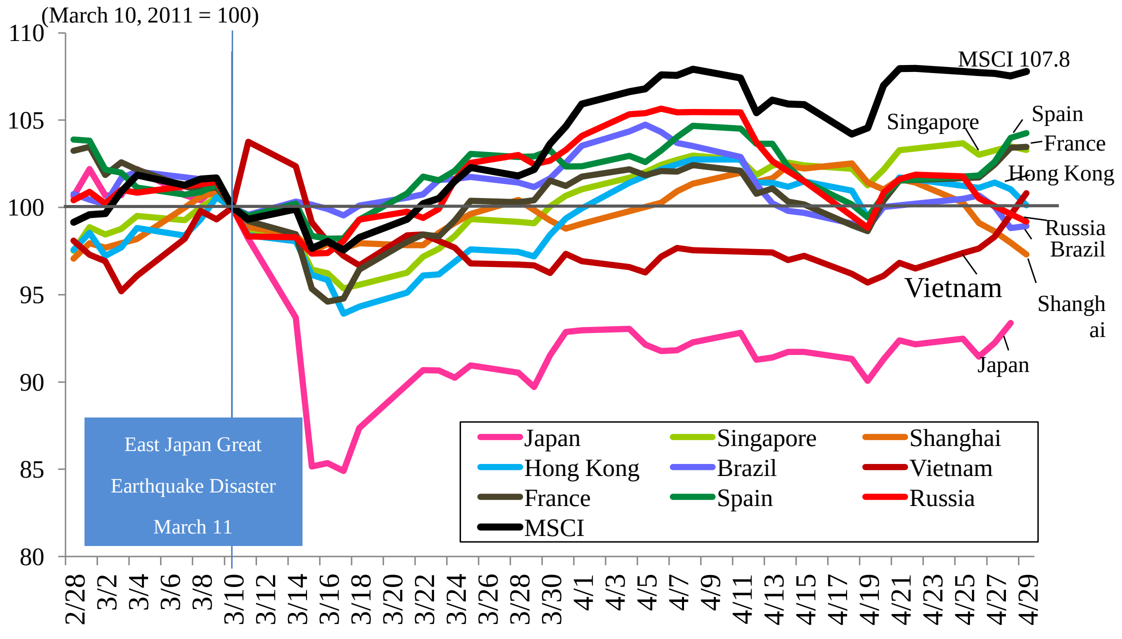
price index calculated and published by the company. The database reflects approximately 80% of the world aggregate market price, and it adopts over 2,600 stocks traded in the 23 markets in the advanced economies and over 1,600 stocks traded in the 28 emerging economies for product items on the index. Therefore, mutual comparison of performances between regions, countries and industries can be done by using the index. Institutional investors in the world widely utilize the index as a benchmark.

[7] Such decline in the share prices may be caused by factors other than the earthquake disaster. For example, the share price decline in Shanghai was caused by the expectation for strengthened real estate control, concern about additional monetary tightening by the authority and additionally, by the decision of People’s Bank of China to make the inflation control policy its first priority. And the share price decline in Brazil was caused by the market concern about foreign investors who might avoid the Brazilian markets due to government’s control measure over the high value currency and inflation control measure.

[8] In Vietnam, the percentage of rise in the consumer prices index continued to largely exceed the government’s target of 7%, and the central Bank aimed at the inflation control by raising the interest-rate.

existing before the earthquake disaster at the end of April.

Figure 1-4-1-8 Conditions of recovery to stock prices existed before the earthquake disaster (countries recovered slowly and the stock prices continued to decline)



Sources: Reuters 3000Xtra

For reference, the MSCI index declined immediately after the earthquake disaster, but recovered to the share price level existing before the earthquake disaster within about 10 days and rose afterward (Figures 1-4-1-7 and 1-4-1-8). This may confirm that the world economy has behaved calmly to the earthquake disaster and it has acted in a favorable way to restore the damage of the disaster.

(3) Movement of commodities markets

<Long-term trend>

The international commodities markets have generally been in an upward trend in 2010 due to improvement of supply and demand accompanying the economic recovery after the monetary economic crisis, implementation of monetary easing policy and additional monetary easing measures in the United States and impacts from unseasonal weather conditions in Russia and Australia. Entering 2011, the commodities markets continued to maintain the upward trend due to political instability in Middle East and re-ignition of the financial crisis in Europe.

The monetary policy of a major country has tremendous impact on the international commodities markets. When Bernanke, chairman of FRB clearly stated his stance to maintain the large scale monetary easing policy at the press conference after FOMC meeting on April 28, the gold price

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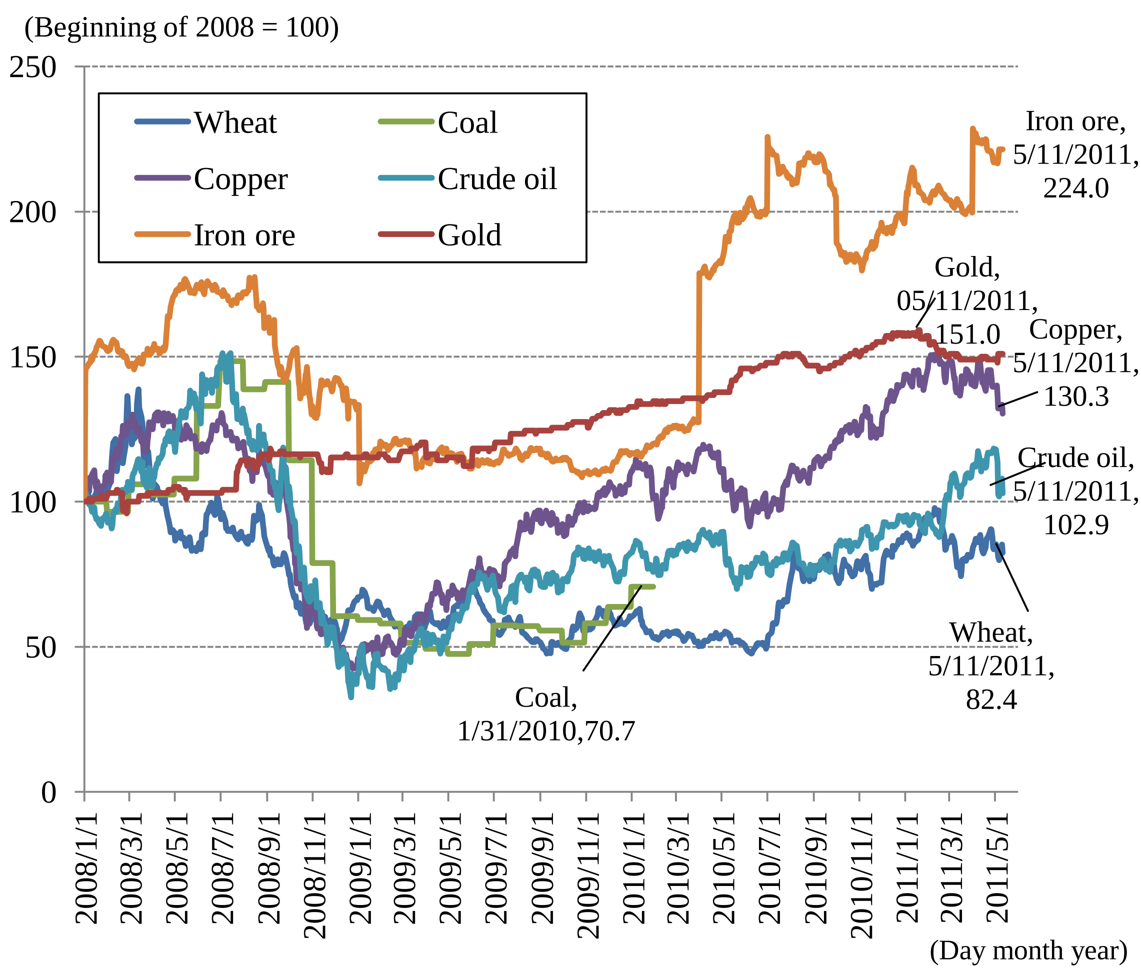
However, the interest-rate raise may increase costs of Vietnamese companies and it leads to a decline in profits. Such concerns caused the share prices decline.

increased to all-time high and the crude oil price was also raised.

In addition, prices of energy and resources plunged drastically in May. The raising of margin rate in the silver futures transaction started on April 29, causing the rise in the US dollar value and the decreased expectation for economic recovery caused by worsened economic index and unemployment ratio in the United States were the reasons for this downslide. Violent fluctuation in prices of crude oil has serious impact on business activities and household budget and it is also recognized as a matter of grave concern to the world economy[9]. Majority in the markets think that prices of resources and energy will rise again and therefore, the concerns about the delay in economic recovery continue to exist.

Figure 1-4-1-9 Transition of main commodity prices in international commodity markets



[9] It was reported that Trichet, Governor of European Central Bank pointed out at the Bank for International Settlement (BIS) and Major Countries Central Bank Governors Meeting held on May 9. that "there is a problem called commodities prices. Especially, recently the volatility has been confirmed on the prices of crude oil and energy, I think it is a serious problem. It has significant impact on rise in worldwide consumer prices index." (Reuter News: May 9, 2011 "BIS Governors Meeting, expression of concern about volatility in commodities prices = Governor of ECB").

Notes: Crude oil is WTI near term of NYM; Copper is 3 month term of London Metal Exchange (LME); Gold is spot commodity of CMX Commodity Exchange.
Sources: DATASTREAM; Reuters 3000Xtra

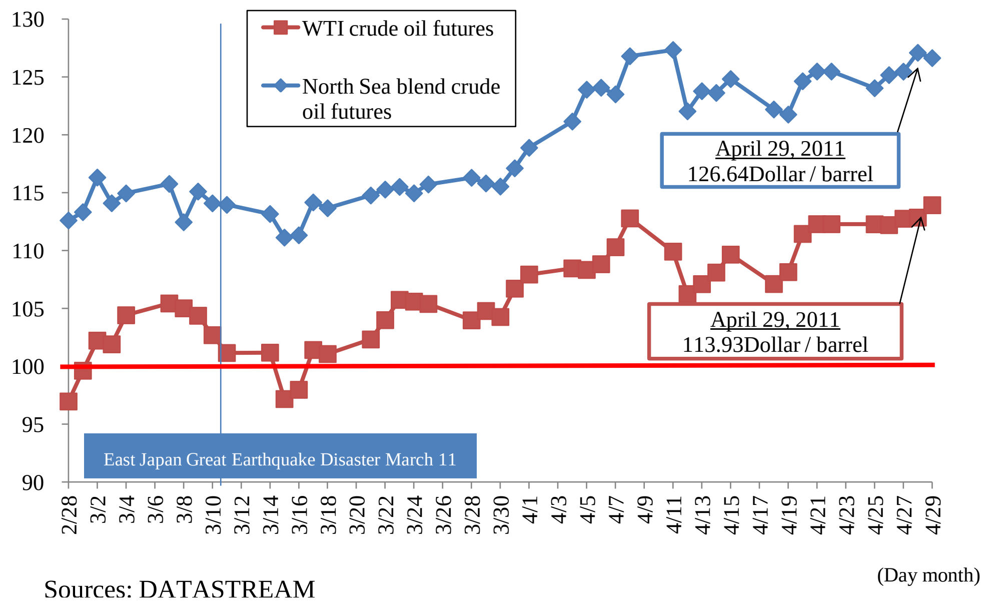
<Movements before and after the earthquake disaster>

(A) Crude oil price

In the crude oil futures markets immediately after the earthquake disaster, the prices declined due to the seriousness of the nuclear plant accident, decrease in demand for crude oil caused by economic stagnation of Japan and slower growth of world economy. However, crude oil price rose again after world's major countries formed a consensus to mitigate the impact of the earthquake disaster through coordinated intervention by G7 on March 18, and the view point that demand for crude oil might additionally increase due to stoppage of the nuclear power generation and increased political and geographic risks caused by the attack on Libya by French, British and US air forces.

In April, the crude oil prices rose moderately with prices of US$120 for North Sea Brent futures and prices around US$ 110 for the WTI[10] crude oil futures. And after Bernanke, chairman of FRB stated that FOMC would maintain the current monetary easing policy on April 28, WTI crude oil futures rose in prices to US$ 113 level due to increased expectation in the markets for continuing funds inflow (Figure 1-4-1-10).

Figure 1-4-1-10 Transition of crude oil prices before and after the earthquake disaster (futures and short term)



Sources: DATASTREAM

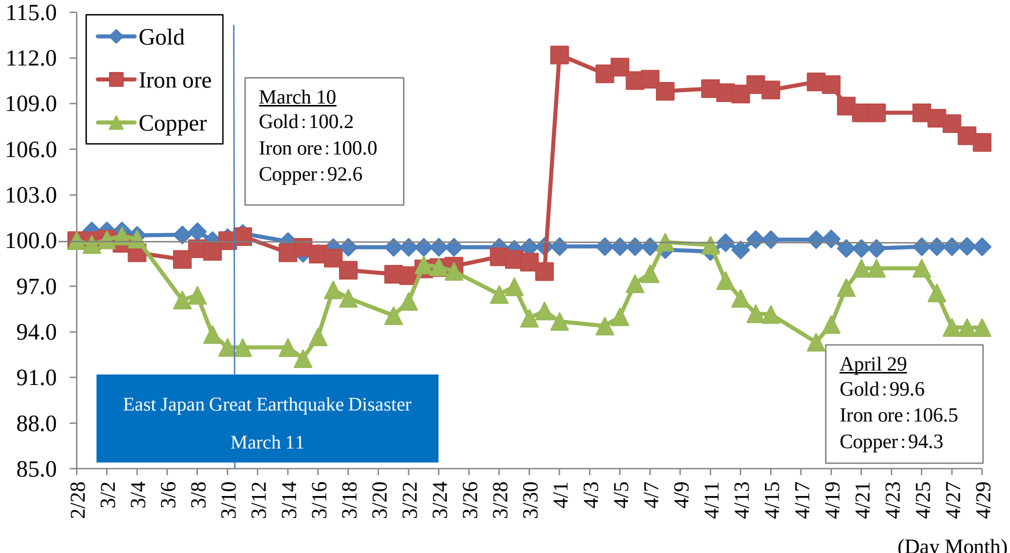
10 Refer to Chapter 1, Section 2, 1.

Despite the existence of an unpredictable world economy due to uncertain prospects of monetary policies by the United States and Europe, debt problems in Europe, China's stance of further monetary tightening, maintenance of worldwide economic expansion[11] in markets backed by continued concern about tight supply of crude oil caused by strained situation in Middle East and North Africa, recovery of the monetary systems, active economic activities in the emerging economies and confidence in the advanced economies of recovery, and the continued rise of crude oil prices. Consequently, decline in the price of crude oil by the earthquake disaster was balanced out and there was no distinctive difference in the upward trend of the crude oil prices before and after the earthquake disaster.

(B) Prices of resources

International price of gold declined slightly after the earthquake disaster and remained unchanged afterward. After Bernanke, the Chairman of FRB, stated on April 28 that FOMC would maintain the current monetary easing policy, the markets expected continued funds inflow and the gold price rose to US$1,500 level and further to US$ 1,530, the highest price in the markets (Figure 1-4-1-11).

Figure 1-4-1-11 Transition of resource prices before and after the earthquake disaster (gold, iron ore and copper)



Notes: Indexation using price on February 28 2011 as 100
Sources: DATASTREAM

The price of copper declined even before the earthquake disaster due to concerns about decreasing demand in China. The price once turned around in the next week of the earthquake disaster, but the overall decline trend continued afterward. In April, excessive pessimism about the earthquake disaster receded and increased demand in China was expected, therefore, the price of copper recovered and

[11] IMF "World Economic Outlook April 2011"

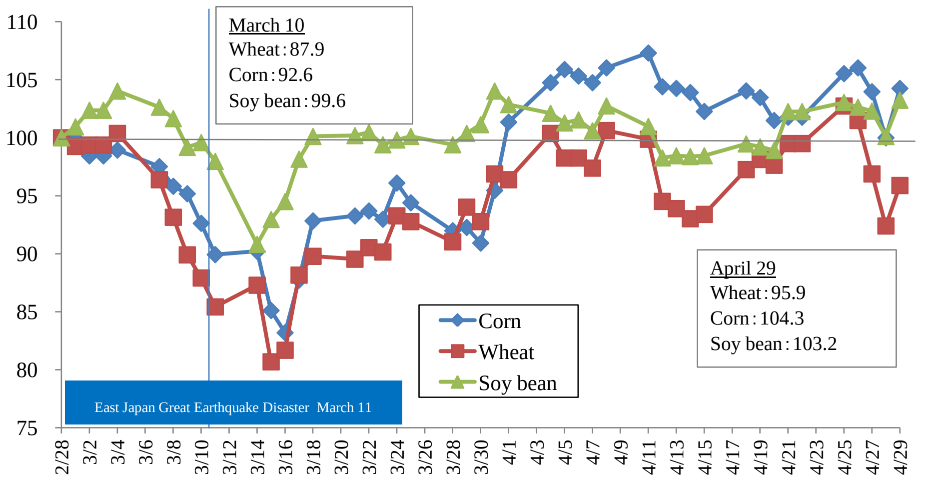
recorded the highest price following the earthquake disaster and returned to the level existing before the earthquake (February 28) on April 8. After the middle of April, being affected by China's demand for the copper and concerns about the monetary tightening policy, the prices of copper fluctuated and had a downward trend toward the end of April (Figure 1-4-1-11).

The price of iron ore slightly fluctuated during a period before and after the earthquake disaster and no obvious changes in the trend were detected. The price revision on April 1 pushed the price higher, but finally it fluctuated moderately with a downward trend under the influence of moderate recovery of the world economy and expected decrease in demand caused by worldwide stagnation in production due to damage of supply chain caused d by the earthquake disaster (Figure 1-4-1-11).

(C) Food prices (grain)

Contrary to prices of resources, food prices had a downward trend even before the earthquake disaster. On March 11, 2011, immediately after the earthquake disaster, prices of "soybean" and "wheat" substantially declined and "corn" prices drastically fell at the Chicago Grain Market. The selling order increased because of a forecast that demand for the grain would decrease due to the infrastructure being damage by the earthquake disaster in Japan, which was one of the most important export destinations for the U.S. grain. However, as major nations of the world reached a consensus to mitigate the impact caused by the earthquake disaster through coordinated intervention by G7 on March 18, the international prices of soybean, wheat and corn rose over the level existing before the earthquake disaster (March 10), and in April, it recovered to the level existing before the earthquake disaster. The prices displayed a downward trend again at the middle of April, but then, it recovered toward the end of April, and it was once converging to the desired level at the end of February. However, the prices fluctuated below the level at the end of February and the situation till May, but the movement of soybean price was relatively stable (Figure 1-4-1-12).

Figure 1-4-1-12 Transition of food prices before and after the earthquake disaster (corn, wheat and soy bean)



Notes: Indexation using price on February 28 2011 as 100
Sources: DATASTREAM