Economic Outlook for FY2011 and FY2012

May 2011

Key points of Mizuho Research Institute's (MHRI) outlook on the economy in FY2011 and FY2012
reflecting *The First Preliminary Quarterly Estimates of GDP (1st QE)* of Japan for the Jan-Mar quarter of 2011

<The US Economy> (previous forecast as of March 10, 2011)

2011	+2.5% (previous forecast +3.0%)
2012	+2.1% (previous forecast +2.4%)

<The Eurozone Economy> (previous forecast as of March 10, 2011)

2011	+1.9% (previous forecast +1.3%)
2012	+1.2% (previous forecast +1.2%)

<The Asian Economy> (previous forecast as of March 10, 2011)

2011	+7.9% (previous forecast +7.9%)
2012	+7.9% (previous forecast +8.0%)

<The Japanese Economy> (previous forecast as of April 5, 2011)

FY2011	+0.6% (previous forecast +1.3%)
FY2012	+2.6% (previous forecast +2.2%)

This English-language translation is based upon the outlook in Japanese released on May 20, 2011. This publication is compiled solely for the purpose of providing readers with information and is in no way meant to encourage readers to buy or sell financial instruments. Although this publication is compiled on the basis of sources which MHRI believes to be reliable and correct, MHRI does not warrant its accuracy and certainty. Readers are requested to exercise their own judgment in the use of this publication. Please also note that the contents of this publication may be subject to change without prior notice.

Mizuho Research Institute

I. The global economy

The global economy is continuing to grow

Despite signs of slowdown in the summer of 2010, the global economy picked up in the Oct-Dec quarter of 2010 and continued to expand in the Jan-Mar quarter of 2011.

US real GDP grew +1.8% q-o-q p.a. in the Jan-Mar quarter of 2011, slowing down from the Oct-Dec quarter of 2010 (+3.1% q-o-q p.a.) (**Chart 1**). Personal consumption grew at a slower pace, reflecting the rise of energy prices such as gasoline.

Eurozone real GDP growth accelerated to +3.3% q-o-q p.a. in the Jan-Mar quarter. Note a widening gap between the strong growth of countries such as Germany and France which are driven by exports and construction, and the economic slump in countries of south Europe including Portugal.

China's real GDP continued to grow at a fast pace of +9.7% y-o-y in the Jan-Mar quarter (Oct-Dec quarter: +9.8% y-o-y). It appears that the contribution by external demand dipped into negative territory while growth of infrastructure investment accelerated.

In Asia, the economies of South Korea (+5.6% q-o-q p.a.), Taiwan (+19.0% q-o-q p.a.), and Singapore (+22.5% q-o-q p.a.) picked up on the back of export recovery. Malaysia (+4.6% y-o-y) and Indonesia (+6.5% y-o-y) also achieved solid growth. In contrast, economic growth slowed sharply in Vietnam beset by a weakening currency and rising inflation.

In contrast to the solid growth of the global economy, Japan's real GDP contracted for the second consecutive quarter in the Jan-Mar quarter (-3.7% q-o-q p.a.) (Oct-Dec quarter: -3.0% q-o-q p.a.) due to the Great East Japan Earthquake (the "Earthquake") on March 11th.

[Chart 1: Real GDP growth of major countries and areas]

(Q-o-q % change, p.a.)

	2009				2010				2011
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
US	-4.9	-0.7	1.6	5.0	3.7	1.7	2.6	3.1	1.8
Eurozone	-9.6	-0.6	1.6	0.8	1.6	4.0	1.4	1.1	3.3
Germany	-14.0	2.2	3.0	2.0	2.1	8.7	3.2	1.5	6.1
France	-6.0	0.3	0.9	2.4	0.6	2.0	1.7	1.4	3.9
Italy	-11.4	-1.3	1.5	-0.0	2.4	2.0	1.2	0.5	0.4
Japan	-18.3	9.1	-2.0	6.3	9.1	0.2	3.8	-3.0	-3.7
South Korea	0.4	10.4	14.5	0.7	8.6	5.7	2.6	2.0	5.6
Taiwan	-4.1	13.5	11.8	18.4	17.8	2.4	3.7	1.2	19.0
Hong Kong	-13.3	14.6	2.1	8.8	7.6	7.8	3.5	6.3	11.9
Singapore	-8.9	18.6	13.3	-1.5	39.9	29.7	-16.7	3.9	22.5
Thailand	-7.9	9.6	8.7	15.4	14.6	-1.5	-1.3	4.8	
Philippines	-5.7	4.4	3.4	7.6	16.1	5.1	-3.2	12.7	

(Y-o-y % change)

China	6.6	8.2	9.7	11.4	11.9	10.3	9.6	9.8	9.7
Malaysia	-6.2	-3.9	-1.2	4.6	10.1	9.0	5.3	4.8	4.6
Indonesia	4.6	4.2	4.2	5.4	5.6	6.1	5.8	6.9	6.5
Vietnam	3.1	4.5	6.0	6.9	5.8	6.4	7.2	7.3	5.4
India	5.9	6.3	8.6	7.3	9.4	8.9	8.9	8.2	

Sources: Datastream, CEIC, statistics of the relevant countries and areas.

The global economy should continue to grow around 4% in 2011 and 2012

Even though the global economy is expected to slow down from its pace of growth around 5% in 2010, it should still continue to grow around the 4%-level in 2011 (**Chart 2**). Likewise in 2012, the global economy should continue to grow around 4%. In contrast to a slightly slower pace of growth in the US and Eurozone economies reflecting the impact of fiscal tightening, the emerging economies - most notably China – should continue to achieve solid growth.

[Chart 2: Outlook on the global economy]

(Y-o-y % change)

Calendar year (CY)	2009 (Actual)	2010 (Actual)	2011 (Forecast)	2012 (Forecast)
Total of forecast area	0.2	5.2	4.2	4.3
Japan, US, Eurozone	-3.6	2.6	1.9	1.9
US	-2.6	2.9	2.5	2.1
Eurozone	-4.0	1.7	1.9	1.2
Japan	-6.3	4.0	-0.4	2.9
Asia	6.1	9.2	7.9	7.9
NIEs	-0.8	8.4	4.7	4.2
ASEAN5	1.6	6.9	5.2	5.4
China	9.2	10.3	9.5	9.7
India	7.0	8.8	7.9	7.7
Japan (FY)	-2.4	2.3	0.6	2.6
Crude oil price (USD/bbl)	62	80	107	126

Note: The total of the forecast area is calculated upon the 2010 GDP share (PPP) by the IMF.
Sources: IMF, MHRI.

Even though the pace of US economic growth is forecast to slow down to +2.5% in 2011 and +2.1% in 2012, the payroll tax cut and capital investment tax credit decided at the end of last year will serve as underpinnings and keep the economy on expansion track. Moreover, it appears that deflationary risks have receded due to the success of the quantitative easing measures ("QE2") since last year.

The Eurozone economy is predicted to grow +1.9% in 2011, picking up slightly from 2010. However, the economy is expected to decelerate to +1.2% in 2012, reflecting the impact of fiscal tightening and rise of commodity prices.

In Asia, domestic demand such as capital investment and personal consumption should continue to grow strongly in addition to the continuation of export growth. The rate of real GDP growth is expected to reach +4.7% in 2011 and +4.2% in 2012 among the NIEs and +5.2% in 2011 and +5.4% in 2012 among the ASEAN5.

The Chinese economy is forecast to maintain its strong growth, reaching +9.5% in 2011 and +9.7 in 2012. Even though monetary policy should remain in tightening mode given the rise of inflation, investment (primarily in infrastructure development and strategic new industries) is predicted to grow strongly along with the start of the new Five-Year Plan. Personal consumption should also increase steadily amid the rise of wages.

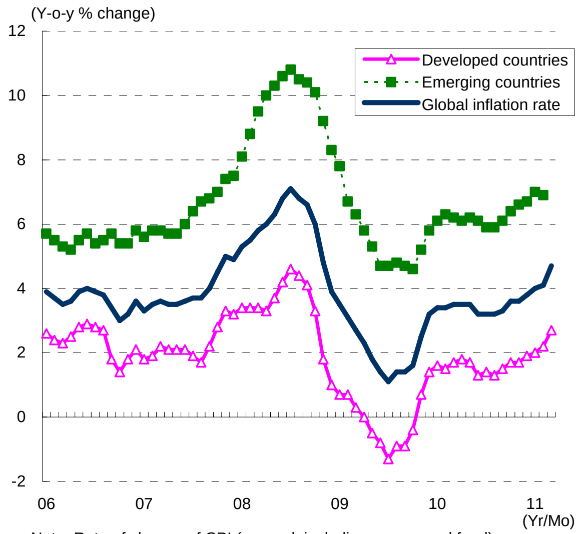
In Japan, the rate of real GDP growth is forecast to dip into negative territory (-0.4%) for the first time in two years in 2011 (on a calendar year basis) due to the impact of the Earthquake. However, the economy should pick up in 2012 (+2.9%), driven in part by reconstruction demand.

Concerns regarding inflation are rising

As set forth above, the main scenario forecast of our latest economic outlook is that the global economy will continue to grow at a pace around 4% per annum in 2012.

That said, note that there are numerous risk factors in the future course of the global economy. A recent concern is the rise of global inflation. The price of crude oil (WTI) surged to approximately USD110/bbl over the spring of 2011 due to the rise of uncertainties in North Africa and the Middle East. Given the rise of commodity prices, global inflation rates are headed for a sharp rise (**Chart 3**). Under these circumstances, a wave of monetary tightening is spreading throughout the world. Among the emerging economies in particular, many countries including China have started to take steps in 2011 such as interest rate hikes to address inflation risks.

[Chart 3: Inflation rates in developed and emerging countries]



Note: Rate of change of CPI (general, including energy and food).
Source: IMF, *International Financial Statistics.*

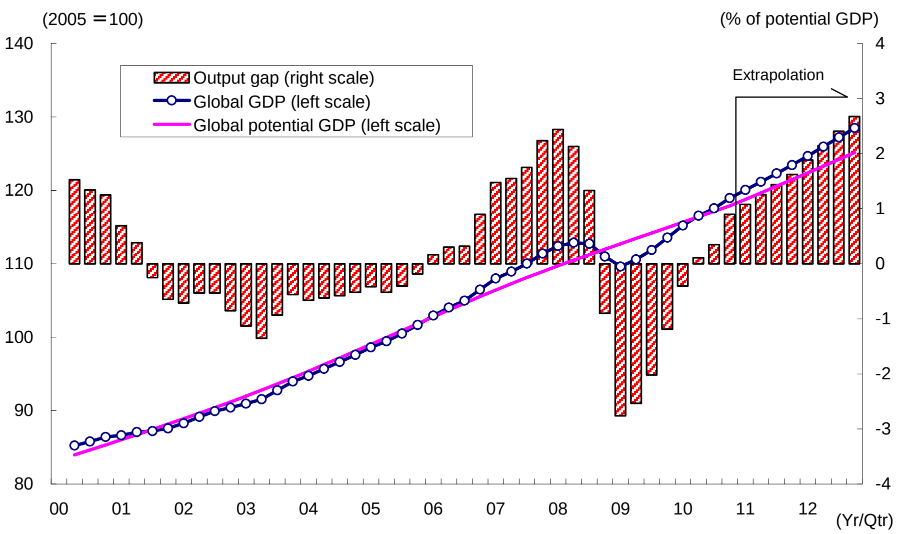
Sharp upward revision of crude oil forecast

The commodity market is calming down, due in part to margin hikes in the silver and crude oil futures market in May. However, the rise of commodity prices is said to stem from forecasts of a sharp demand-supply crunch in the mid- to long-term due to the expansion of emerging economies. **Chart 4** sets forth the global output gap on the basis of data released by the International Monetary Fund (IMF). In the event the global economy continues to grow at 4% in 2012, the global output gap in positive territory (the “inflationary gap”) should expand to the level in early 2008 prior to the Lehman crisis. Under these circumstances, market attention will tend to focus upon the tightening of supply and demand of various items including energy and food, leading to a high possibility that the crude oil and commodities markets will continue to rise. Our forecast on crude oil in our latest economic outlook is USD107/bbl in 2011 (previous forecast: USD98), and USD126/bbl in 2012 (previous forecast: USD99).

Amid predictions that many countries will continue to keep its grips upon monetary policy in a bid to prevent the rise of inflation, it should be noted that some countries may be compelled to take significant tightening measures in the face of the acceleration of inflation. Furthermore, the commodities markets may surge at some point in time, leading to a slowdown of the global economy. The ability of the countries of the world to take appropriate monetary policy measures toward global inflation concerns will serve to define the course of the global economy in 2012.

Meanwhile, the surge of commodities will serve as downward pressures upon domestic demand for Japan through the deterioration of its terms of trade. The rise of costs stemming from the deterioration of terms of trade may hamper Japan's recovery from the Earthquake.

[Chart 4: Global output gap (estimates)]



Notes: The output gap is synthesized by converting the real GDP of each of the countries (the developed countries (US, Eurozone, Japan, UK, South Korea, Canada, Australia, Taiwan) and the emerging countries (China, India, Russia, Brazil, Mexico, Turkey, Indonesia, Poland, Thailand, Argentina)) by the 2005 share of PPP-based GDP. Potential GDP is computed by the HP filter. The extrapolation is the estimate based upon 4% growth in 2012.

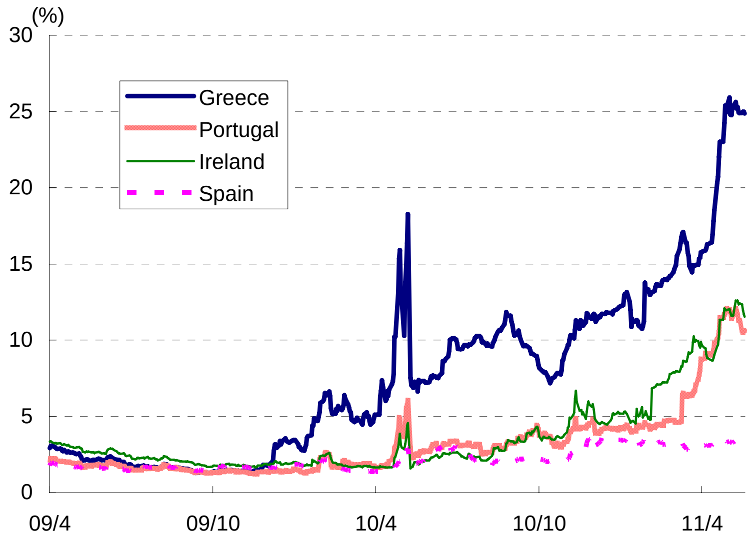
Sources: Made by MHRI based upon IMF, *International Financial Statistics, World Economic Outlook,* and statistics of the relevant countries.

Europe's government debt and financial sector uncertainties will continue to serve as risks

Uncertainties regarding Europe's government debt and financial sector are continuing to linger. The rising discordance among the EU members regarding their support toward Portugal and Greece is causing trepidations in the financial markets, leading to the rise of government bond yields of South European countries (**Chart 5**). In view of the intensifying opposition to the bail-outs among the people of Germany and France who would face heavier burdens, a solution is unlikely anytime soon.

The global economy appears to be destabilizing under the weight of various risk factors, leading to uncertainties on the sustainability of the robust growth up to 2012.

[Chart 5: Yields on 2-yr government bonds of Greece, Portugal, Ireland and Spain]



Source: Bloomberg.

II. The Japanese economy

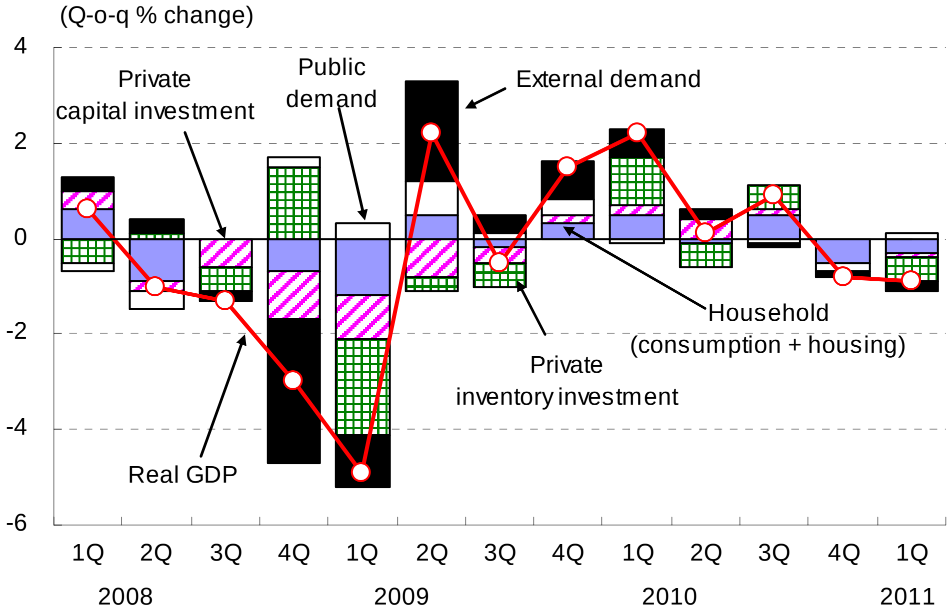
(1) The current state of the economy

The Japanese economy contracted for the second quarter in a row due to the impact of the Earthquake

According to the *First Preliminary Quarterly Estimates of GDP (1st QE)*, Japan's real GDP shrank in the Jan-Mar quarter of 2011 (-0.9% q-o-q, or -3.7% q-o-q p.a.), registering a contraction for the second consecutive quarter (**Chart 6**). Since the Earthquake on March 11th, personal consumption, capital investment, inventory investment and exports dropped sharply, serving as a significant drag upon the rate of Japan's real GDP growth.

Looking closer at each of the components of demand, personal consumption fell 0.6% q-o-q due to consumer cutbacks on nonessential spending and the rolling blackouts after the Earthquake, continuing to fall as in the Oct-Dec quarter of 2010 (-1.0% q-o-q). Housing investment continued to grow (+0.7% q-o-q), given the steady rise of housing starts prior to the Earthquake. Capital investment fell into negative territory (-0.9% q-o-q) due to the fall of capital goods supply after the Earthquake. Private-sector inventory investment dropped sharply because of the suspension of production activity over a wide spectrum of industries (contribution to quarterly real GDP growth: -0.5% pt). Since all the components other than

[Chart 6: Japan's quarterly real GDP growth]



Source: Cabinet Office, *Preliminary Quarterly Estimates of GDP.*

housing investment fell into negative territory, the contribution by domestic private demand fell to -0.9% pt. Despite the ongoing fall of public investment (-1.3% q-o-q), the contribution by public demand stood at +0.1% pt due to the sharp rise of government consumption (+1.0% q-o-q) stemming from the cost of setting up shelters for quake victims. As a result, the contribution by domestic demand to Japan's real GDP growth stood at -0.8% pt. Although exports fell sharply after the Earthquake, a modest rise of exports (+0.7% q-o-q) was maintained due to the solid growth of exports up March 10th. Even so, since export growth fell below that of imports (+2.0% q-o-q), the contribution by external demand remained in negative territory (-0.2% pt) for the third consecutive quarter.

The deflator fell deeper into negative territory

The GDP deflator fell deeper into negative territory (-1.9% y-o-y) from the previous quarter (-1.6% y-o-y). Even though the breadth of the fall of the domestic demand deflator (-1.0% y-o-y) was the same as the fall in the Oct-Dec quarter of 2010, the rise of the import deflator (+1.7% y-o-y → +4.0% y-o-y) due to the rise of commodity prices served to drag down the GDP deflator.

FY2010 real GDP growth: +2.3%

FY2010 real GDP growth stood at +2.3% y-o-y. In addition to the sharp fall in the Jan-Mar quarter of 2011, the downward revision of growth in the Oct-Dec quarter of 2011 to -3.0% q-o-q p.a. (prior to revision: -1.3% q-o-q p.a.) resulted in a sharp drop of the carry-over of growth to FY2011 (-0.7).

(2) Outlook on the Japanese economy in FY2011 and FY2012

Real GDP growth should remain in negative territory in the Apr-Jun quarter due to supply-side constraints

The level of Japan's production activity dropped sharply, given the suspension of operations at many companies immediately after the Earthquake and disruptions due to the rolling blackouts in the Tokyo metropolitan area at the end of March. In March, industrial production dropped 15.5% m-o-m, recording a historical decline on a single-month basis. Even though the level of industrial production should rise from April – with March as the bottom – the recovery of production activity to pre-Earthquake levels may require time due to the slow recovery of supply chains among manufacturers, most notably in the automotive industry. In particular, the operating rate among automakers is forecast to remain at 50%-60% in the Apr-Jun quarter, leading to downward pressures upon exports and personal consumption as a result of a supply shortage. Cars make up approximately 2% of personal consumption and just over 10% of exports. Even though spending on items such as clothing appears to be picking up in April, personal consumption as a whole is forecast to remain on a downward path (-0.3% q-o-q) in the Apr-Jun quarter due in part to the shortage of automotive inventories. Furthermore, exports which had managed to remain in positive territory in the Jan-Mar quarter are expected to fall sharply (-8.3% q-o-q) along with the depletion of inventories of cars and electronic parts, serving to intensify the negative contribution by external demand. Real GDP should fall 0.5% q-o-q (or -1.8% q-o-q p.a.) in the Apr-Jun quarter, recording negative growth for the third consecutive quarter.

Strong growth expected ahead from the Jul-Sep quarter

The Japanese economy is predicted to stage a strong rebound from the Jul-Sep quarter, rallying from the sharp drop of economic activity stemming from factors such as the shortage of parts supply and the implementation of public works for reconstruction.

FY2011 real GDP is subject to downside risks around 0.3%-0.6% pt due to decline of car production

Subsequent to bottoming out in April, exports should gradually pick up along with the restoration of supply chains and start to increase on a quarterly basis from the Jul-Sep quarter. However, even though most industrial sectors are expected to regain normal supply capacities by June, there may be a delay in the time schedule for the full operation of car manufacturers to around the Oct-Dec quarter. Thus, the level of production and exports will not recover to pre-Earthquake levels by this summer. Based upon MHRI's assumptions of a normalization of car production in October (the "main scenario") and in December (the "cautious scenario"), industrial production would fall 1.4% pt and 2.6% pt respectively. The breadth of the fall of real GDP in such event would be 0.3% pt in the main scenario and 0.6% pt in the cautious scenario (**Chart 7**).

[Chart 7: The impact of the fall of car production upon Japan's IP and GDP]

(Change from baseline, %)

	Industrial production (IP)		GDP					
					Personal consumption		Exports	
	Main scenario	Cautious scenario	Main scenario	Cautious scenario	Main	Cautious	Main	Cautious
2011Q2	-5.0	-5.4	-1.2	-1.2	-0.7	-0.8	-4.8	-4.9
2011Q3	-2.6	-4.2	-0.6	-1.0	-0.4	-0.6	-2.5	-3.9
2011Q4	0.1	-1.8	0.0	-0.4	0.0	-0.3	0.1	-1.7
2012Q1	1.7	0.7	0.4	0.2	0.3	0.1	1.6	0.7
FY2011 1H	-3.8	-4.8	-0.9	-1.1	-0.6	-0.7	-3.6	-4.4
FY2011 2H	0.9	-0.5	0.2	-0.1	0.1	-0.1	0.9	-0.5
FY2011	-1.4	-2.6	-0.3	-0.6	-0.2	-0.4	-1.4	-2.4

Note: The baseline assumes a pattern in which FY2011 automotive production increases by 1% per month. The "main scenario" assumes that production activity will normalize in October and the "cautious scenario" assumes the normalization of production activity in December. The impact upon GDP only takes personal consumption and exports into consideration. The impact is calculated upon the assumption that exports and domestic sales of cars will move in tandem with production.

Source: MHRI.

The electrical power constraints over the summer months may push down nationwide production by approximately 2%-4%

Furthermore, there are concerns that the electrical power constraints over the summer months may hamper the recovery of industrial production. According to announcements by the Tokyo Electric Power Company (TEPCO), electric power supply capacity which had fallen to the 30 million kilowatt-level immediately after the Earthquake, is expected to recover to 53.8 million kilowatts by the end of July and 54.8 million kilowatts by the end of August as a result of the restoration of thermal electric power plants which were damaged by the Earthquake, new installations of gas turbine power plants, and pumped-storage power generation (**Chart 8**). Even so, when compared with maximum electric power demand a year ago (July: 59.99 million kilowatts, August: 58.88 million kilowatts), there would be an electric power shortage of 10.3% in July and 6.9% in August. To avoid the implementation of rolling blackouts which have a large impact upon economic activity, companies and industries are devising ways to minimize the impact upon production and business activities such as the adoption of daylight saving time practices, introduction of operational shifts to weekends and nighttime when power usage is typically lower. Since the success of power saving endeavors depends upon efforts in the corporate sector as well as the temperature level over the summer, it would be difficult to predict its impact upon economic activity. Assuming that production activity drops 5%-10% in the area served by the Tohoku Electric Power Co. Ltd., in addition to the areas covered by TEPCO, nationwide industrial production would decline around 2%-4% (**Chart 9**).

Chart 8: Supply and demand of electrical power over the summer months (TEPCO)

(10,000 kW)		July	August
Total		**5,380**	**5,480**
(Increase from end of March)		(1,730)	(1,830)
	Resumption from post-Earthquake suspension/regular inspection	1390	1610
	Installation of gas turbine power plants etc.	80	150
	Pumped-storage power generation	650	650
	Others	-390	-580
(Reference) Maximum demand in 2010		5999	5888
	Rate of shortage	-10.3	-6.9

Notes: Outlook as of May 13th.
"Others": summertime decline of existing thermal generation (-2.6 million kW), accomodation to Tohoku Electric Power Co. (-1.4 million kW), decrease of accomodation by Chubu Electric Power Co., increase of purchases of surplus power from in-house generation, etc. In August, electrical power will decline (-1.9 million kW) due to the suspension of Units 1 and 7 of the Kashiwazaki-Kariwa nuclear power plant for the purpose of inspection.
Source: Made by MHRI based uponh Tokyo Electric Power Company.

Chart 9: Impact of production cuts in the Kanto and Tohoku areas

(%)

Breadth of output cuts in Kanto area	Breadth of output cuts in Tohoku area: 1%	5%	10%	15%
1%	0.4	0.6	0.9	1.2
5%	1.8	2.0	2.3	2.6
10%	3.5	3.8	4.1	4.3
15%	5.3	5.5	5.8	6.1

Note: Breadth of negative impact of production cuts in the Kanto and Tohoku areas upon industrial production.
Source: MHRI.

Reconstruction demand will push up growth from the Jul-Sep quarter

The 1st supplementary budget – earmarking JPY4 trillion for immediate reconstruction costs following the Earthquake (of which public works account for JPY1.6 trillion) – was passed on May 2nd. Ever since the Jan-Mar quarter, government spending has been climbing due to the increase of expenses necessary to set up temporary housing and remove debris and rubble. From the Jul-Sep quarter, the growth of public investment is expected to accelerate, given the implementation of the supplementary budget, thereby pushing up the rate of real GDP growth.

MHRI's current economic outlook is based upon the assumption that the reconstruction-related budget (based upon government funds) including spending from FY2012 onward will total JPY15.6 trillion (of which public works account for JPY10.8 trillion). This includes the 2nd supplementary budget of JPY3.4 trillion (of which public works account for JPY2.2 trillion) during FY2011 and JPY5.2 trillion (of which public works account for JPY4.5 trillion) earmarked in FY2012 (**Chart 10**). To fund the spending, we assume a freeze of the child allowance (and the reinstatement of the childcare allowance which is subject to income limitations) from the second half of FY2011 (**Chart 11**). Furthermore, we assume that (1) there will be no income tax and consumption tax hikes in FY2012, (2) the budget will be financed mainly by the child allowance freeze and contingency reserves and surplus funds, and (3) the shortage will be funded by the issuance of government bonds. Assumptions on the amount of additional government bond issues are as follows: JPY2.4 trillion in FY2011 and JPY2.1 trillion in FY2012.

FY2011 real GDP forecast: +0.6%

Even though the slow recovery of automotive production and electrical power conservation will serve as a drag, strong growth is expected ahead in the Jul-Sep quarter (+1.3% q-o-q, or +5.4% q-o-q p.a.) due to (1) the rebound of exports as

Chart 10: Assumptions in the reconstruction-related budget

(JPY trillion)

	FY2011	1st supplementary budget	2nd supplementary budget onward	FY2012	FY2013 onward	Total
Public works	3.8	1.6	2.2	4.5	2.5	10.8
Cost of purchasing flooded land	0.0	–	0.0	0.5	0.5	1.0
Costs other than purchases of flooded land	3.8	1.6	2.2	4.0	2.0	9.8
Disposal of debris and rubble	0.6	0.4	0.2	0.0	0.0	0.6
Temporary housing	0.6	0.4	0.2	0.0	0.0	0.6
Condolence money etc.	0.2	0.1	0.1	0.1	0.1	0.4
Disaster-related loans	0.8	0.6	0.2	0.1	0.1	1.0
Agriculture, forestry & fisheries/employment measures	0.6	0.3	0.3	0.5	0.3	1.4
Reduction/exemption of healthcare costs	0.2	0.1	0.1	0.0	0.0	0.2
Others	0.7	0.6	0.1	0.0	0.0	0.7
Total	7.4	4.0	3.4	5.2	3.0	15.6

Source: Made by MHRI based upon various data and releases.

Chart 11: Assumptions in the financial resources to fund the reconstruction

(JPY trillion)

	FY2011	1st supplementary budget	2nd supplementary budget onward	FY2012
Financial resources utilized in the 1st supplementary budget				
Use of "hidden treasures" (reduction of government financial contribution for basic pension)	2.5	2.5	0.0	0.0
Utilization of contingency reserve	0.8	0.8	0.0	0.8
Freeze-up of child allowance	1.0	0.2	0.8	1.8
Freeze-up of social experiement making expressway tolls free	0.1	0.1	0.0	0.1
Reduction of ODA & utilization of funds for the Development of Areas Adjacent to Electric Power Generating Facilities	0.1	0.1	0.0	0.0
Freeze-up of new expressway tolls	0.3	0.3	0.0	0.0
Prospective financial resources for the 2nd supplementary budget onward				
General budget surplus from the previous fiscal year	0.9	0.0	0.9	0.4
Reduction of personnel expenses for civil servants	0.3	0.0	0.3	0.3
Transfer from other public works	0.3	0.0	0.3	0.3
Deferment of corporate tax rate cut	0.4	0.0	0.4	0.6
Total amount	6.3	4.0	2.3	3.7
Necessary amount	7.4	4.0	3.4	5.2
Tax revenue shortfall due to Earthquake	1.3	0.0	1.3	0.6
Shortage (issuance of government bonds)	2.4	0.0	2.4	2.1

Source: Made by MHRI based upon various data and releases.

companies in most industrial sectors regain their supply capacity, and (2) the rise of public investment stemming from reconstruction demand. In the Oct-Dec quarter, exports should continue to grow strongly along with the normalization of automotive production and the resolution of electrical power constraints. Automotive sales should rise as supply constraints are dispelled, leading to the acceleration of personal consumption. Capital investment should start to gather momentum from the Apr-Jun quarter along with the resolution of the shortage of materials and reach approximately +2% q-o-q in the Jul-Sep and Oct-Dec quarters, based upon prospects of investment to restore facilities damaged by the Earthquake. Likewise in the Jan-Mar quarter of 2012, Japan’s economy is forecast to grow at a solid pace of +0.7% q-o-q (or +2.8% q-o-q p.a.), driven by the upturn of personal consumption and expansion of public demand. As a result, the rate of real GDP growth should reach +0.6% in FY2011. In MHRI’s *Economic Outlook* (as of April 5, 2011) revised immediately after the Earthquake, we predicted that the rate of growth in FY2011 would reach +1.3%. The main reason for the downward revision stems from a larger-than-initially expected impact of supply constraints such as cars, leading us to revise down our forecast on quarterly growth in the Apr-Jun quarter mainly with respect to exports and personal consumption.

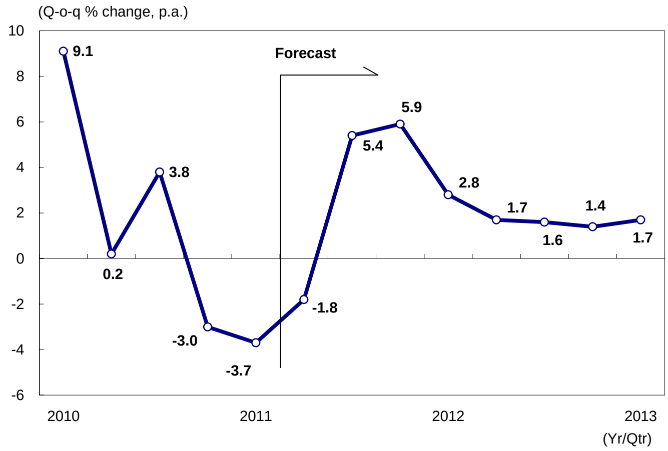
FY2012 real GDP forecast: +2.6%

As the year progresses in FY2012, the rebound from the fall after the Earthquake should subside and the pace of growth is expected to settle down to around +1 to +2% p.a. (the pace of cruise mode prior to the Earthquake) (**Chart 12**). Even though public demand will remain at a high level due to reconstruction demand, the pace of growth will slow down and have a smaller contribution to growth. On the other hand, domestic private demand will serve as a driver of growth, given the rise of personal consumption reflecting the recovery of employment and income and the continuing rise of capital investment along with the improvement of corporate business performance. Real GDP growth in FY2012 is forecast to rise to +2.6% (*Economic Outlook* as of April 5th: +2.2%), given a large carry-over of growth to FY2012 (forecast: +1.7%) due to the strong growth in the second half of FY2011.

Personal consumption will fall in FY2012 in the event the consumption tax or income tax rate is raised

There are various uncertainties in our outlook above, ranging from when the supply chains will be restored, when and how much demand will be generated in connection with reconstruction, to the future course of the electrical power constraints. In particular, it should be noted that the outlook on FY2012 would differ considerably depending upon how the costs for reconstruction are financed. Even though our latest outlook is based upon the assumption that there will be no significant household burdens other than the freeze of the child allowance, there are persistent views that a tax hike would be necessary in order to secure the financial sources for reconstruction. If the costs of reconstruction are financed by income tax and/or consumption tax hikes which are accompanied by household burdens, such measures would have a negative impact upon personal consumption and housing investment. For example, even though a 1% hike of the consumption tax would generate tax revenues of approximately JPY2.3 trillion, the erosion of income in real terms as a result of the rise of prices would lower personal consumption in FY2012. Moreover, since the tax hike would lead to a last-minute rush of demand in the second half of FY2011 and a subsequent backlash in FY2012, personal consumption would rise in FY2011 and drop in FY2012. On the other hand, in order to generate the same amount of tax revenues as in a 1% consumption tax hike by an income tax hike, a tax hike of approximately 18% (in terms of tax rates, +1.8% in the 10% income tax bracket) would be necessary (**Chart 13**). In the case of an income tax hike, FY2012 personal consumption would be pushed down through the decline of household disposable income.

Chart 12: Quarterly real GDP growth



Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP.*

Chart 13: Tax hike necessary to secure financial resources

Tax hike	Breadth of consumption tax hike	Breadth of income tax hike
JPY2.3 tril	+1%	18%
JPY4.7 tril	+2%	37%
JPY7.0 tril	+3%	55%

Source: Made by MHRI based upon Cabinet Office, *National Accounts.*

The Earthquake will only have a limited impact upon prices

Thus far, MHRI has calculated the output gap as a reference for its price forecast. However, in addition to the damage to capital stock in the areas ravaged by the Earthquake, Japan's potential supply capacity has declined sharply due to constraints upon the supply of electrical power and manufacturing parts. Under these circumstances, it has become extremely difficult to calculate the output gap by our past method (which estimates potential GDP on the basis of a production function with labor and private-sector capital stock as the sole factors of production).

Therefore, we have calculated the output gap by taking into consideration the supply constraints mentioned above. In Pattern 1, which only takes into consideration the decline of potential GDP due to the damage of capital stock, the output gap as of the Jan-Mar quarter of 2011 is estimated to be -4.5% of potential GDP and -5.1% as of the Apr-Jun quarter of 2011 (**Chart 15**). The results portray that the output gap is falling deeper into negative territory, indicating the intensification of deflationary risks. However, these results are not consistent with the actual state of the economy where a supply crunch is occurring with respect to certain goods due to strong supply constraints.

Pattern 2 takes into consideration the decline of potential GDP stemming from supply constraints upon electrical power and parts supply in the transport equipment industry. In Pattern 2, the breadth of the output gap in negative territory is estimated to narrow from -3.9% of potential GDP as of the Jan-Mar quarter to -3.1% in the Apr-Jun quarter. Even though these estimations are in no ways complete, given its treatment of the depressed level of real GDP due to supply-side constraints as "demand", this still appears to provide a better portrayal of the current state of the economy.

In the event the Japanese economy progresses according to our latest outlook, the breadth of the negative output gap in Pattern 2 would gradually contract from the Jul-Sep quarter. Even so, a slight supply overhang (-1.5% of potential GDP) is expected to linger even at the end of FY2012. Thus, it appears that it will be difficult for Japan to emerge out of deflation during FY2012. Forecasts on the CPI (general, excluding food (excluding alcohol) and energy, referred to as the "US-based core CPI") are as follows: FY2011 -0.0%, and FY2012 +0.2%. Given a rebase of the CPI in the summer, the US-based core CPI will be revised down to -0.6% in FY2011 and -0.3% in FY2012, making an upturn into positive territory unlikely. Even though the CPI (general, excluding fresh food, referred to as the "Core CPI") is expected to rise slightly even after the rebase, due primarily to the rise of energy prices, it should not be viewed as a sign of a departure from deflation under the current circumstance since the upturn would not lead readily to the rise of wages.

[Chart 14: Outlook on the Japanese economy]

		FY2009	FY2010	FY2011	FY2012	2010				2011				2012				2013
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
GDP (real)	Q-o-q % ch	-2.4	2.3	0.6	2.6	2.2	0.1	0.9	-0.8	-0.9	-0.5	1.3	1.4	0.7	0.4	0.4	0.4	0.4
	Q-o-q % ch p.a.	--	--	--	--	9.1	0.2	3.8	-3.0	-3.7	-1.8	5.4	5.9	2.8	1.7	1.6	1.4	1.7
Domestic demand	Q-o-q % ch	-2.7	1.5	0.9	2.1	1.7	-0.2	1.1	-0.7	-0.8	0.2	0.9	1.0	0.7	0.3	0.5	0.3	0.3
Private sector demand	Q-o-q % ch	-5.0	1.9	0.6	2.6	2.4	-0.3	1.6	-0.7	-1.2	0.1	0.8	1.2	0.8	0.3	0.7	0.5	0.6
Personal consumption	Q-o-q % ch	-0.0	0.8	-0.4	1.2	0.9	-0.2	0.8	-1.0	-0.6	-0.3	0.3	0.5	0.6	-0.1	0.2	0.2	0.6
Housing investment	Q-o-q % ch	-18.2	-0.2	2.4	4.9	1.4	-0.6	1.9	3.2	0.7	-0.8	0.2	1.6	-1.1	2.0	2.2	1.8	0.9
Capital investment	Q-o-q % ch	-13.6	4.5	3.5	4.7	1.4	2.7	1.1	0.1	-0.9	1.0	2.1	1.8	0.8	1.0	1.5	0.6	1.0
Inventory investment	Q-o-q contribution, % pt	-1.1	0.4	0.2	0.4	1.0	-0.5	0.5	-0.0	-0.5	0.2	0.1	0.3	0.2	0.1	0.1	0.1	-0.1
Public sector demand	Q-o-q % ch	5.2	0.1	1.7	0.5	-0.4	0.2	-0.3	-0.6	0.6	0.4	1.1	0.4	0.2	0.3	-0.2	-0.3	-0.5
Government consumption	Q-o-q % ch	3.5	2.3	1.9	0.5	-0.4	1.2	0.3	0.4	1.0	0.4	0.5	0.3	0.1	0.1	0.0	0.1	0.1
Public investment	Q-o-q % ch	14.2	-10.0	1.2	0.1	-0.7	-4.5	-2.5	-6.0	-1.3	0.7	4.8	1.0	1.0	1.6	-1.4	-2.3	-3.9
External demand	Q-o-q contribution, % pt	0.3	0.9	-0.2	0.2	0.6	0.2	-0.1	-0.1	-0.2	-0.4	0.4	0.3	-0.1	0.1	-0.1	0.0	0.0
Exports	Q-o-q % ch	-9.6	17.0	-0.1	9.5	6.7	5.2	1.6	-0.8	0.7	-8.3	5.5	6.5	2.7	1.6	0.2	1.3	1.6
Imports	Q-o-q % ch	-11.0	10.9	1.2	8.0	2.9	4.1	2.9	-0.3	2.0	-6.0	2.9	4.7	3.4	0.9	0.6	1.2	1.3
GDP (nominal)	Q-o-q % ch	-3.7	0.4	-0.9	1.4	2.2	-1.0	0.6	-1.1	-1.3	-1.1	1.0	1.2	0.5	-1.0	1.1	0.4	0.9
GDP deflator	Y-o-y % ch	-1.3	-1.9	-1.5	-1.1	-2.8	-2.0	-2.1	-1.6	-1.9	-1.5	-1.7	-1.6	-1.1	-2.3	-1.1	-1.0	-0.2
Domestic demand deflator	Y-o-y % ch	-2.2	-1.1	-0.5	-0.2	-1.4	-0.9	-1.4	-1.0	-1.0	-0.6	-0.6	-0.5	-0.1	-0.5	-0.2	-0.2	0.0

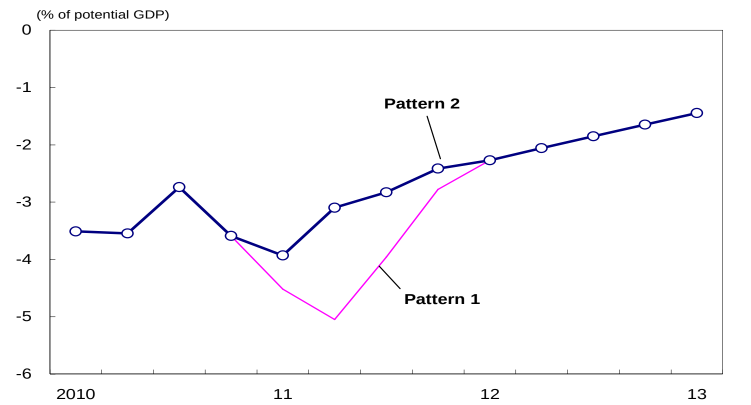
Source: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP*.

		FY2009	FY2010	FY2011	FY2012	2010				2011				2012				2013
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Industrial production	Q-o-q % ch	-8.8	8.9	1.2	9.0	7.4	0.7	-1.0	-0.1	-2.0	-5.0	5.2	6.7	3.5	0.6	0.2	1.2	1.3
Ordinary profits	Y-o-y % ch	2.1	32.4	-4.1	15.7	163.8	83.4	54.1	27.3	-9.3	-22.4	2.4	2.1	4.8	13.1	26.4	15.7	7.3
Nominal labor compensation	Y-o-y ch	-3.6	0.9	-0.2	0.8	-0.2	1.2	1.2	0.8	0.3	-0.3	-0.5	-0.1	0.3	0.7	1.0	1.0	0.5
Unemployment rate	%	5.2	5.0	4.8	4.5	5.1	5.1	5.0	5.0	4.7	4.8	4.9	4.9	4.6	4.7	4.6	4.5	4.3
New housing starts	P.a., 10,000 units	77.5	81.9	83.0	90.0	81.6	77.6	81.5	84.3	84.2	81.1	82.3	84.4	84.3	85.5	86.5	87.3	87.9
Current account balance	P.a., JPY tril	15.8	15.9	10.6	9.7	18.1	15.6	17.6	17.3	12.2	8.0	11.5	13.2	9.0	6.1	11.5	11.4	8.4
Domestic corporate goods prices	Y-o-y % ch	-5.2	0.7	2.6	1.3	-1.7	0.2	-0.1	1.0	1.7	2.2	3.0	2.9	2.3	1.7	1.5	1.1	0.8
Consumer prices	Y-o-y % ch	-1.6	-0.8	0.6	0.7	-1.2	-1.2	-1.1	-0.5	-0.2	0.4	0.7	0.6	0.6	0.6	0.7	0.7	0.7
Uncollateralized overnight call rate	%	0.08	0.06	0～0.10	0～0.10	0.08	0.10	0.11	0.08	0.06	0～0.10	0～0.10	0～0.10	0～0.10	0～0.10	0～0.10	0～0.10	0～0.10
Yield on newly-issued 10-yr JGBs	%	1.35	1.13	1.23	1.46	1.34	1.21	0.99	1.07	1.24	1.19	1.20	1.25	1.30	1.35	1.45	1.50	1.55
Nikkei average	JPY	9,974	9,961	10,200	11,000	10,503	10,343	9,357	9,836	10,308	9,700	10,000	10,300	10,600	10,600	10,800	11,100	11,400
Exchange rate	JPY/USD	93.0	86.0	84.0	89.0	90.7	92.0	85.9	82.6	82.3	83.0	83.0	85.0	86.0	87.0	88.0	90.0	92.0
Crude oil price (WTI nearest term contract)	USD/bbl	71.0	84.0	114.0	126.0	78.9	78.1	76.2	85.2	94.6	104.0	110.0	117.0	125.0	128.0	126.0	125.0	126.0

Notes: 1. The readings above may differ from public releases because the rates of change are calculated based upon actual results.
2. Ordinary profits are based upon the *Financial Statements Statistics of Corporations by Industry (all industries)*.
3. Consumer prices exclude fresh food.
4. Quarterly data on the unemployment rate, new housing starts and current account balance are seasonally-adjusted.
5. Of the finance-relate indices, the uncollateralized overnight call rate refers to the rate at the end of term and all others are averages during the relevant terms.

Sources: Made by MHRI based upon Cabinet Office, *Preliminary Quarterly Estimates of GDP*, Ministry of Economy, Trade and Industry, *Indices of Industrial Production*, Ministry of Finance, *Financial Statements Statistics of Corporations by Industry, Quarterly*, Ministry of Internal Affairs and Communications, *Labor Force Survey, Consumer Price Index*, Ministry of Land, Infrastructure, Transport and Tourism, *Current Survey on Construction Statistics*, Bank of Japan, *Balance of Payments*, *Corporate Goods Price Index*, *Financial and Economic Statistics Monthly, Foreign Exchange Rates*, Japan Bond Trading Co., Ltd., *Latest Daily JGB Rates*, Nikkei Inc. and Bloomberg.

[Chart 15: Estimates of the output gap]



Note: The estimate in Pattern 1only takes into consideration the Earthquake's damage to capital stock.
The estimate in Pattern 2 takes into consideration supply constraints upon parts and electrical power.

Sources: Made by MHRI based upon Cabinet Office, *National Accounts.*

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