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Japan's Economic Outlook No. 176

Will Abenomics Rehabilitate Japan's Economy?

Japan to see real GDP growth of +0.9% in FY12, +2.7% in FY13, and +0.4% in FY14, nominal GDP growth of +0.1%, +2.1%, and +1.5%

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Main Points

- **Economic outlook revised:** In light of the first preliminary Oct-Dec 2012 GDP report (Cabinet Office), we have revised our economic growth outlook for FY12-14. We had provisionally revised our outlook upward on 18 January in view of the formation of the Abe administration, but now forecast real GDP growth of +0.9% y/y for FY12 (provisional forecast as of 18 January: +1.3%; forecast before the formation of the Abe administration: +1.0%), +2.7% for FY13 (+2.2% and +1.1%, respectively), and +0.4% for FY14 (provisional forecast as of 18 January: +0.3%). Forecast revisions were made by taking a broad account of such factors as the formation of a large-scale supplementary budget, and the ongoing depreciation of the yen/ascent of share prices accompanying the Bank of Japan (BOJ)'s adoption of inflation targeting.

- **Will Abenomics Rehabilitate Japan's Economy?:** In our current outlook, we provide a multifaceted examination of the economic policies of the Abe administration (so-called Abenomics). Abenomics prioritizes three thrusts: (1) bold monetary policies, (2) flexible fiscal policies, and (3) growth strategies to stimulate private sector investment. We believe that Abenomics has the potential of sparking the revival of Japan's economy and that its basic direction is set on the right course. In this report, we examine four concerns that Japanese citizens have regarding Abenomics. First, there is the risk that the government failing to maintain fiscal discipline will invite the triple blow of falling JGB prices, falling stock prices, and a falling yen. Second, criticism is being widely voiced that medium- to long-term improvements in the nation's economic foundation and structural reforms are currently insufficient. Third, there is concern that employee income will not grow as inflation progresses. And fourth, there is also worry that Abenomics will benefit large companies but small companies will be left out. Our analysis of these four concerns led us to the conclusion that the first two are the most worrisome. That is to say, the key to the future success of Abenomics will be (1) selective investment in public works projects while maintaining fiscal discipline and (2) the implementation of policies to improve the foundations of Japan's economy, such as

deregulation, participation in the Trans-Pacific Strategic Economic Partnership Agreement (TPP), and the reduction of the effective tax rate borne by corporations.

- **Main scenario for Japan's economy:** Japan's economy slipped into recession after peaking in March 2012. The economy now appears to have hit bottom in November 2012 and to have bottomed out. It is expected to continue expanding, supported by (1) the recovery of the US and Chinese economies, (2) the continuation of reconstruction demand and the formation of a large-scale supplementary budget, and (3) the ongoing depreciation of the yen/ascent of share prices accompanying BOJ's adoption of inflation targeting. With regard to the last, we believe that a correction of the yen's excessive appreciation is currently underway in foreign exchange markets. Also, a comparison with the real economy suggests that stock prices are potentially still undervalued at current levels.

- **Risks facing Japan's economy:** Risks that will need to be borne in mind regarding Japan's economy are: (1) any deepening of the European sovereign debt crisis, reflecting likely political instability in Italy and Spain, (2) any worsening of Japan-China relations, (3) the US fiscal issue, and (4) a surge in crude oil prices stemming from geopolitical risk.

- **BOJ monetary policy:** The BOJ adopting inflation targeting in January 2013 can be applauded to some degree. The BOJ, however, will need to ease monetary policy further, such as by actively purchasing risk assets (ETFs and other such assets). Another issue the BOJ will likely need to address is improving communication with the markets.

Our assumptions

- Public works spending will grow +14.7% in FY12, +12.3% in FY13, and –15.8% in FY14; the consumption tax rate will be increased in April 2014

- Average exchange rate of Y82.9/$ in FY12, Y95.0/$ in both FY13 and FY14

- US real GDP growth of +2.0% in CY13 and +2.6% in CY14

Main Economic Indicators and Real GDP Components

	FY12 (Estimate)	FY13 (Estimate)	FY14 (Estimate)	CY12	CY13 (Estimate)	CY14 (Estimate)
Main economic indicators						
Nominal GDP (y/y %)	0.1	2.1	1.5	1.1	0.6	2.3
Real GDP (chained [2005]; y/y %)	0.9	2.7	0.4	1.9	1.4	1.6
Domestic demand (contribution, % pt)	1.7	2.5	-0.6	2.8	1.8	1.0
Foreign demand (contribution, % pt)	-0.9	0.1	0.9	-0.9	-0.3	0.5
GDP deflator (y/y %)	-0.8	-0.5	1.1	-0.8	-0.8	0.7
Index of All-industry Activity (y/y %)*	0.4	2.4	2.0	0.8	1.5	2.7
Index of Industrial Production (y/y %)	-3.1	3.0	4.6	-0.3	-0.0	5.0
Index of Tertiary Industry Activity (y/y %)	1.1	2.2	1.4	1.2	1.6	2.1
Corporate Goods Price Index (y/y %)	-0.9	1.3	3.2	-0.8	1.0	2.6
Consumer Price Index (excl. fresh food; y/y %)	-0.2	0.2	2.6	-0.1	-0.0	2.0
Unemployment rate (%)	4.3	4.1	4.0	4.3	4.2	4.0
Government bond yield (10 year; %)	0.80	0.95	1.11	0.84	0.90	1.07
Money stock; M2 (end-period; y/y %)	2.3	1.7	1.5	2.5	1.8	1.5
Balance of payments						
Trade balance (Y tril)	-7.2	-9.5	-5.3	-5.9	-9.5	-6.8
Current balance ($100 mil)	433	242	795	585	192	594
Current balance (Y tril)	3.5	2.3	7.6	4.7	1.8	5.6
(% of nominal GDP)	0.7	0.5	1.5	1.0	0.4	1.2
Real GDP components (Chained [2005]; y/y %; figures in parentheses: contribution, % pt)						
Private final consumption	1.4 (0.8)	1.5 (0.9)	-0.9 (-0.5)	2.3 (1.4)	0.7 (0.4)	0.4 (0.3)
Private housing investment	4.9 (0.1)	6.6 (0.2)	-4.9 (-0.1)	2.9 (0.1)	7.1 (0.2)	-1.9 (-0.1)
Private fixed investment	-1.7 (-0.2)	2.3 (0.3)	5.6 (0.7)	1.7 (0.2)	-1.0 (-0.1)	5.9 (0.8)
Government final consumption	2.4 (0.5)	1.4 (0.3)	1.1 (0.2)	2.6 (0.5)	1.5 (0.3)	1.2 (0.2)
Public fixed investment	14.8 (0.6)	10.8 (0.5)	-16.9 (-0.8)	12.3 (0.5)	12.8 (0.6)	-8.7 (-0.5)
Exports of goods and services	-2.3 (-0.4)	2.8 (0.4)	8.7 (1.4)	-0.3 (-0.0)	-0.9 (-0.1)	8.4 (1.3)
Imports of goods and services	3.6 (-0.5)	2.7 (-0.4)	3.4 (-0.5)	5.3 (-0.9)	1.3 (-0.2)	4.1 (-0.8)
Major assumptions:						
1. World economy						
Economic growth of major trading partners	3.1	3.5	4.0	3.1	3.3	3.9
Crude oil price (WTI futures; $/bbl)	92.3	95.0	95.0	94.1	95.1	95.0
2. US economy						
US real GDP (chained [2005]; y/y %)	2.0	2.1	2.7	2.2	2.0	2.6
US Consumer Price Index (y/y %)	1.8	2.1	2.2	2.1	2.0	2.1
3. Japanese economy						
Nominal public fixed investment (y/y %)	14.7	12.3	-15.8	12.1	14.2	-7.6
Exchange rate (Y/$)	82.9	95.0	95.0	79.8	94.2	95.0
(Y/€)	107.5	125.0	125.0	103.5	124.4	125.0
Call rate (end-period; %)	0.10	0.10	0.10	0.10	0.10	0.10

Source: Compiled by DIR.
Note: Due to rounding, actual figures may differ from those released by the government.
* Excl. agriculture, forestry, and fisheries.
Estimate: DIR estimate.

Comparison with Previous Outlook

	Current outlook (Outlook 176)			Previous outlook (Outlook 175 Update)		Difference between previous and current outlooks	
	FY12	FY13	FY14	FY12	FY13	FY12	FY13
Main economic indicators							
Nominal GDP (y/y %)	0.1	2.1	1.5	0.3	0.8	-0.2	1.3
Real GDP (chained [2005]; y/y %)	0.9	2.7	0.4	1.0	1.1	-0.1	1.5
Domestic demand (contribution, % pt)	1.7	2.5	-0.6	1.9	1.2	-0.2	1.3
Foreign demand (contribution, % pt)	-0.9	0.1	0.9	-0.9	-0.2	0.0	0.2
GDP deflator (y/y %)	-0.8	-0.5	1.1	-0.7	-0.4	-0.1	-0.2
Index of All-industry Activity (y/y %)*	0.4	2.4	2.0	0.4	0.5	0.0	1.9
Index of Industrial Production (y/y %)	-3.1	3.0	4.6	-2.8	1.1	-0.3	1.9
Index of Tertiary Industry Activity (y/y %)	1.1	2.2	1.4	0.5	0.1	0.5	2.1
Corporate Goods Price Index (y/y %)	-0.9	1.3	3.2	-1.0	0.3	0.1	1.0
Consumer Price Index (excl. fresh food; y/y %)	-0.2	0.2	2.6	-0.1	-0.1	-0.1	0.3
Unemployment rate (%)	4.3	4.1	4.0	4.3	4.3	-0.1	-0.1
Government bond yield (10 year; %)	0.80	0.95	1.11	0.83	0.99	-0.03	-0.04
Money stock; M2 (end-period; y/y %)	2.3	1.7	1.5	2.3	1.7	0.0	-0.0
Balance of payments							
Trade balance (Y tril)	-7.2	-9.5	-5.3	-6.5	-6.5	-0.8	-3.0
Current balance ($100 mil)	433	242	795	521	529	-88	-286
Current balance (Y tril)	3.5	2.3	7.6	4.2	4.2	-0.7	-1.9
(% of nominal GDP)	0.7	0.5	1.5	0.9	0.9	-0.1	-0.4
Real GDP components (chained [2005]; y/y %)							
Private final consumption	1.4	1.5	-0.9	1.2	0.9	0.2	0.6
Private housing investment	4.9	6.6	-4.9	3.0	5.4	2.0	1.2
Private fixed investment	-1.7	2.3	5.6	0.0	1.2	-1.7	1.1
Government final consumption	2.4	1.4	1.1	2.4	1.2	-0.0	0.3
Public fixed investment	14.8	10.8	-16.9	13.5	-2.0	1.3	12.8
Exports of goods and services	-2.3	2.8	8.7	-1.3	0.7	-1.0	2.1
Imports of goods and services	3.6	2.7	3.4	4.8	1.9	-1.2	0.8
Major assumptions:							
1. World economy							
Economic growth of major trading partners	3.1	3.5	4.0	3.0	3.4	0.1	0.1
Crude oil price (WTI futures; $/bbl)	92.3	95.0	95.0	93.9	95.0	-1.6	0.0
2. US economy							
US real GDP (chained [2005]; y/y %)	2.0	2.1	2.7	2.0	2.0	-0.0	0.1
US Consumer Price Index (y/y %)	1.8	2.1	2.2	1.8	2.1	0.0	-0.0
3. Japanese economy							
Nominal public fixed investment (y/y %)	14.7	12.3	-15.8	13.5	-1.2	1.2	13.5
Exchange rate (Y/$)	82.9	95.0	95.0	79.7	80.0	3.2	15.0
(Y/€)	107.5	125.0	125.0	99.8	100.0	7.7	25.0
Call rate (end-period; %)	0.10	0.10	0.10	0.10	0.10	0.00	0.00

Source: Compiled by DIR.
Notes: Due to rounding, differences do not necessarily conform to calculations based on figures shown.
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Contents

Summary

Economic outlook revised

In light of the first preliminary Oct-Dec 2012 GDP report (Cabinet Office), we have revised our economic growth outlook for FY12-14. We had provisionally revised our outlook upward on 18 January in view of the formation of the Abe administration, but now forecast real GDP growth of +0.9% y/y for FY12 (provisional forecast as of 18 January: +1.3%; forecast before the formation of the Abe administration: +1.0%), +2.7% for FY13 (+2.2% and +1.1%, respectively), and +0.4% for FY14 (provisional forecast as of 18 January: +0.3%). Forecast revisions were made by taking a broad account of such factors as the formation of a large-scale supplementary budget, and the ongoing depreciation of the yen/ascent of share prices accompanying the Bank of Japan (BOJ)'s adoption of inflation targeting.

Oct-Dec 2012 real GDP contracted an annualized 0.4% q/q in the first preliminary estimate

The first preliminary estimate of Oct-Dec real GDP (Cabinet Office) posted a slide of 0.1% q/q, annualized at –0.4%, negative growth for the third quarter in a row and falling short of the market consensus (+0.1%; annualized at +0.4%). Domestic demand saw the first positive contribution to q/q GDP growth in two quarters (+0.1 percentage point), while foreign demand saw the third quarterly negative contribution in a row (–0.2 points), dragging down real GDP growth. The negative contribution of foreign demand was as expected. In contrast, due to the negative contribution of private inventories (–0.2 points), the positive contribution of domestic demand undershot expectations, which is responsible for the lower-than-expected growth of real GDP.

Personal consumption increased 0.4% q/q, the first gain in two quarters. Spending on durable goods saw a substantial slide of 6.5%, following the end to the eco-car subsidy program. Spending on semi-durable and non-durable goods increased, accompanied by strong sales of seasonal goods due to lower temperatures, driving personal consumption. However, real employee compensation declined 0.5%, indicating that the weather factor pushed up personal spending beyond its underlying trend. Public investment increased 1.5%, the fourth consecutive quarterly gain, and pushed up domestic demand, thanks to the progress of reconstruction projects. Capex declined 2.6%, the fourth quarterly slide in a row. Lower production has led to lower capacity utilization rates for manufacturing industries, which is responsible for their persistently cautious attitude toward capex. Exports declined 3.7%, the second consecutive quarterly slide. In *Trade Statistics of Japan* (Ministry of Finance), export volume has been on a downtrend, regardless of shipments to the US, EU, or Asian trading partners, reflecting the slowdown in overseas economies. Imports declined 2.3% for the second quarter in a row due to sluggish exports and production. The plunge in exports was not offset by the slide in imports. Thus, foreign demand (net exports) pulled down GDP growth substantially for the third consecutive quarter.

Nominal GDP declined (–0.4% q/q; annualized at –1.8%) for the third consecutive quarter. The GDP deflator saw a slide of 0.3% q/q for the 16th consecutive quarter and a slide of 0.6% y/y, the 13th quarterly slide in a row and evidence that a deflationary trend continues.

Will Abenomics Rehabilitate Japan's Economy?

In our current outlook, we provide a multifaceted examination of the economic policies of the Abe administration (so-called Abenomics). Abenomics prioritizes three thrusts: (1) bold monetary policies, (2) flexible fiscal policies, and (3) growth strategies to stimulate private sector investments. We believe that Abenomics has the potential of sparking the revival of Japan's economy and that its basic direction is set on the right course. In this report, we examine four concerns that Japanese citizens have regarding Abenomics. First, there is the risk that the government failing to maintain fiscal discipline will invite the triple blow of falling JGB prices, falling stock prices, and a falling yen. Second,

criticism is being widely voiced that medium- to long-term improvements in the nation's economic foundation and structural reforms are currently insufficient. Third, there is concern that employee income will not grow as inflation progresses. And fourth, there is worry that Abenomics will benefit large companies but small companies will be left out. Our analysis of these four concerns led us to the conclusion that the first two are the most worrisome for Abenomics. That is to say, the key to the future success of Abenomics will be (1) selective investment in public works projects while maintaining fiscal discipline and (2) the implementation of policies to improve the foundations of Japan's economy, such as deregulation, participation in the Trans-Pacific Strategic Economic Partnership Agreement (TPP), and the reduction of the effective tax rate borne by corporations.

Main scenario for Japan's economy

Japan's economy slipped into recession after peaking in March 2012. The economy now appears to have hit bottom in November 2012 and to have bottomed out. It is expected to continue expanding, supported by (1) the recovery of the US and Chinese economies, (2) the continuation of reconstruction demand and the formation of a large-scale supplementary budget, and (3) the ongoing depreciation of the yen/ascent of stock prices accompanying the BOJ's adoption of inflation targeting. With regard to the last, we believe that a correction of the yen's excessive appreciation is currently under way in foreign exchange markets. Also, a comparison with the real economy suggests that stock prices are potentially still undervalued at current levels.

Risks facing Japan's economy

Risks that will need to be borne in mind regarding Japan's economy are: (1) any deepening of the European sovereign debt crisis, reflecting likely political instability in Italy and Spain, (2) any worsening of Japan-China relations, (3) the US fiscal issue, and (4) a surge in crude oil prices stemming from geopolitical risk.

BOJ monetary policy

The BOJ adopting inflation targeting in January 2013 can be applauded to some degree. The BOJ, however, will need to ease monetary policy further, such as by actively purchasing risk assets (ETFs and other such assets). Another issue the BOJ will likely need to address is improving communication with the markets.

1. Will Abenomics Rehabilitate Japan's Economy?

1.1 Current situation and future issues

Three priorities

In our current outlook, we provide a multifaceted examination of the economic policies of the Abe administration (so-called Abenomics). Abenomics prioritizes three thrusts (1) bold monetary policies, (2) flexible fiscal policies, and (3) growth strategies to stimulate private-sector investments. We believe that Abenomics has the potential of sparking the revival of Japan's economy and that its basic direction is set on the right course.

Bold monetary policies steadily yielding results

Of the three priority areas Abenomics is focusing on, the first, bold monetary policies, is steadily yielding results. At its Policy Board meeting of 21-22 January 2013, the BOJ established a new policy framework, namely a 2% target for the inflation rate. With the BOJ strengthening its stance toward monetary easing, the yen has weakened dramatically and stock prices have shot upward.

A pending issue for the BOJ is to resolutely ease monetary policy further by actively incorporating risk assets (ETFs and other such assets) in its asset purchase program. It goes without saying that improving communication with the markets will be indispensable, a subject that the BOJ has not looked at for some time.

(1) Bold monetary policy: Already yielding results

Issue: Further monetary easing by BOJ

—Move proactively into risk assets (ETFs, etc) and foreign bonds

—Improve ability to communicate with market

(2) Flexible fiscal policy: Uncertainty remains

Issue: Maintaining fiscal discipline

—Strengthening resilience of nation's infrastructure: Risk of bloated public spending under guise of protecting lives and assets of citizens

—Risk of budget deficit expanding, JGBs plunging (rise in long-term interest rate), then weaker yen and lower stock prices

(3) Growth strategy: Not underway yet

Issue: Improving/restructuring economic structure over medium/long term

Need to tackle issues like joining TPP, deregulation, and lowering effective tax rate for corporations

Overall necessary to have systematic strategy based on strong vision (national vision/philosophy)

—Build strong ties between Council on Economic and Fiscal Policy and Headquarters for Japan's Economic Revitalization

Structural reform and maintaining fiscal discipline are issues Abenomics must address

In contrast to the first priority area, the second and third involve issues that need tackling.

With regard to the second policy, the key point is maintaining fiscal discipline. The governing Liberal Democratic Party (LDP) has proposed a "national land strengthening plan" and intends to unleash massive public works spending on a scale of roughly Y200 trillion over 10 years. Such infrastructure as bridges, roads, and ports reach a replacement period in about 50 years. Thus, Japan's major

infrastructure projects of the 1960s and 1970s will enter a full-fledged replacement period toward the 2020s. While there is no more important work for a nation than protecting the lives and assets of its citizens, drifting into unnecessary public works projects in the name of safety and security will reduce economic efficiency and expand fiscal deficits. What will be important is clearly separating the discussion of investments indispensable for protecting the lives and assets of citizens from other public works spending. There is no doubt that the former will be necessary even if they are somewhat inefficient. The latter, however, should be undertaken very selectively by carefully ascertaining economic efficiency according to their cost effectiveness. In addition, a full-fledged reform of the social security system will be indispensable in order to achieve fiscal reconstruction. Meanwhile, aggressive monetary easing occurring together with the loss of fiscal discipline will take on the appearance of the *de facto* monetization of government debt. Should JGB prices plunge (yields surge) sharply, concerns about the unremitting and injurious depreciation of the yen and about stagflation ensuing from higher import prices might well arise.

The third priority area, growth strategies to stimulate private sector investment, also requires further elaboration. At the present moment, Abenomics mainly consists of stimulus measures like public works spending and monetary policies. However, if the capacity for economic growth is to be strengthened in the medium to long term, efforts toward structural reform will be necessary, such as deregulation and participation in the Trans-Pacific Strategic Economic Partnership Agreement (TPP). Other essential steps will be reducing the corporate tax, tax breaks for investing in growth sectors, and establishing an environment that promotes entrepreneurship. If Japan's economic foundations are not improved through such measures, there is concern that the ascent of stock prices and the depreciation of the yen will come to be just passing phenomena.

To conclude, while we have great hopes for Abenomics, we also believe that it must address two paramount issues, namely, (1) selective investment in public works projects while maintaining fiscal discipline and (2) the implementation of policies to improve the foundations of Japan's economy, such as deregulation, participation in TPP, and the reduction of the effective tax rate borne by corporations.

1.2 Positive aspects of Abenomics

We believe that Abenomics can be highly commended for two reasons.

Abenomics represents policies prioritizing economic growth

First, Abenomics represents policies prioritizing economic growth. Economic policies can be broadly divided into the four quadrants of supply-side policies, demand-side policies, domestic demand, and foreign demand (Chart 1). The Democratic Party of Japan (DPJ) administration inaugurated in 2009, in part as an antithesis to the LDP that gave some thought to the supply side and foreign demand, placed considerable weight on demand-side and domestic-demand policies.

As a result, many foreign investors, key players in Japan's stock market, came to view the former DPJ administration as not being well balanced and as being tilted toward the demand side of domestic demand centered on the child support subsidy—in other words, with an interest in only one quarter of the economy. At the Round Table on the Promotion of Inward Investment (Chair: Minister of Economy, Trade and Industry; held under the direction of Prime Minister Naoto Kan), Japanese business leaders identified five factors that were "evicting" Japanese companies from Japan and that were abetting the hollowing out of the economy. The so-called five "eviction factors" were a strong yen, slowness in concluding EPAs, environmental regulations, labor regulations, and a heavy corporate tax rate. By ignoring these issues, the DPJ administration was roundly criticized as being anti-business. Unlike the anti-business stance of the former DPJ administration, the clear pro-business stance of Abenomics can be highly commended.

Conceptual Image of Economic Policies **Chart 1**

<table>
<tr><th></th><th>Domestic demand</th><th>Foreign demand</th></tr>
<tr><td rowspan="2">Supply side</td><td>● Ease regulations</td><td>● Conclude Trans-Pacific Partnership Agreement (TPP) so that Japan will be able to align with economic growth in East Asia
● Prevent sharp appreciation of yen</td></tr>
<tr><td colspan="2">● Implement growth strategy, such as promoting advancement of science and technology, etc.</td></tr>
<tr><td>Demand side</td><td>● Implement measures to counter low birth rate, such as child stipend
● Implement job-creating measures
● Reform pension and social security system</td><td>Conditions surrounding foreign demand dependent on overseas economic development</td></tr>
<tr><td>Growth fields</td><td colspan="2">Medical/nursing care Environment</td></tr>
</table>

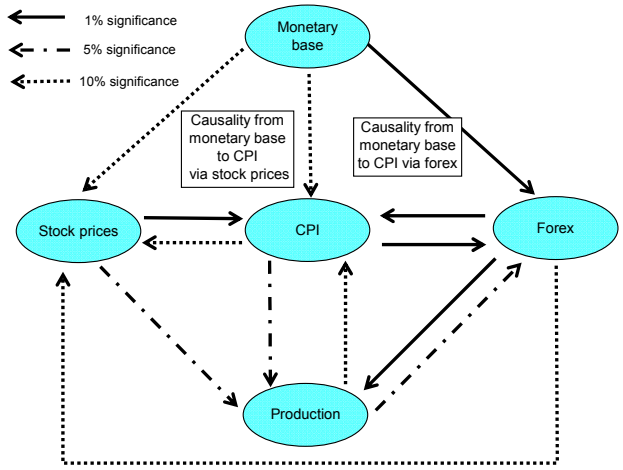
Source: Compiled by DIR.

Bold monetary easing by the BOJ

Second, Abenomics can be highly rated for pressing the BOJ to take bold steps to ease monetary policy. We believe a weaker yen and higher stock prices ensuing from aggressive monetary easing will be effective in ending deflation. Chart 2 presents a five-variable model Granger causality test. To define Granger causality, variable X is viewed as Granger-causing Y when past information about variable X is useful in improving the forecast of variable Y. The analysis we performed suggests the possibility that expansion of the monetary base influences CPI through stock prices and forex. Also, a variance analysis of CPI points to the possibility of forex having a certain effect on prices.

The BOJ recently made its price stability goal of 1% (low by international standards) a definite target to be achieved, and subsequently increased it to 2%. It was also decided that the BOJ would report to the Council on Economic and Fiscal Policy on the current prospects for achieving its target. By convincing investors that the BOJ is serious, these developments can be expected to energize markets.

Five Variable Granger Causality (y/y %) **Chart 2**



Model description

Sampling period		Mar 2006-Feb 2011
Lag		Quartic lag based on Akaike information criterion
Variables	Monetary base	Avg outstanding balance, adjusted for reserve requirement ratio, seasonally adjusted
	Stock prices	Nikkei 225 (monthly avg)
	Forex	Nominal effective exchange rate (2010 benchmark; BIS regulation basis)
	Production	All-industry Activity Index (excl agriculture/forestry/fisheries & public service; 2005 benchmark; seasonally adjusted)
	CPI	Major category items (excl. fresh food; nationwide; 2010 benchmark)

Source: Bank of Japan, Ministry of Finance, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, *Nikkei*; compiled by DIR.

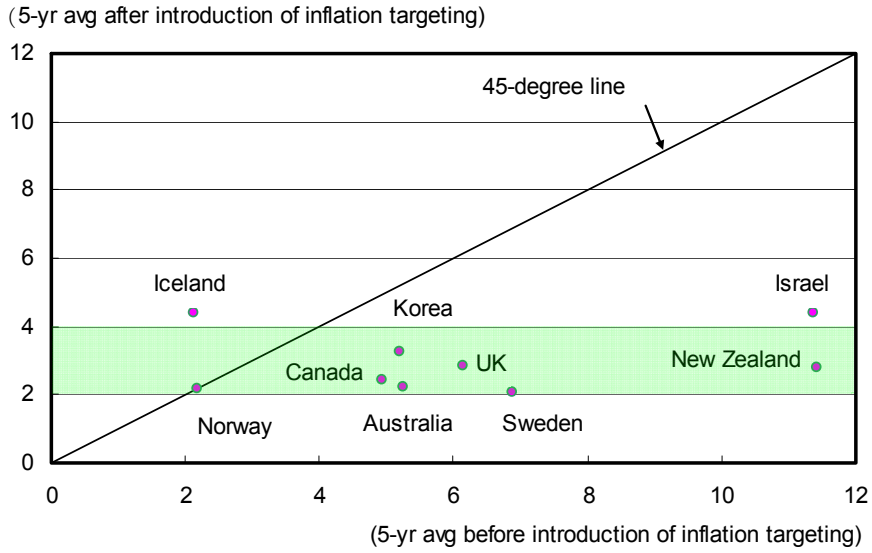
Prices will rise appropriately with the adoption of inflation targeting

The adoption of inflation targeting has been criticized from two extremes: first, that deflation cannot be overcome through the monetary policies of the BOJ alone and, second, that excessive monetary easing could give way to hyperinflation. This is similar to arguing that, when trying to hit a golf ball out of a bunker (i.e., an economy that has slipped into deflation), the only possible outcomes are failing to do so or hitting the ball too hard that it misses the green (symbolizing appropriate inflation) and plunges into the water hazard beyond (i.e., hyperinflation). Such inconsistent criticism of an inflation targeting policy, however, is likely to be found baseless in light of the experience of other nations.

Chart 3 illustrates inflation rates for selected nations before/after the adoption of inflation targeting. Most nations were experiencing inflation of 4% or more before they adopted inflation targets. Once they did so, however, inflation fell to a 2-4% target range in general. When central banks set an inflation target, communication with the market proceeds more smoothly, allowing them to more effectively shape expectations. As a result, these central banks succeeded in having the inflation rate converge near the target range. As this should illustrate, the past experience of nations adopting inflation targeting makes it reasonable to anticipate that central banks committing to an inflation target will enable the effective management of the economy concerned.

However, to achieve an inflation target of 2% in Japan, monetary easing by the BOJ alone will not be enough, and it will be indispensable to reduce the GDP gap, such as through structural reform by the government, which we elaborate upon below.

Inflation Rate Before/after Introduction of Inflation Targeting **Chart 3**



Source: Haver Analytics; compiled by DIR.

1.3 Examination of four concerns regarding Abenomics

Four concerns Japanese citizens have regarding Abenomics

In this report, we examine four concerns that media reports say Japanese citizens have regarding Abenomics. First, there is the risk that the government failing to maintain fiscal discipline will invite the triple blow of falling JGB prices, falling stock prices, and a falling yen. Second, criticism is being widely voiced that medium- to long-term improvements in the nation's economic foundation and structural reforms are currently insufficient. Third, there is concern that employee income will not grow as inflation progresses. And fourth, there is worry that Abenomics will benefit large companies but small companies will be left out.

Our analysis of these four concerns led us to the conclusion that the first two are the most worrisome. That is to say, the key to the future success of Abenomics will be (1) selective investment in public works projects while maintaining fiscal discipline and (2) the implementation of policies to improve the foundations of Japan's economy, such as deregulation, participation in TPP, and the reduction of the effective tax rate borne by corporations.

Concern 1: Loss of fiscal discipline

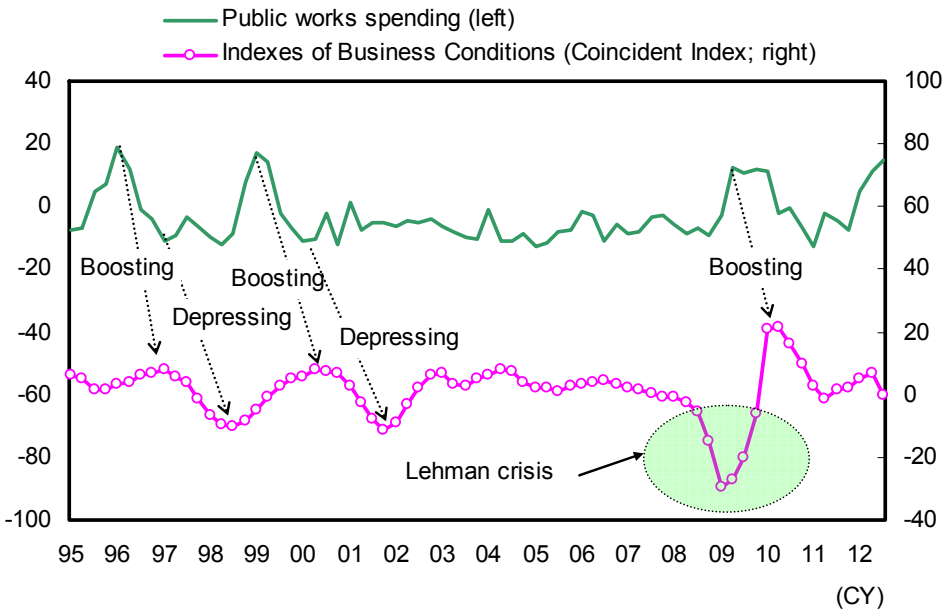
Public works spending only has short-lived effect

The first concern that Japanese citizens have with respect to Abenomics is the risk that the government failing to maintain fiscal discipline will invite the triple blow of falling JGB prices, falling stock prices, and a falling yen.

Public works spending will support the economy but have nothing more than a short-lived effect. Chart 4 illustrates the trend of public works spending and the Indexes of Business Conditions (Coincident Index; Cabinet Office). We can see in the chart that, when public works spending increases (decreases), the Coincident Index tends to rise (decline) after a certain lag. This should indicate that, while public works spending will lift the economy for a while, this is not an effect that is sustained over time. The recent large-scale supplementary budget taking effect is expected to spur the economy temporarily (we assume that it will boost real GDP by 0.7 percentage points). However, to increase the economy's

growth rate in the medium to long term, the third priority area of Abenomics, implementing growth strategies, will be extremely important.

Indexes of Business Conditions and Public Works Spending (y/y %) **Chart 4**



Source: Cabinet Office; compiled by DIR.

Economic effect of public works spending trending downward

Chart 5 presents a time series from 1987 of the multiplier for public works spending based on the Cabinet Office's macroeconometric model. This multiplier expresses by how much GDP as a whole will expand when nominal public works spending increases 1% as a percentage of nominal GDP. The larger the multiplier becomes, so too will the economic effect of public works spending. We can see from the chart that the multiplier is trending downward over the long term, suggesting that public works spending is having less of an effect than before in the lift it provides to the economy.

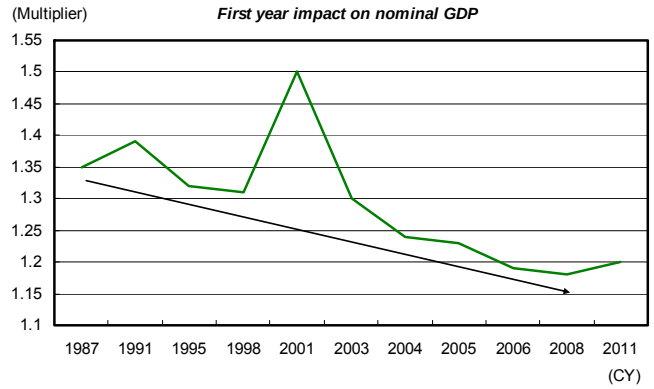
Is real social capital stock in excess by Y367 trillion?

Chart 6 portrays the trend of real social capital stock in Japan. Real social capital stock of about Y800 trillion is estimated to currently exist in Japan, a figure that strongly reflects massive public works spending carried out in the past. If general government fixed capital formation in Japan had been restricted to around 2.5% of nominal GDP, the average of advanced economies, Japan's current real social capital stock would be limited to about Y400 trillion. In our estimation, the difference between these two figures as of end-2010 was Y367 trillion. In other words, Japan's real social capital stock is in excess by this amount. While some allowance will need to be made for Japan's distinctive geographical features, such as extensive mountainous regions, it seems safe to say that "economic growth reliant on public works spending has reached a limit" is a view that is consistent with the sentiment of a majority of the public.

The claim is heard that there will be a growing need in Japan to replace the massive social infrastructure accumulated through past public works spending. If the current level of social capital stock is excessive, however, the case can be made that not all will need replacing. While there is no more important work for a nation than protecting the lives and assets of its citizens, investing little by little in unnecessary public works projects in the name of safety and security will reduce economic efficiency and expand fiscal deficits. What will be important is clearly separating the discussion of

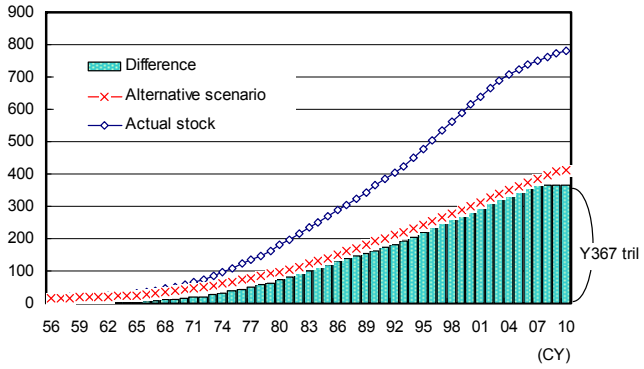
investments indispensable for protecting the lives and assets of citizens from other public works spending. There can be no doubt that the former will be necessary even if they are somewhat inefficient. The latter, however, should be undertaken very selectively by carefully ascertaining economic efficiency according to their cost effectiveness.

Multiplier for Nominal Public Works Spending Chart 5



Source: Cabinet Office; compiled by DIR.

Real Social Capital Stock (Y tril) Chart 6



Source: Cabinet Office; compiled by DIR.
Note: Alternative scenario assumes general government fixed capital formation has been 2.5% of nominal GDP.

Concern 2: Medium- to long-term improvements in the nation's economic foundation and structural reforms insufficient

Efforts such as deregulation, TPP participation, and corporate tax reduction currently insufficient

The second concern that Japanese citizens have about Abenomics is that medium- to long-term improvements in the nation's economic foundation and structural reforms are insufficient at the present moment. Abenomics mainly consists of stimulus measures like public works spending and monetary policies. However, if the capacity for economic growth is to be strengthened in the medium to long term, efforts toward structural reform will be necessary, such as deregulation and participation in TPP. Other essential steps will be reducing the corporate tax, tax breaks for investing in growth sectors, and establishing an environment that promotes entrepreneurship. If Japan's economic foundations are not improved through such measures, there is concern that the ascent of share prices and depreciation of the yen will come to be just passing phenomena.

Japan's growth areas in terms of industrial structure

As illustrated in Chart 7, in view of Japan's industrial structure, priority areas are likely to be (1) the environment, which promises efficiency, ripple effects to other industries, and high growth prospects, and (2) services centering on health care and long-term care which have a large capacity to create jobs. In the chart, the size of circles indicates number employed. The capacity to create jobs is limited for environment-related industries (electrical machinery, chemicals, and transportation equipment). In addition, manufacturing industries only accounted for 18.8% of the number of employees in CY12. Therefore, to increase jobs, it is indispensable to stimulate services, centering on health care and long-term care (located in the lower left corner in the graph), for example, by easing regulation regarding operating "special nursing homes" (social welfare facilities for the aged).

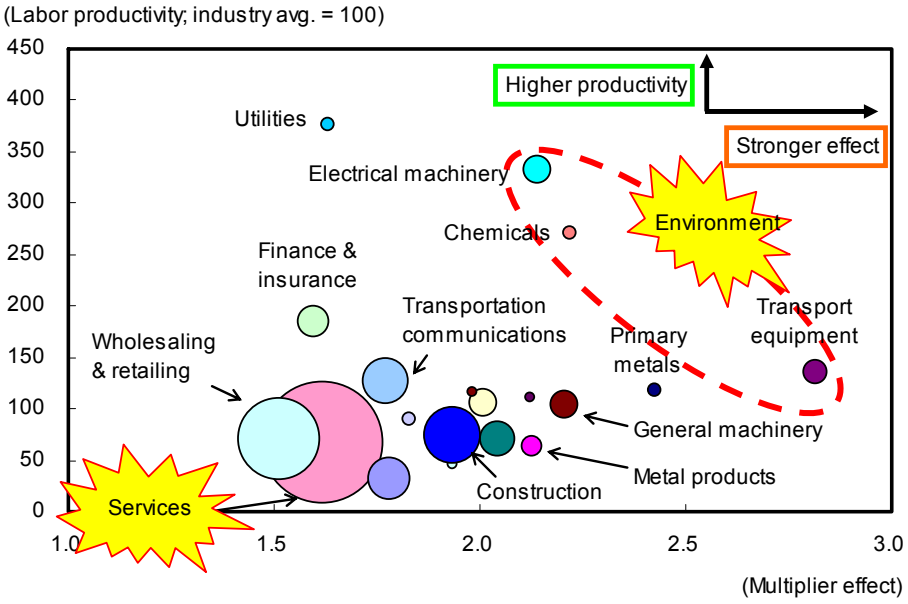
In growth strategy discussions, the pointless contest between manufacturing and non-manufacturing (services) industries or that between foreign demand and domestic demand often continues endlessly. While manufacturing industries and foreign demand promise efficiency and ripple effects to other industries, service industries and domestic demand have a large capacity to create jobs. Thus, the key

to Japan's economic growth will be to first determine the potential advantages of each and then to implement strategies to fortify industries/demand on both sides as optimally as possible.

In implementing industrial policies, the government should provide funds such as subsidies to specified areas only on a limited basis. For example, in such areas as stem-cell research where it is difficult for the pure private sector to assume risk—areas where research periods are long and uncertainties large—some degree of government involvement will be necessary. The basic approach, however, should be for the government to ease regulations to the maximum extent possible within the scope that does not cause harm and to expend maximum effort in laying the groundwork so the private sector can freely express its creative energies.

In addition to serious efforts to ease regulations, other measures worth examining would include (1) braking the hollowing out of Japan's economy such as by participating in TPP and by reducing corporate taxes and (2) the implementation of support measures that would promote R&D investments and the pursuit of international opportunities by small and medium-sized companies.

Labor Productivity and Multiplier Effect **Chart 7**

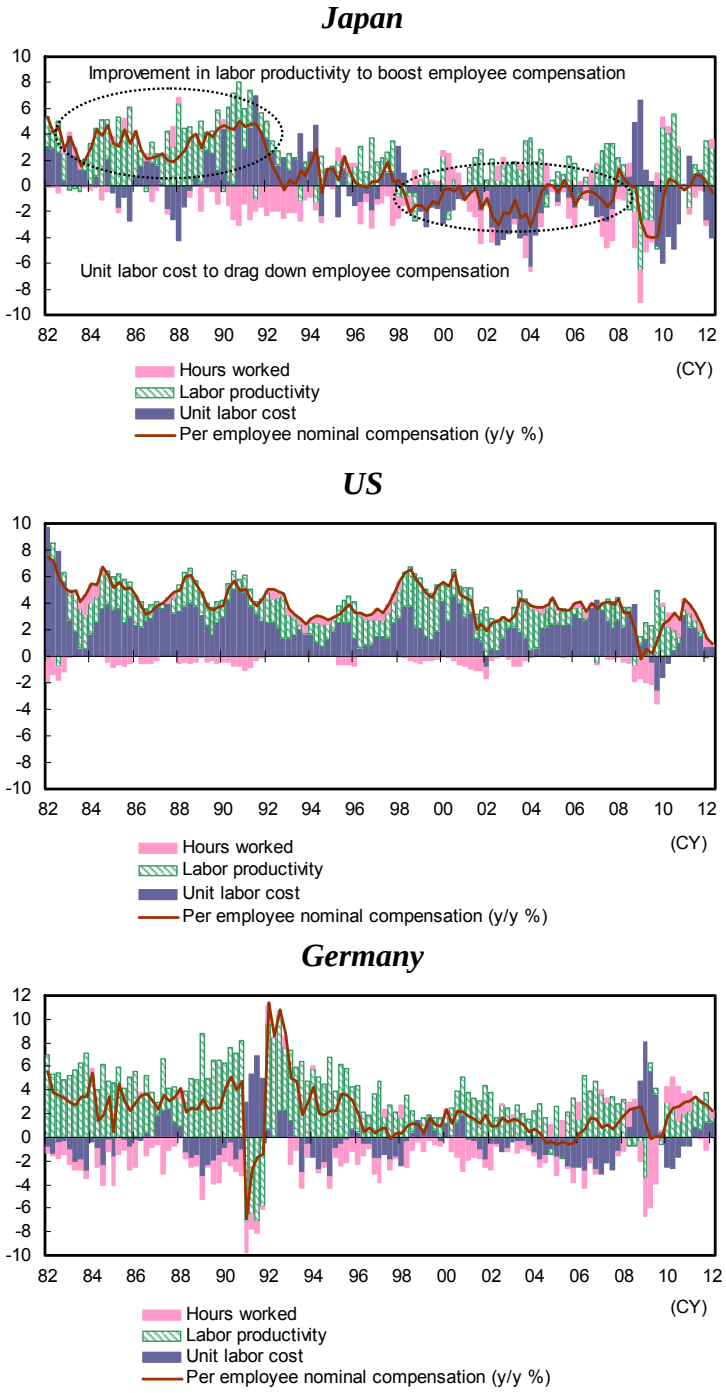


Source: Ministry of Economy, Trade and Industry; Cabinet Office; compiled by DIR.
Notes: 1) Multiplier effect: DIR estimate for some industries.
2) Size of circles indicates number employed.

Factor analysis of changes in per employee nominal compensation in Japan, US, and Germany

A major reason for deflation persisting in Japan is sluggish per employee nominal compensation. In Chart 8, per employee nominal compensation of Japan, the US, and Germany is broken down into (1) unit labor cost, (2) labor productivity, and (3) hours worked. We can see from the chart that since the 1990s in Japan, labor productivity (2) has grown weakly and unit labor cost (1) has fallen, giving way to stagnant per employee nominal compensation.

Contribution to Y/y Per Employee Compensation by Nation (% pt) **Chart 8**



Source: Japan's data based on Ministry of Internal Affairs and Communications, Cabinet Office; US and German data based on Haver Analytics; compiled by DIR.

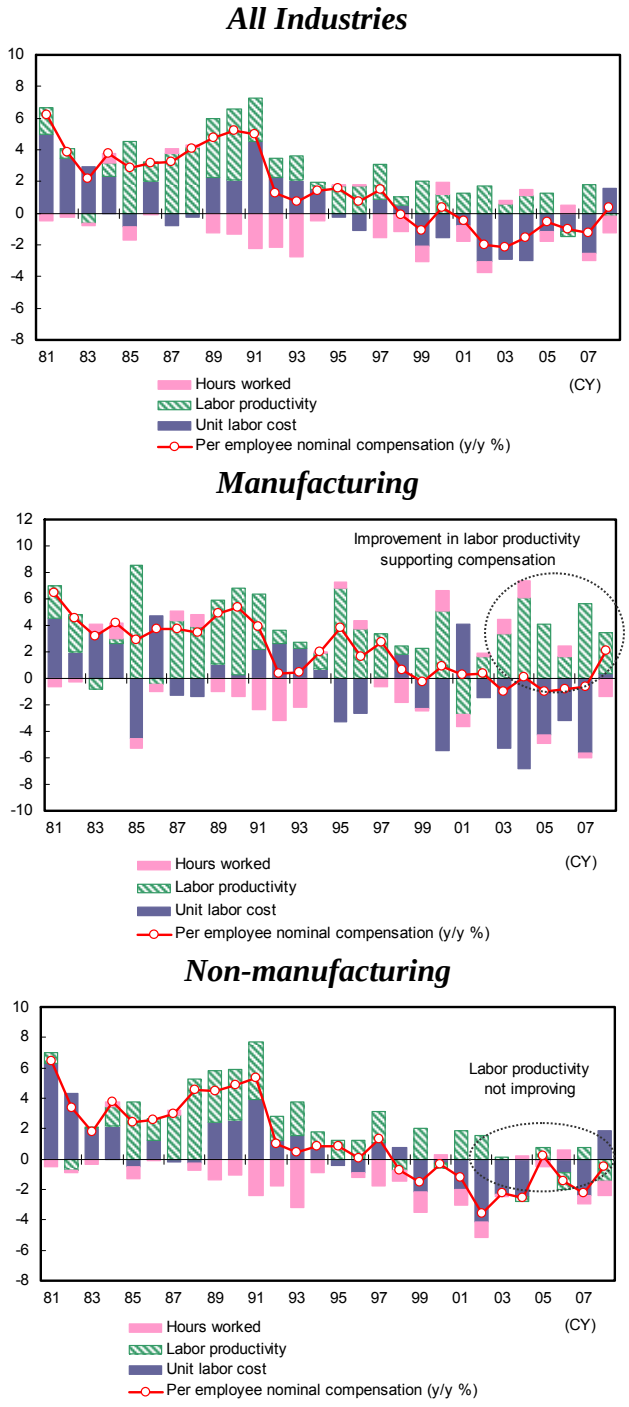
Notes: 1) Japan and US: per employee nominal compensation = (a) nominal employee compensation / real GDP x (b) real GDP / (no. of employees x hours worked) x (c) hours worked, where (a) corresponds to unit labor cost, and (b) labor productivity.

2) Germany: per employee nominal compensation = (a) nominal employee compensation / nominal GDP x (b) nominal GDP / (no. of employees x hours worked) x (c) hours worked, where (a) corresponds to unit labor cost, and (b) labor productivity; through 1991: former West Germany.

Sluggishness of labor productivity pronounced for non-manufacturing industry in Japan

Chart 9 depicts per employee nominal compensation for the manufacturing and non-manufacturing industries. The chart discloses that the increase in labor productivity is supporting employee compensation in the manufacturing industry. In contrast, labor productivity failing to increase is a factor placing downward pressure on employee compensation in the non-manufacturing industry. Thus, an important point to address in future policy responses will be policies that increase employee compensation such as through the improvement of labor productivity in the non-manufacturing industry.

Contribution to Y/y Per Employee Compensation by Industry (% pt) **Chart 9**



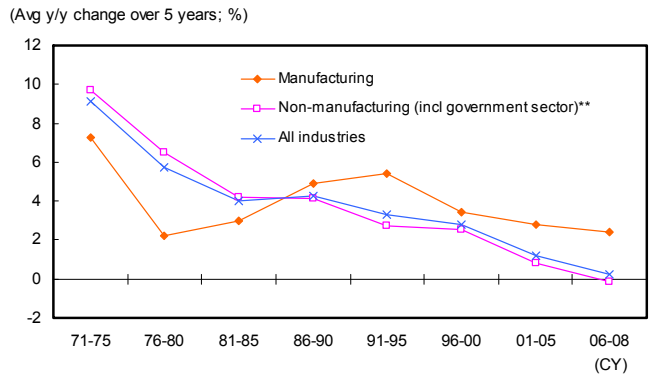
Source: Cabinet Office; compiled by DIR.
Notes: 1) Per employee compensation = (a) nominal employee compensation / real GDP x (b) real GDP / (no. of employees x hours worked) x (c) hours worked; (a) corresponds to unit labor cost, and (b) labor productivity.
2) 2000 SNA basis.
3) Data was available through 2010 but we excluded 2009 and 2010 due to significant volatility.

Low labor productivity of non-manufacturing industry stems from low capital-labor ratio

The low labor productivity of Japan's non-manufacturing industry stems from a low capital-labor ratio, centering on IT-related investments. Charts 10.1 and 10.2 underscore that the capital-labor ratio of the industry is growing far more slowly than that of the manufacturing industry, and total factor productivity (a measure of technological progress) of the industry remains stagnant.

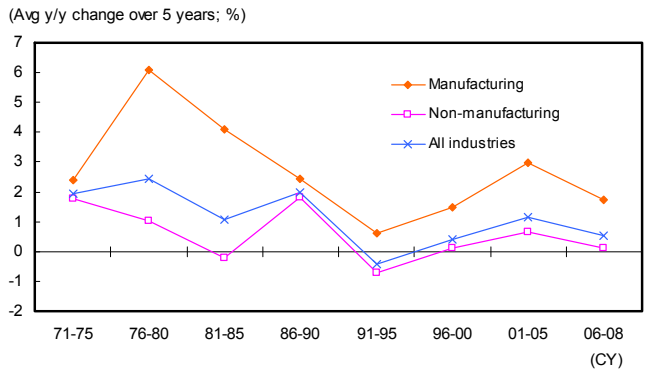
An important issue going forward will be raising labor productivity of the non-manufacturing industry such as by increasing its capital-labor ratio, centering on IT-related investments. Specifically, it will be worth considering policy incentives to promote IT-related investments in the industry. What will prove to be key are measures that will encourage the renewal of companies in the industry by fostering entrepreneurs, by developing domestic sites through the promotion of TPP, and by reforming the labor market.

Japan: Capital-Labor Ratio* Chart 10.1



Source: Research Institute of Economy, Trade and Industry; compiled by DIR.
* Real net capital stock / no. employed.
** All industries minus manufacturing.
Note: Latest data available: 3-yr avg.

Total Factor Productivity Chart 10.2



Source: Research Institute of Economy, Trade and Industry; compiled by DIR.
Note: "All" and "Non-manufacturing" industries exclude housing and unclassified industries.
Note: Latest data available: 3-yr avg.

Three points regarding employment policies

Three points are worth making regarding employment policies:

First, what needs to be recognized is that employment is essentially a form of secondary demand. The guiding principle to follow is the idea that the best employment policy is the steady expansion of Japan's economy.

Second, building on this guiding principle, what should be placed at the core of employment measures are active ones that center on job training rather than those that relieve pain after the fact (passive employment measures). The essential point of employment policies should be none other than increasing the employability of workers.

Third, an urgent issue that needs addressing is the elimination of unfair disparities between regular and non-regular workers. In this process, an all-important perspective will be committing fully to the principle of same pay for the same work. Should attempts be made to forcefully convert non-regular workers into regular workers, this would result in the outflow of jobs overseas and risk placing non-regular workers in more difficult straits. In legislative terms, a temporary agency law should be passed, and the legal status of non-regular workers should be clarified in the main body of this law.

To overcome deflation, government efforts to strengthen growth strategies will be indispensable

Finally, it is worth emphasizing that, to overcome deflation in Japan, monetary easing by the BOJ alone will not be enough and that government efforts to strengthen growth strategies will be indispensable.

Chart 11 presents an estimation using DIR's short-term macroeconomic model of the foreign exchange rate and the margin of overshooting in the GDP gap needed to achieve an inflation rate of 2%. Our estimation revealed that if the yen were traded at Y120/$ and the GDP gap overshot the base scenario by 4 percentage points, inflation would be 2% at end-FY14. This estimate suggests that it will be difficult to achieve an inflation target of 2% solely by weakening the yen through bold monetary easing and that it will be essential to stimulate potential demand and to improve the GDP gap through such measures as government efforts to strengthen growth strategies.

Forex Rate and Margin of Improvement in GDP Gap that Could Satisfy 2% Inflation Target **Chart 11**

		Case 1: Y95/$	Case 2: Y100/$	Case 3: Y110/$	Case 4: Y120/$
		CPI (excl. fresh food; Jan-Mar 2015; y/y)			
GDP gap (deviation from base scenario; % pt)	0.0	0.5%	0.6%	0.8%	1.0%
	1.0	0.8%	0.9%	1.1%	1.2%
	2.0	1.1%	1.2%	1.3%	1.5%
	3.0	1.3%	1.4%	1.6%	1.8%
	4.0	1.6%	1.7%	1.9%	2.0%
	5.0	1.9%	2.0%	2.1%	2.3%

Source: Compiled by DIR based on various statistics and DIR's short-term macroeconomic model.
Notes: 1) Changes in GDP gap and forex assumed to occur in Apr-Jun 2013.
2) CPI excl. impact of consumption tax hike.

Concern 3: Misplaced belief that employee income will not grow amidst inflation

Cycle seen where increase in sales is followed by higher wages and higher prices

The third concern that Japanese citizens have with respect to Abenomics is that, while inflation progresses, employee income will not grow. An examination of the historical record, however, discloses the existence of a cycle where an increase in sales is followed by higher wages and higher prices in Japan.

Chart 12 illustrates the sales of Japanese companies, nominal wages, and CPI. It should be evident from the chart that higher sales lead to an increase in nominal wages, which then gives way to a higher CPI. It should also be evident that these increases do not occur simultaneously but occur with a lag of about six months. In other words, about six months after sales increase, wages rise, followed by CPI after another six months.

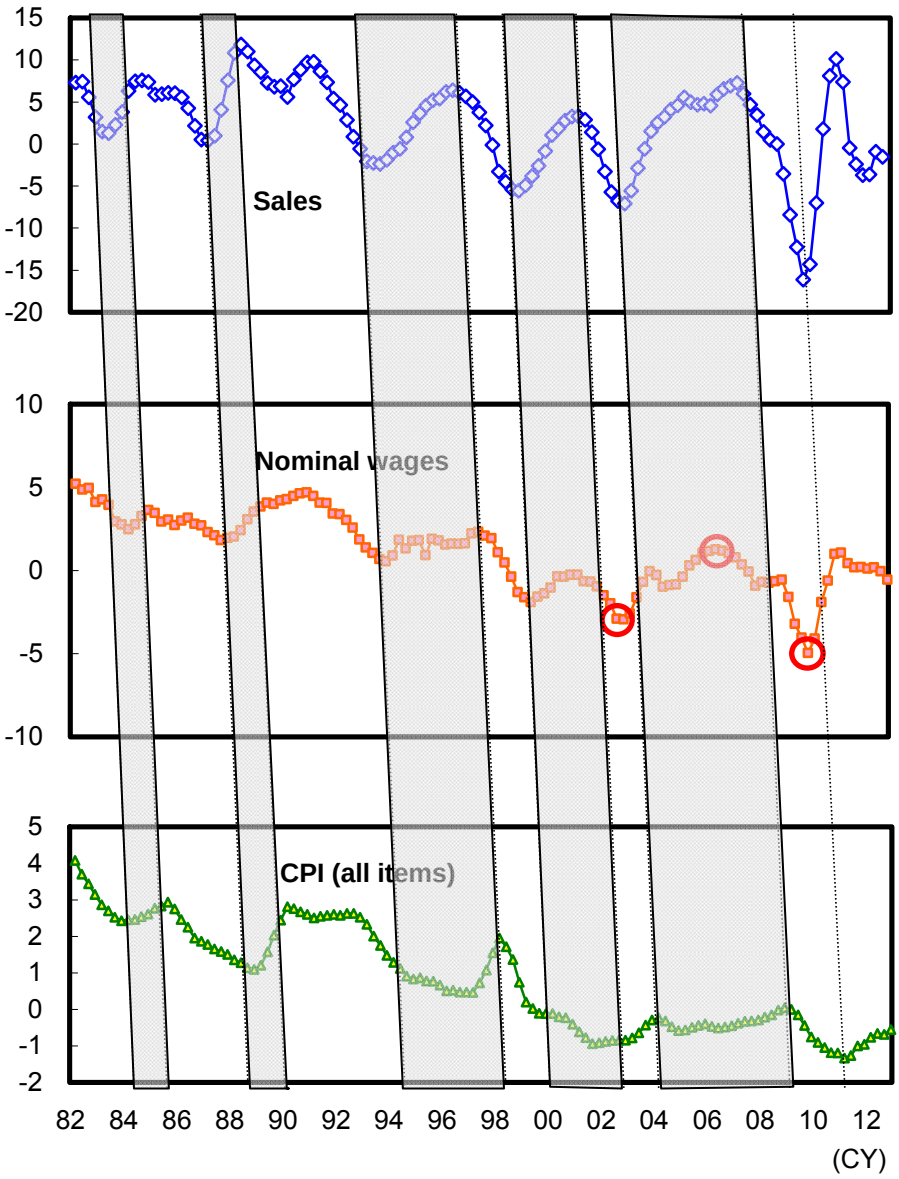
In its basic philosophy, Abenomics views the expansion of sales through monetary easing by the BOJ and through the pro-business policies of the government as the best approach for overcoming deflation. Bearing the above cycle in mind, it is safe to say that Abenomics has chosen precisely the right target to aim for.

Policies sought that will support transfer of income from corporate to household sector

Some concern, however, is raised by sales losing some of their leading character relative to nominal wages since the 2000s with the progress of globalization. In other words, as global competition intensifies, there is a tendency among companies to accelerate the increase or decrease in employee

wages. From such a perspective, there is no doubting the need in policy terms to strengthen a transmission mechanism that will enable higher sales to propagate appropriately to wage increases. The government deserves some praise for establishing a policy of offering tax relief to companies that increase the allocation of income to workers from the viewpoint of supporting the transfer of income from the corporate sector to the household sector.

Sales, Wages, and Prices (y/y %) **Chart 12**



Source: Ministry of Finance, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare; compiled by DIR.
Notes: 1) Four quarter avg.
2) Shaded bars denote periods when sales were on uptrend. Bars tiled in order to show roughly 6-month lag from sales graph to nominal wages graph and from there to CPI graph, respectively.

Number of employees may increase but per employee wage may not immediately increase

Higher sales may not immediately entail higher per employee wages. Chart 13 offers a breakdown of total labor costs for all workers of all industries. The chart shows that, from 2001 to around 2002 and from 2004 to around 2005, while the number of employees increased as the economy expanded, per employee wages did not rise. This is thought to be the outcome of such factors as (1) companies

lacking confidence in the sustainability of economic expansion and being reluctant to raise base wages (i.e., regular pay) and (2) a trend centering on the service sector in recent years to curb labor costs by hiring more part-time workers. Thus, to increase per employee wages, the firm implementation of growth strategies that will usher in sustainable economic growth will need to be accompanied by further improvement in the job climate to the point where the part-time employee ratio turns downward.

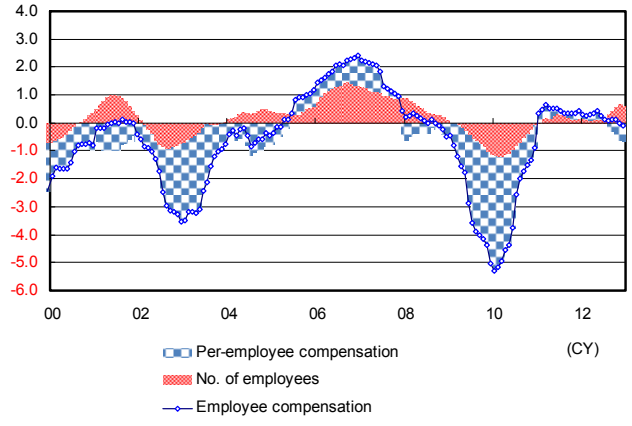
To conclude, even if Abenomics leads to higher sales for companies, since worker wages will not immediately rise, many Japanese citizens may not experience Abenomics as improving their lives. However, since job increases will boost employee compensation at the macro level, there is no question that this will contribute to higher prices in the final analysis, such as by way of the improvement in the GDP gap through economic growth.

Labor's share not trending downward in Japan

The view loudly proclaimed by some economists that labor's share is trending downward in Japan is a misinterpretation of the facts. Chart 14 portrays the long-term trend of labor's share in Japan and the US. The chart reveals that labor's share is trending upward in Japan in the medium to long term and that its current level exceeds that of the US. Because of the downward rigidity of wages, labor's share generally declines during economic expansion and advances during recession.

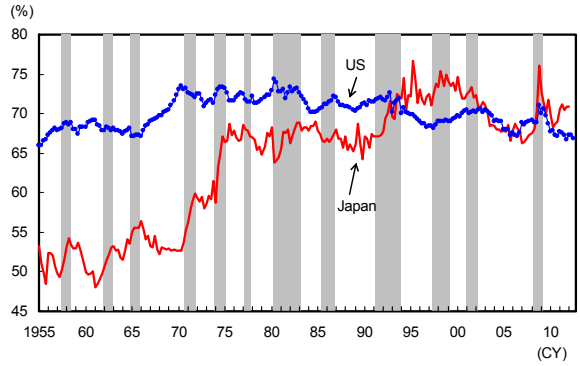
In the years since 1990, labor's share in Japan surged temporarily when the economy worsened sharply following the collapse of an asset bubble and after the Lehman crisis but declined in subsequent economic expansion periods. It is not the case that it is on a downward trend. In other words, the sluggishness of employee income is not a problem related to the allocation of national income but is mainly the outcome of an economic pie that has not expanded.

Employee Compensation (all industries; y/y %)
Chart 13



Source: Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare; compiled by DIR.
Note: Y/y change in "employee compensation" = y/y change in "per-employee compensation x no. of employees".

Long-term Trend of Japan and US Labor's Share
Chart 14



Source: US Bureau of Economic Analysis, Cabinet Office; compiled by DIR.
Note: Due to discontinuity, Japan's labor's share adjusted based on 1990 SNA for 1955-79, 2000 SNA for 1980-93, 2005 SNA from 1994, and seasonally adjusted by DIR for 1955-79.

For Japan, driver of recovery is the growth of exports

Believing that the cause of deflation is sluggish employee wages, some economists argue that the first step to take is to increase wages. It should be apparent, however, that the government seeking to forcefully raise wages would accelerate the hollowing out of the economy, where companies transfer their operations overseas, and that this would cause demand for labor to decline domestically. Just as

assumed by Abenomics, the best approach for overcoming deflation is surely the expansion of sales through bold monetary easing by the BOJ and through pro-business policies on the part of the government.

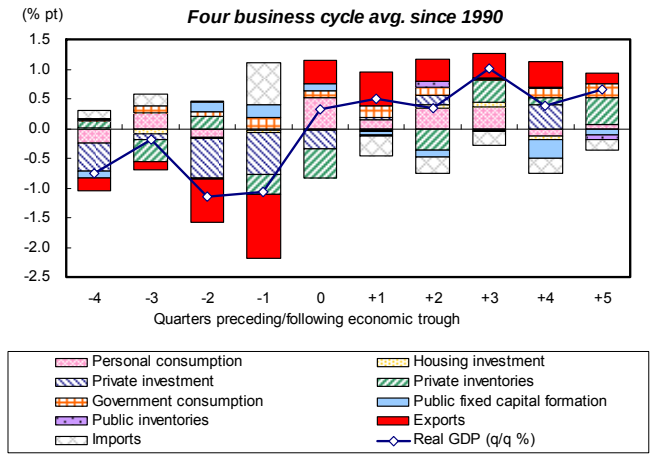
An examination of past recoveries in Japan and the US indicates that, since the 1990s, the growth of exports has been the driver of recoveries in Japan. Chart 15 presents an average pattern of four recoveries Japan experienced since the 1990s. Recent recoveries share three features. First, the driving force of recoveries has clearly shifted from fiscal and monetary measures to exports. Second, a few quarters after the trough of the business cycle, capex and inventories clearly increase. The lead actor in the rise of capex is assembly industries being stimulated by foreign demand. Third, the upside effect on the economy of personal consumption, public works spending, and housing investment has greatly diminished compared to the past.

In the most recent downturn as well, the growth of exports ensuing from the depreciation of the yen that has followed the bold monetary easing of the BOJ can be expected to trigger the bottoming out of Japan's economy.

In contrast to Japan, driver of economic recoveries in the US is growth of personal consumption

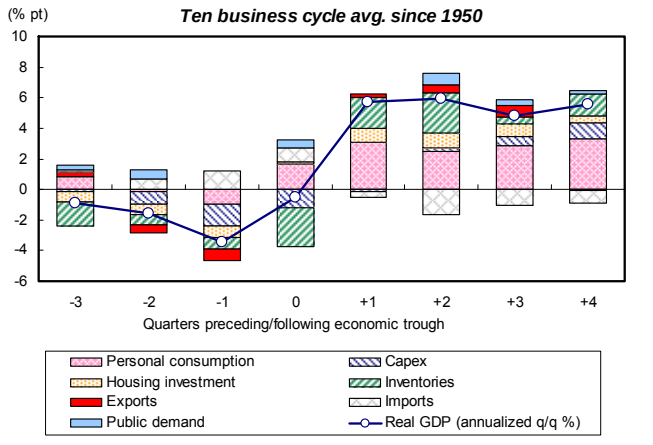
Chart 16 presents an average view of economic recoveries in the US. Their distinguishing characteristic is personal consumption being the first to turn sharply upward when the trough of the business cycle is reached. This contrasts with Japan where the growth of exports triggers recoveries. Once personal consumption turns upward, this is then followed by an increase in inventory investments after about a quarter, substantially boosting the growth rate of real GDP. In recent years (particularly since the 1990s), with the progress of globalization, exports have also come to contribute to the growth rate of real GDP about one quarter after the trough, but this contribution is not all that large.

Japan: Breakdown of GDP Growth in Recovery Phases **Chart 15**



Source: Cabinet Office; compiled by DIR.

US: Breakdown of GDP Growth in Recovery Phases **Chart 16**



Source: US Bureau of Economic Analysis, Haver Analytics; compiled by DIR.

An environment where real wages will readily rise in Japan is one where (1) the yen is depreciating and (2) commodity prices are stable

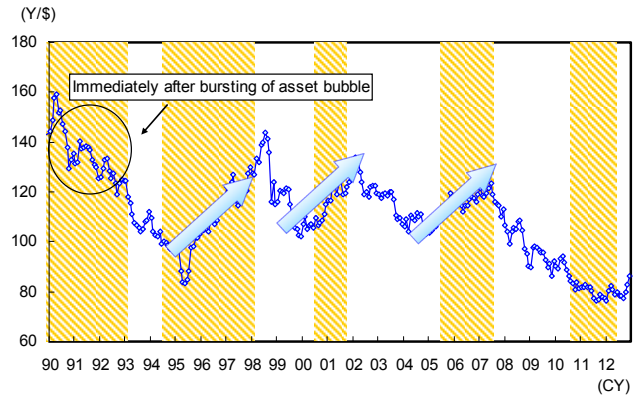
Finally, we examine the environment where real wages will readily rise in Japan. Charts 17 and 18 examine the sort of environment where real wages will readily rise. The shaded areas in the charts are periods when the growth rate of nominal wages exceeded that of CPI (all items)—that is to say, when real wages increased. These charts suggest the existence of two shared conditions for periods when

real wages rose. The first condition, shown in Chart 17, is the yen depreciating against the dollar. The second condition, shown in Chart 18, is commodity prices trending downward.

The interpretation of these two conditions is extremely complex, but it is likely the case that, when the yen is depreciating, corporate earnings readily improve and wages are more easily increased. On the other hand, since import prices rise when the yen depreciates, the concern cannot be eliminated that this would readily lead to higher costs for companies. This requires the second condition, commodity prices trending downward, being met in past periods when real wages rose. If commodity prices are trending downward, the increase in costs will be limited for companies even when the yen is depreciating.

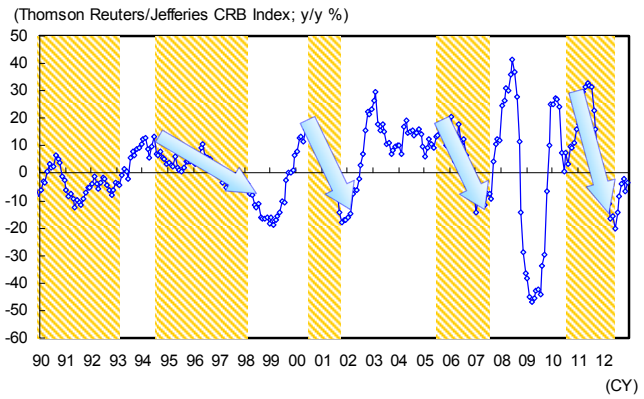
Given the above analysis, the current situation where the yen is depreciating accompanied by the BOJ's bold monetary easing can be understood in general terms as an environment where real wages will readily rise. However, the halting of nuclear power plants is also exerting an effect, and the increase in energy imports (the sum of crude oil and LNG imports) by 13% y/y to Y18.2 trillion in 2012 is a matter that raises concern. Going forward, whether the second condition required for the increase of real wages, commodity prices trending downward, will be satisfied or not will need to be carefully monitored.

Advance in Real Wages and Forex **Chart 17**



Source: Bank of Japan; Ministry of Internal Affairs and Communications; compiled by DIR.
Note: Shaded areas denote period when nominal wages grew faster than CPI.

Advance in Real Wages and Commodity Prices **Chart 18**



Source: Haver Analytics; Ministry of Internal Affairs and Communications; compiled by DIR.
Note: Shaded areas denote period when nominal wages grew faster than CPI.

Concern 4: Small companies do not benefit from Abenomics

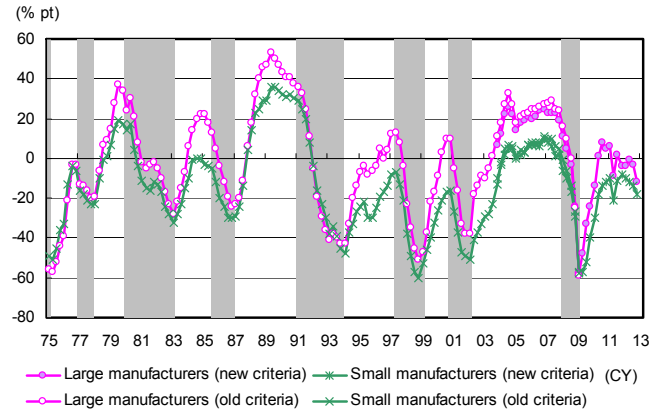
In historical terms, difficult to say disparities have widened between large and small companies

Fourth, there is criticism that while Abenomics will benefit large companies, small companies will be left out. We believe, however, that such concerns will prove to be unfounded. In historical terms, it is difficult to say that disparities have widened between them.

Chart 19.1 compares the BOJ's *Tankan* business condition DI of manufacturers by company size. The trend of the differential between the DIs of large and small companies is portrayed in Chart 19.2. Media reports sometimes point out that disparities between large and small companies widened during the period of Koizumi structural reforms. However, the differential has trended stably for the most part in a range of 15-20 points since around 1995. Thus, from the perspective of business condition DIs, it cannot be said that disparities increased sharply under Koizumi structural reform. Moreover, the

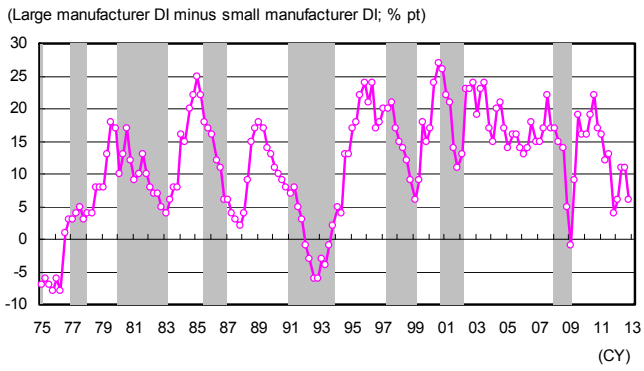
differential in their DIs has narrowed significantly, due in part to Japan's economy slipping into recession following a peak in March 2012.

Tankan Business Condition DI: Large and Small Manufacturers **Chart 19.1**



Source: Bank of Japan; compiled by DIR.
Note: Shaded areas denote economic downturns.

Tankan Business Condition DI: Gap between Large and Small Manufacturers **Chart 19.2**



Source: Bank of Japan; compiled by DIR.
Notes: 1) Shaded areas denote economic downturns.
2) New criteria basis from Jan 2004.

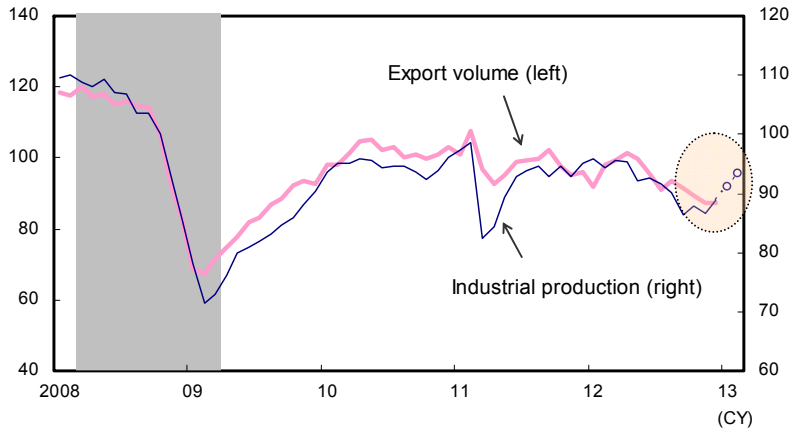
2. Main Scenario for Japan's Economy

2.1 Current state of Japan's economy: On a recovery path since November 2012

Japan's economy to bottom out

After peaking in March 2012, Japan's economy slipped into recession, impacted by the worsening of foreign economies. Since November 2012, however, the economy appears to be on a path toward recovery. As shown in Chart 20, industrial production in Japan has trended downward since the start of 2012 due to sluggish export volume. With the recovery of Asian economies centering on China, however, exports are bottoming, and industrial production is showing signs of bottoming out. The likelihood is growing that exports will turn upward reflecting the improvement in the export environment, such as the recovery of foreign economies and the yen's ongoing depreciation. Hence, as exports rebound, industrial production is expected to bottom out.

Industrial Production and Export Volume (2005 = 100) **Chart 20**



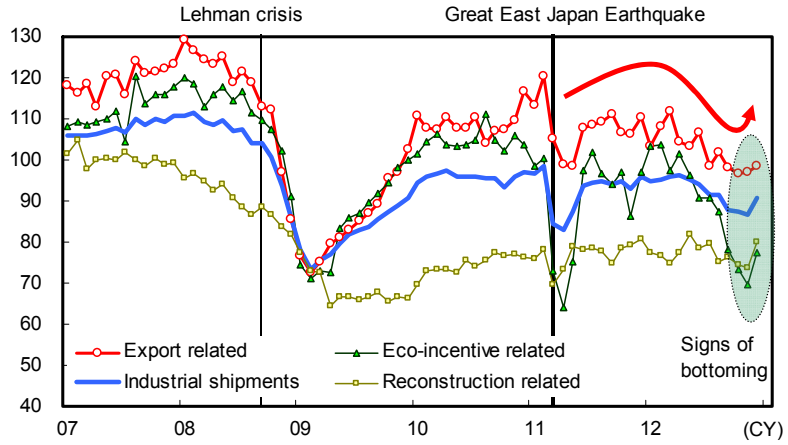
Source: Ministry of Economy, Trade and Industry (METI); Cabinet Office; compiled by DIR.
Notes: 1) Latest two months for industrial production: METI forecast survey.
2) Shaded area denotes economic downturn.

Breakdown of industrial shipments in Japan

Chart 21 provides a breakdown of industrial shipments in Japan. Here we can verify the reasons for the economy slipping into recession after peaking in March 2012. First, eco-incentive-related shipments, defined as domestic consumer durables that are eligible for eco-car tax breaks and eco-point programs, greatly slowed. In addition, export-related shipments declined on account of the sluggishness of foreign economies, centering on Europe and China. In contrast, reconstruction-related shipments, such as construction materials and capital goods (excl. transportation equipment) trended firmly for the most part. Thus, reconstruction demand appeared to be the sole source of support for Japan's economy.

Now that the impact of the expiration of eco-car tax breaks has run its course, eco-incentive-related shipments have greatly improved. Also, export-related shipments, the driver of Japan's economy, are beginning to bottom. Furthermore, given that reconstruction-related shipments have sharply increased and given the anticipated expansion of public works spending ensuing from the formation of a large-scale supplementary budget, it is reasonable to expect that Japan's economy will follow a steady path toward recovery going forward.

Breakdown of Industrial Shipments (2005 = 100) **Chart 21**



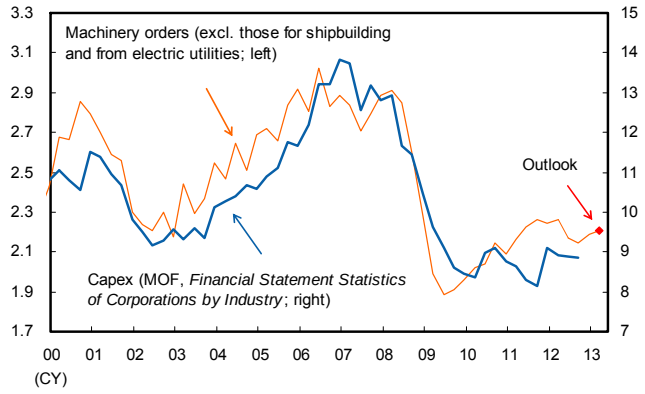
Source: Ministry of Economy, Trade and Industry; compiled by DIR.
Notes: 1) Eco-incentive related: Durable goods for the domestic market that are eligible for eco-car subsidies/tax breaks and eco-point programs.
2) Reconstruction related: Construction materials and capital goods (excl. transportation equipment).

Capex-related indices showing signs of bottoming out

As Japan's economy follows a steady path toward recovery, capex-related indices are showing signs of bottoming out. First, as indicated in Chart 22, the outlook for private-sector demand in machinery order statistics, a leading indicator of capex, is gradually improving. Second, as indicated in Chart 23, the expected growth of real demand (outlook for the next five years), which leads the ratio of capex to cash flow by around three quarters, has turned sharply upward.

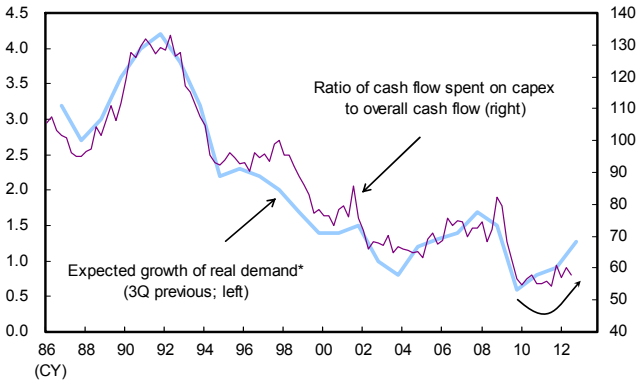
Given that (1) the ratio of capex to cash flow has dropped to a record low and that (2) net investments are negative since capex has fallen below depreciation, it is reasonable to think that capex will trend gradually upward. In policy terms, the government establishing a policy of expanding tax breaks for companies that increase capex will be a factor helping to support capital expenditures.

Machinery Orders and Capex (Y tril) **Chart 22**



Source: Cabinet Office, Ministry of Finance; compiled by DIR.

Capex-Cash Flow Ratio and Expected Growth of Real Demand (%) **Chart 23**



Source: Ministry of Finance, Cabinet Office; compiled by DIR.
*Outlook for the next five years; FY10 survey implemented before March 2011 quake/tsunami.

2.2 Outlook for Japan's economy: Three positives supporting recovery

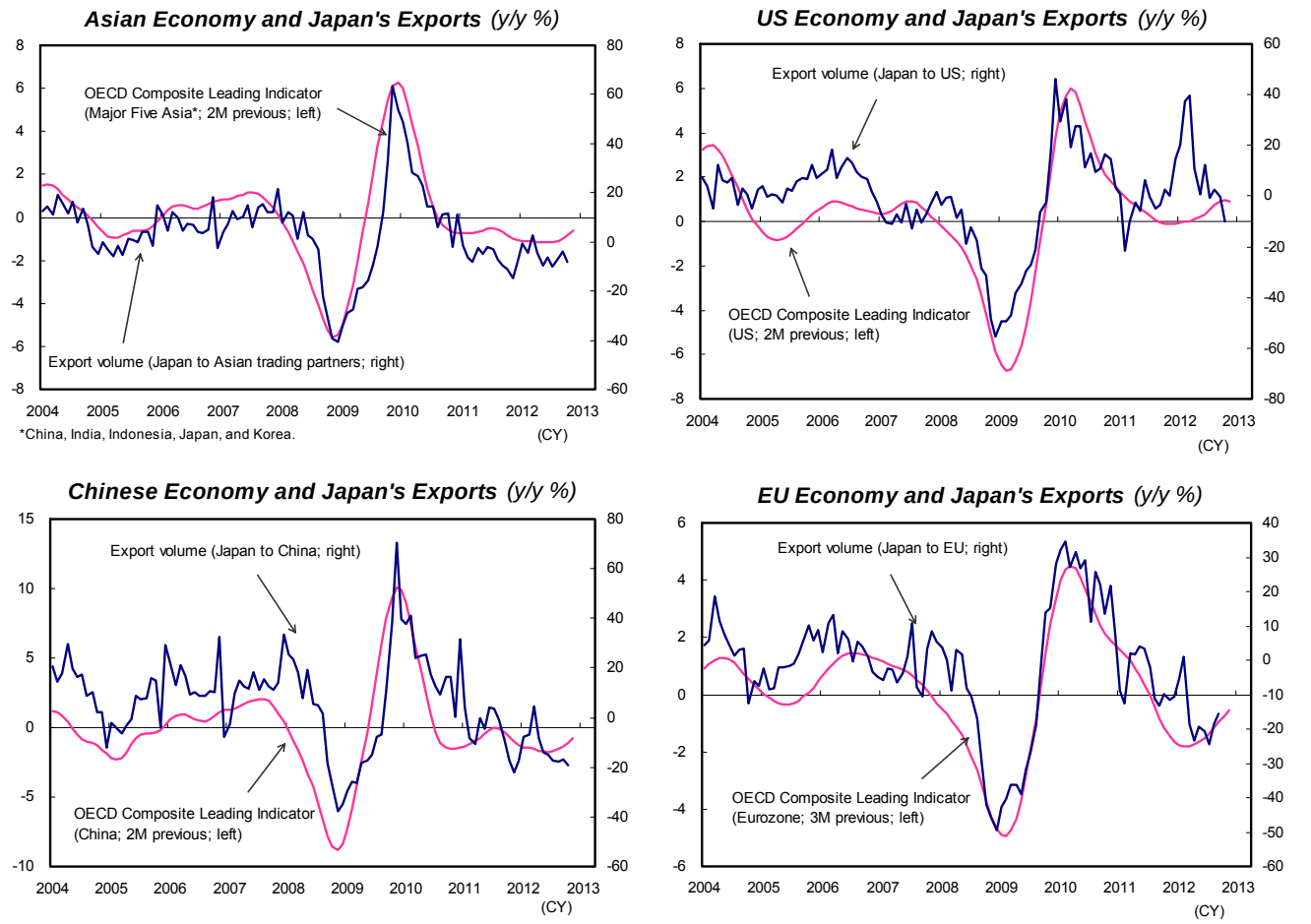
Positive 1: Pickup of the US and Chinese economies

Signs that foreign economies are gradually bottoming out

As our main scenario, we believe that the expansion of Japan's economy will continue, supported by three factors: (1) pickup of the US and Chinese economies, (2) ongoing reconstruction projects and the formation of a large-scale supplementary budget, and (3) the ongoing depreciation of the yen/ascent of stock prices accompanying the BOJ's adoption of inflation targeting.

The first factor that will support Japan's economy going forward are prospects that foreign economies will recover centering on the US and China. Chart 24 illustrates the trend of Japanese exports by trading partner. OECD Composite Leading Indicators (CLIs) for respective partners tend to lead the volume of Japanese exports to the corresponding region by two to three months. OECD CLIs of major regions are showing signs of gradually bottoming out, a positive development for Japanese exports. Regarding the direction of the world economy, we assume that (1) Eurozone economies will stagnate due to the sovereign debt crisis, (2) the US economy will slowly recover, and (3) China's economy will gradually improve, supported by the effects of fiscal and monetary measures.

Japan's Exports by Trading Partner — Chart 24



Source: OECD, Ministry of Finance; compiled by DIR.

Three conditions determining long-term structural recession—possibility of the US experiencing so-called Japanization limited

First of all, we would like to emphasize that the US is not slipping into a long-term structural recession similar to the Great Depression of the 1930s or Japan's Heisei recession. Chart 25 offers a comparison of the Great Depression, Japan's Heisei recession, and the current situation of the US and Europe. Currently in the US, (1) policy responses have been rapid, (2) the labor market is flexible, and (3) financial system uncertainties have abated. Hence, the three basic conditions determining a long-term structural recession shared by the Great Depression and Japan's Heisei recession are not presently seen in the US. Therefore, we believe that the US will avoid a long-term structural recession accompanied by a deflationary spiral (so-called "Japanization"). In the case of European nations, since (1) policy responses have been slow, (2) labor markets are rigid, and (3) financial system uncertainties remain, some attention should be given to the risk that Europe will slip into a long-term structural recession.

Recovery of the US economy will have major significance for Japan

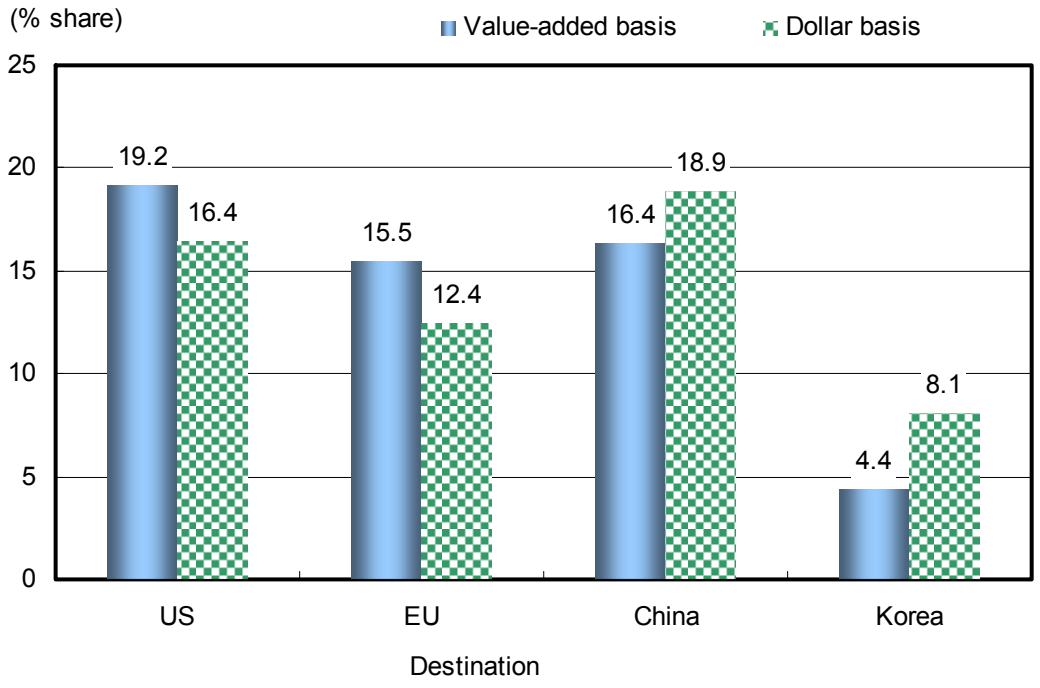
The recovery of the US economy will have major significance for Japan. Chart 26 compares the shares of exports from Japan by trading partner on a value-added basis and on a dollar basis. Comparing the situation for the US and China, the share of exports shipped to China is larger on a dollar basis, and that shipped to the US is larger on a value-added basis. This is an extremely interesting portrait of exports since it suggests the existence of a trade structure where Japan exports intermediate goods to China and other Asian trading partners, where these goods are assembled into finished goods that Asian economies export to European nations and the US, the source of final demand.

Conditions Determining Protracted Structural Recession **Chart 25**

	Great Depression	Heisei Recession	Current status of US economy	Current status of European economy
① Failure of policy responses	✓	✓	X	0
② Real wages remaining high resulting in prolonged stagnation of capex	✓	✓	X	0
③ Impairment of financial system	✓	✓	X	0

Source: Compiled by DIR.
✓=Yes, 0=to some degree, and X=No.

Export of Goods from Japan by Destination **Chart 26**



Source: OECD, Haver Analytics; compiled by DIR.
Note: Export of goods in 2009.

China's economy about to bottom out

Next, we examine the future direction of China's economy. Supported by macroeconomic stimulus measures and regional public works spending, China's economy is foreseen to gradually improve for the time being. We believe that China's real GDP will increase 8.3% in 2013 and 7.5% in 2014.

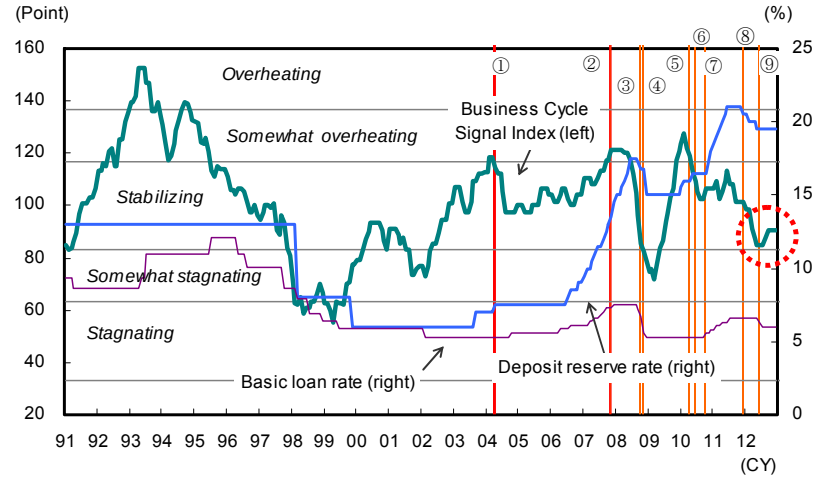
Business Cycle Signal Index suggests possibility of further implementation of policy measures

Chart 27 presents the Business Cycle Signal Index for China. According to this index, China's economy has slowed significantly. After peaking at 123.3 in February 2010, the index fell to 84.7 in August 2012, sinking to the low side of the stable zone between 83.33 and 116.66. Similar to previous instances when the economy has slowed to this extent, the authorities have implemented stimulus measures, such as monetary easing, since last year. As a result, the index is showing signs of rebounding. However, since the index remains at a low level, implementation of further policy measures is likely to come into view.

Key phrases are "socialist market economy," "collective leadership," and "gradualism"

China being a socialist market economy rather than a pure capitalist economy may also become a factor offering economic support for the time being. In the change in political leadership that occurs once every 10 years, and which we have just witnessed, it is natural for desires to come into play to circumvent as much as possible the rapid deceleration of the economy. There is no question that China is burdened with many medium- to long-term challenges. However, since its economy is not a pure capitalist system, problems can always be deferred for at least one or two more years one way or another. Politically speaking, collective leadership and a policy of gradualism should also be factors that will preclude a short-term relapse of the Chinese economy.

China: Business Cycle Signal Index **Chart 27**



Source: National Bureau of Statistics of China, People's Bank of China, CEIC Data; compiled by DIR.

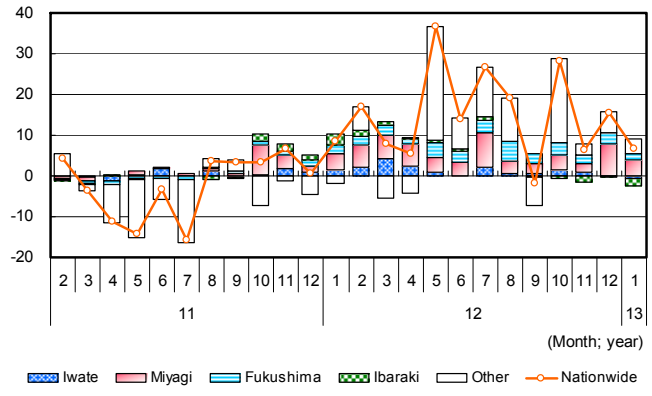
1. Apr 2004: Restrictions on aggregate loans strengthened
2. Oct 2007: Restrictions on aggregate loans strengthened
3. Oct 2008: Restrictions on aggregate loans eased
4. Nov 2008: Stimulus package of 4 tril yuan announced
5. Apr 2010: Real estate regulations strengthened
6. Jun 2010: More flexible regime for control of yuan exchange rate
7. Oct 2010-Jul 2011: Period of loan rate hikes
8. From Dec 2011: A series of deposit reserve rate lowering moves began
9. From Jun 2012: A series of loan rate cuts began

Positive 2: Reconstruction demand/formation of large-scale supplementary budget

Reconstruction demand will gradually materialize

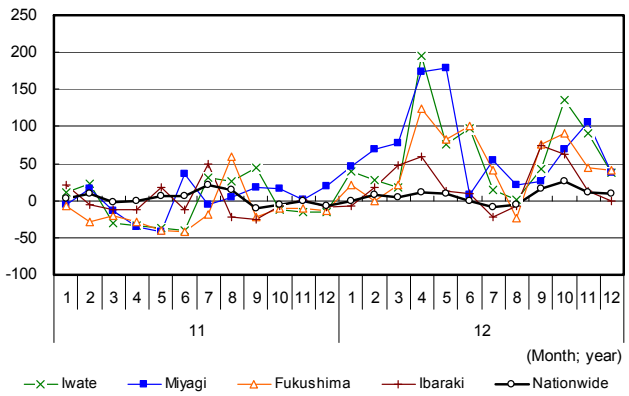
The second factor that will support Japan's economy going forward are prospects for the continuation of reconstruction projects related to the Great East Japan Earthquake and this being attended with the formation of a large-scale supplementary budget by the Abe administration. As shown in Chart 28, the yen amount of prepayment guarantees for public works projects has steadily increased since 2H11, with a significant contribution being provided by increases related to the three disaster-affected prefectures. Also, as shown in Chart 29, new housing starts by prefecture (totals) are continuing to grow firmly, centering on disaster-affected areas.

Prepayment Guarantees for Public Works by Prefecture (y/y %) **Chart 28**



Source: East Japan Construction Surety, West Japan Construction Surety, Hokkaido Construction Surety; compiled by DIR.

New Housing Starts by Prefecture (y/y %) **Chart 29**



Source: Ministry of Land, Infrastructure, Transport and Tourism; compiled by DIR.

Estimation of impact of reconstruction demand related to Great East Japan Earthquake and reconstruction surtaxes

Chart 30 provides an estimation of the effect on Japan's GDP of developments related to reconstruction demand and also of reconstruction surtaxes. Given that the supplementary budget for FY12 has been factored into public works spending, GDP is anticipated to receive a boost of around 1.5% in FY13. At the present moment, higher public works spending is not causing the long-term interest rate to rise, and personal consumption, housing investment, and capex can be expected to increase as the economy expands.

Impact of Reconstruction Demand and Change in Taxation on Real GDP (% deviation from base scenario) **Chart 30**

	FY11	FY12	FY13	FY14	FY15
Real GDP	0.1	0.9	1.5	0.4	-0.3
Household consumption expenditure	0.0	0.1	0.3	0.2	-0.4
Private housing investment	0.1	1.2	3.3	3.7	1.3
Private capex	0.1	1.2	3.2	3.3	0.9
Government consumption expenditure	0.0	0.0	-0.1	-0.3	-0.4
Public fixed-capital formation	3.3	19.3	32.1	8.5	0.8

Source: Cabinet Office, media reports; compiled by DIR.
Note: DIR estimate based on DIR's short-term macroeconomic model.
Assumptions: 1) Income tax up 2.1% pt over 25 years from Jan 2013.
2) Inhabitants tax up Y1,000/person from Jun 2014.
3) 10% inhabitants tax reduction for those receiving retirement benefit abolished from Jan 2013.
4) Due to return to stricter child care allowance system (revival of income threshold for receiving allowance, etc.), aggregate income (incl. child care allowance) down Y0.5 tril a year from FY12.

Positive 3: Ongoing depreciation of the yen/ascent of stock prices accompanying BOJ's adoption of inflation targeting

The yen cannot be said to be excessively undervalued

The third factor that will support Japan's economy going forward is the ongoing depreciation of the yen/ascent of stock prices accompanying BOJ's adoption of inflation targeting. We believe that a correction of the yen's excessive appreciation is currently under way in foreign exchange markets.

Also, a comparison with the real economy suggests that stock prices are potentially still undervalued at their current levels.

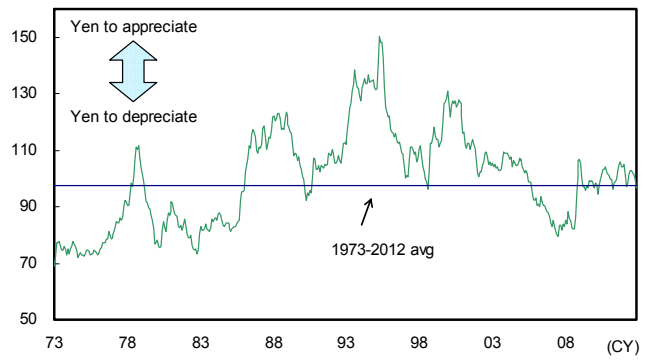
Going forward, (1) bold monetary easing by the BOJ, (2) Japan's trade balance turning negative, and (3) the European sovereign debt crisis in reprieve and the easing of global credit uncertainties will be factors for the yen depreciating against the dollar. We believe that Japan's policy authorities are unlikely to intervene in a major way to brake the yen's depreciation until it weakens to the Y100/$ level at the very least.

Chart 31 illustrates the trend of the real effective exchange rate of the yen. It is the trade-weighted average of the yen exchange rate that factors in differences in prices with trading partners. It is an exchange rate that expresses the true strength of the yen. Since the real effective exchange rate of the yen is trending at its historical average, this suggests that the yen's current level is hardly one that can be called undervalued. In other words, the current situation should be understood as a correction of the yen's excessive appreciation.

Chart 32 depicts absolute purchasing power parity (PPP) of the yen against the dollar estimated by the OECD, which is currently Y103.9/$. Absolute PPP is a mechanism that shows the equilibrium level of prices for equivalent goods. Absolute PPP estimated by the OECD takes into account a broad range of goods and services that constitute GDP. However, it is not an indicator that reflects changes in import and export prices, which should not be overlooked. However, absolute PPP should always be borne in mind as an indicator followed by global financial market participants.

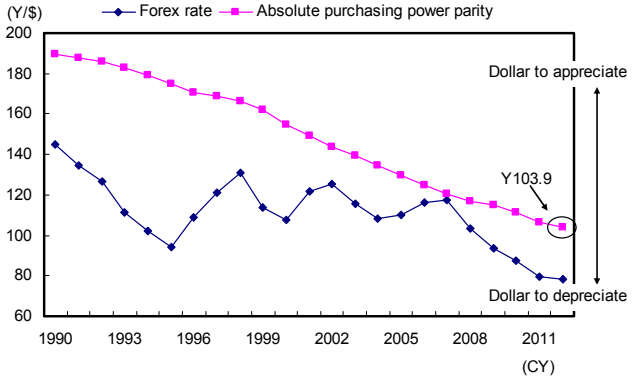
A staff report accompanying the IMF Article IV Consultation of August 2012 notes that the real effective exchange rate of the yen estimated from unit labor cost is overvalued by about 10% to 15% compared to its average for the last 20 years. Even when the yen's subsequent depreciation is allowed for, it would still be difficult to conclude that the yen is currently undervalued.

Real Effective Exchange Rate of Yen (2010 = 100)
Chart 31



Source: Bank of Japan; compiled by DIR.

Absolute Purchasing Power Parity and Forex Rate
Chart 32



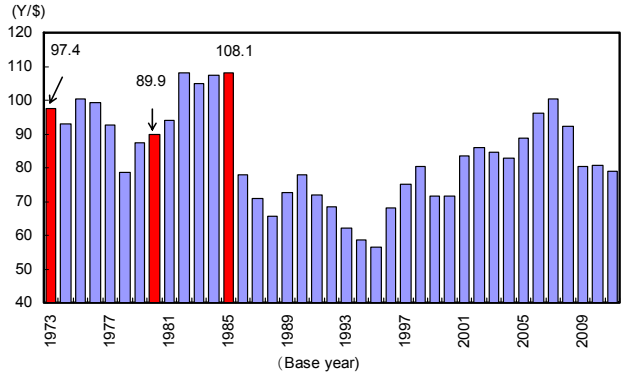
Source: OECD; compiled by DIR.

Appropriate yen-dollar rate in terms of relative PPP

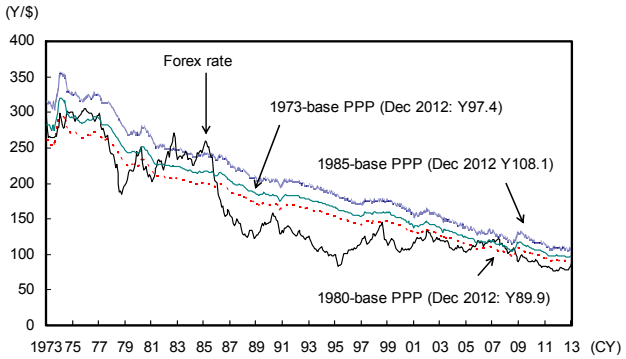
Relative PPP is also often used for the long-run equilibrium level of exchange rates. It is, however, associated with a drawback, namely that its level changes depending on the base year selected. Chart 33.1 demonstrates to what extent current PPP (as of December 2012) for the yen against the dollar changes when the base year is shifted. The yen is the weakest when the base year is 1985, yielding a PPP of Y108.1/$. In contrast, the yen is the strongest when the base year is 1995, yielding a PPP of Y56.5/$. As indicated in Chart 33.2, PPP as of December 2012 for the widely used base years of 1973,

1980, and 1985 is respectively Y97.4/$, Y89.9/$, and Y108.1/$. Hence, PPP on a Corporate Goods Price Index basis suggests that it would be difficult to say that the yen has depreciated too far.

Comparison of 2012 Y/$ Purchasing Power Parity Measured by Base Year **Chart 33.1**



Relative Purchasing Power Parity and Forex Rate **Chart 33.2**



Source: Ministry of Internal Affairs and Communications, Bank of Japan, US Bureau of Labor Statistics; compiled by DIR.
Note: Prices based on Corporate Goods Price Index for Japan and Producer Price Index for US.

Japan's currency authorities intervened to purchase the yen twice in the past

It is interesting to recall that Japan's currency authorities have intervened to purchase the yen twice in the past to halt its depreciation (Chart 34.1). The first was from 1991 to 1992 and the second 1997 to 1998. Intervention at those times occurred when the yen was in the Y125-140/$ range.

Does the Japanese government intervene to brake the depreciation of the yen when turmoil in the form of falling stock and/or JGB prices overtakes financial markets?

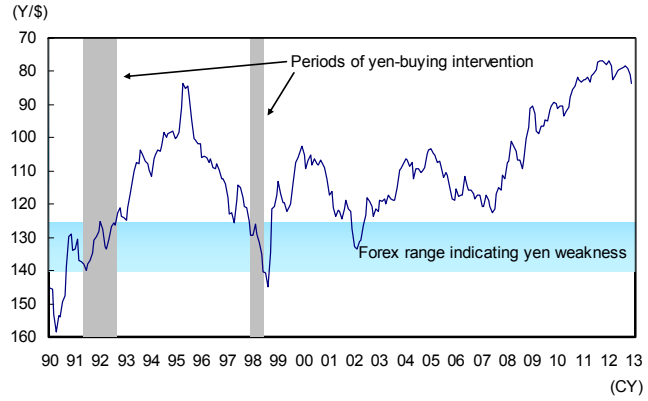
Chart 34.2 reveals that currency authorities in Japan have intervened to purchase the yen when financial markets are overtaken by turmoil, such as in the form of falling stock prices. In 1991 and 1992, the collapse of an asset bubble induced capital flight from Japan, and, for a period, the yen depreciated while stock prices fell. In 1997 and 1998, influenced by BIS capital adequacy requirements, the depreciation of the yen gave rise to growing concerns about the management of Japan's financial institutions, and the yen depreciated and stock prices fell in a spiral fashion.

Given these past cases, it seems reasonable to think that situations when the Japanese government will intervene to brake the yen weakening are those where its depreciation has given way to turmoil in financial markets in the form of falling stock or JGB prices.

Japan succeeded in gaining certain degree of understanding from foreign nations at G20 meeting

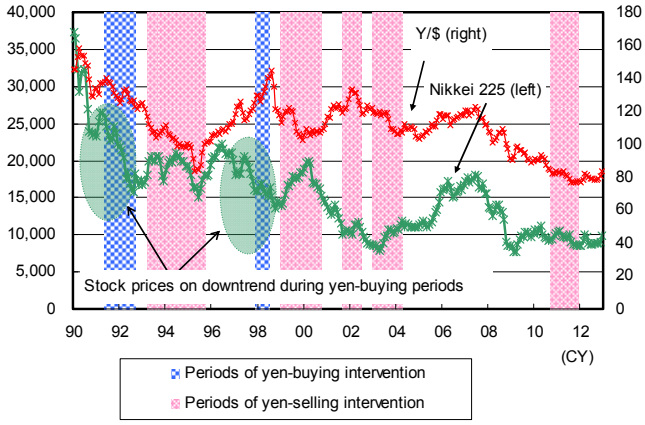
At the G20 meeting of finance ministers and central bank governors held in Moscow on 16 February 2013, Japan succeeded in gaining a certain degree of understanding from foreign nations that the objective of Abenomics is to solve a domestic problem of overcoming deflation and not to weaken the yen. To begin with, foreign nations have no basis for criticizing the monetary policies of an independent central bank aiming to overcome deflation. Japan's policy authorities, however, will need to show even more consideration than before when commenting on the yen.

Forex Rate and Yen-buying Operations **Chart 34.1**



Source: Bank of Japan, Ministry of Finance; compiled by DIR.

Nikkei 225 vs. Forex Market Intervention **Chart 34. 2**



Source: Ministry of Finance, Nikkei; compiled by DIR.

As long as financial markets are not shaken, a weaker yen is a plus for Japan's economy

Since Japan has an export-led economic structure, a weaker yen is basically a plus for the economy. Charts 35 and 36 present a quantitative analysis of the effect of a weaker yen on Japan's economy and corporate earnings. A view frequently heard in Japan is one that emphasizes only the negative aspects of a weaker yen, such as worsening of the trade balance on a yen basis and/or the adverse impact on some import industries. From a macroeconomic perspective, however, these concerns are partial in scope. To conclude, as long as the yen's depreciation does not give way to turmoil in financial markets in the form of falling stock and/or JGB prices, Japan's currency authorities are basically expected to maintain their stance of tolerating a weaker yen.

Impact of Weaker Yen on Japan's Economy (deviation from Y80/$ case) **Chart 35**

	Y85/$	Y90/$	Y95/$	Y100/$	Y110/$	Y120/$
Real GDP (%)	0.2	0.4	0.6	0.8	1.1	1.3
Domestic demand (%)	0.0	0.1	0.1	0.1	0.2	0.2
Exports (%)	1.0	2.0	2.8	3.6	5.0	6.3
Imports (%)	-0.1	-0.1	-0.2	-0.4	-0.6	-0.9
Trade balance (customs-clearance base; Y tril)	-1.7	-3.5	-5.3	-7.0	-10.6	-14.2
Import Price Index (%)	4.4	8.7	12.9	17.0	25.2	33.1
Corporate Goods Price Index (%)	0.6	1.2	1.8	2.3	3.3	4.2
Consumer Price Index (%)	0.1	0.2	0.2	0.3	0.4	0.6

Source: Cabinet Office, Bank of Japan, Ministry of Internal Affairs and Communications.
Note: DIR estimates based on DIR's short-term macroeconomic model.

Impact of Y10 Depreciation vs. $ on Corporate Earnings (% deviation from Y80/$ case) **Chart 36**

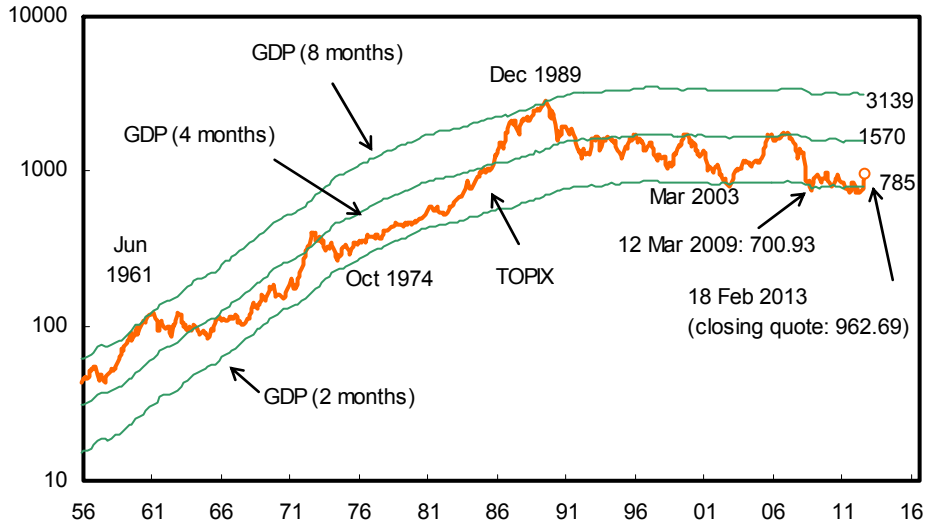
		FY12	FY13	FY14
Sales	All industries	0.4	2.5	2.5
	Manufacturing	0.5	3.4	3.4
	Non-manufacturing	0.3	2.1	2.1
Recurring profit	All industries	0.0	4.9	4.8
	Manufacturing	5.3	25.3	22.5
	Non-manufacturing	-1.8	-5.0	-4.4

Source: Compiled by DIR based on statistics by Ministry of Finance.
Notes: 1) Sales and recurring profit based on Financial Statements Statistics of Corporations by Industry (Ministry of Finance).
2) Non-manufacturing excludes finance/insurance.

Possibility that stock prices still undervalued

Finally, it is worth pointing out that, compared to the real economy, stock prices are likely still undervalued at their current levels. Chart 37 illustrates the long-term trends of Japanese stocks and nominal GDP. In historical terms, Japanese stocks have traded within a band defined by nominal GDP for more than 50 years. In December 1989, when the asset bubble reached its peak, this band's upper limit became a ceiling for share prices. In October 1974 following the first oil crisis, in March 2003 in the wake of Japan's banking crisis, in March 2009 in the wake of the Lehman crisis, and in March 2011 immediately after the Great East Japan Earthquake, stock prices found a floor at the GDP band's lower limit. Japanese stocks are currently trending near the GDP band's lower limit, making it reasonable to conclude that they are trading in an undervalued zone in comparison to the real economy.

TOPIX (pt) **and Nominal GDP** (Y100 bil) **Chart 37**



Source: Cabinet Office, Tokyo Stock Exchange; compiled by DIR.

3. Risks Facing Japan's Economy

In this section, we examine four risk factors facing Japan's economy: (1) any deepening of the European sovereign debt crisis, reflecting likely political instability in Italy and Spain, (2) any worsening of Japan-China relations, (3) the US fiscal issue, and (4) a surge in crude oil prices stemming from geopolitical risk.

Risk 1: Any deepening of the European sovereign debt crisis

In the worst case, an impact comparable to the Lehman crisis

Of risks (1) to (4) above, there is no question that the greatest tail risk is (1). Chart 38 depicts the results of simulating the impact of the European sovereign debt crisis on Japan's economy. Specifically, we established three scenarios for the size of the haircuts given to the sovereign debt of European nations and calculated the core capital shortfall that major European banks would face in each scenario. We then estimated how the resulting credit crunch would influence the world economy, factored in yen appreciation because of less alternative currency selection, and calculated how Japan's real GDP would be affected. In the worst case (Case 3), Japan's real GDP has the potential of experiencing downward pressure of more than 4%. It goes without saying that calculation results will need to be viewed with considerable latitude. Even so, should the European sovereign debt crisis see

any worsening, such as by Greece leaving the euro, there is risk that Japan would sustain a blow comparable in size to the Lehman crisis.

Impact of European Sovereign Debt Crisis on Japanese Economy **Chart 38**

	% discount of respective nation's sovereign bonds						European banks		Impact		
	Belgium	Greece	Ireland	Italy	Portugal	Spain	Tier 1 capital shortfall (€ 100 mil)	Risk asset write-off matching half capital shortfall (% of overall risk assets)	Bank loans worldwide ($)	Nominal GDP worldwide ($)	Japan's real GDP (yen)
Case 1	0%	60%	40%	10%	40%	10%	**1,274**	**7.0%**	-1.7%	-1.6%	**-0.6%**
Case 2	15%	80%	50%	30%	50%	30%	**2,233**	**13.9%**	-3.4%	-3.2%	**-2.2%**
Case 3	30%	100%	60%	50%	60%	50%	**3,240**	**24.9%**	-6.0%	-5.7%	**-4.1%**

Source: World Bank, European Banking Authority, Cabinet Office; compiled by DIR.
Assumptions: 1) Ratio of risk asset write-off to overall risk assets corresponds to that of loan cutbacks to overall loans.
2) Case 1: the yen remains flat; Case 2: 5% appreciation; Case 3: 10% appreciation; all against the dollar.
Note: Estimated based on elasticity approach, which warrants some latitude.

Risk 2: Worsening of Japan-China relations

Effect on Japan's economy of the worsening of Japan-China relations

The second risk for Japan's economy is a deterioration in Japan-China relations. As shown in Chart 39.1, any deterioration in Japan-China relations would have adverse effects on Japan's economy through three channels. The assumptions for the case of exports to China stagnating for six months (first column) are given in the footnote to Chart 39.2.

Impact on domestic production if exports to China stagnate for six months

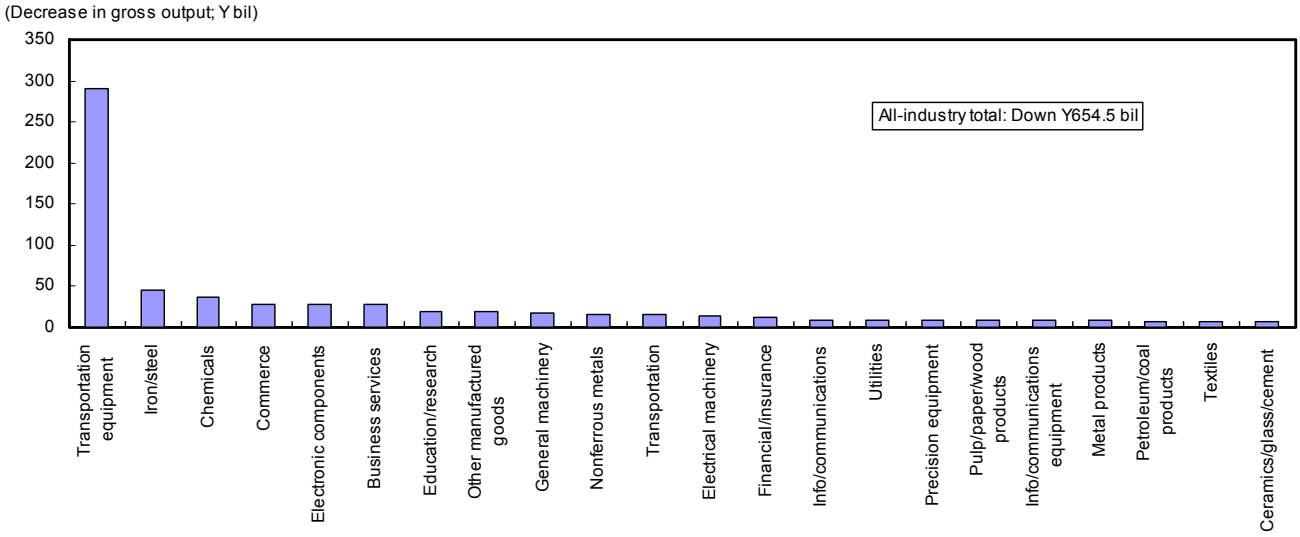
We have estimated the impact on domestic production of exports to China stagnating for six months based on *2005 Input-Output Tables for Japan* (Ministry of Internal Affairs and Communications). In this case, as shown in Chart 39.2, domestic production would shrink by Y654.5 billion on an all-industry basis and a wide range of industries would be impacted, including transportation equipment, chemicals, iron/steel, general machinery, and electronic components.

Impact on Japan's Economy of Deterioration in Japan-China Relations **Chart 39.1**

(1) Exports from Japan to China	**(2) Sales of Japanese manufacturers incorporated in China**	**(3) No. of Chinese tourists visiting Japan**
Y12 tril/year (19% of Japan's exports)	Y20 tril/year (5% of manufacturers' sales in Japan)	1.41 mil tourists/year (16% of tourists visiting Japan)
If exports to China stagnate for six months	**If business in China declines by 10% for one year**	**If Chinese tourists decline by 40% for one year**
Domestic production would decline by Y654.5 bil GDP would shrink by Y200 bil	Japanese corporate sales would decline by Y2.0 tril Recurring profit would decline by Y144 bil	Domestic production would decline by Y185 bil GDP would shrink by Y94 bil

Source: Ministry of Finance, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, Japan National Tourism Organization; compiled by DIR.

Impact on Industries if Exports to China Stagnate for Six Months **Chart 39.2**



Source: Ministry of Finance, Ministry of Internal Affairs and Communications; compiled by DIR.
Assumptions: Export value to China will decline 80% for automobiles, 20% for auto parts, and 2% for other sectors.

Slide in exports from deteriorating Japan-China relations would place downward pressure of about only 0.1% on Japan's GDP even in the worst case scenario

Chart 40 shows results of estimating how Japan's GDP would be affected by the decrease in exports ensuing from deteriorating relations between Japan and China. In this process, we first established a number of assumptions and conditions before proceeding with our estimation. We estimated the direct impact of production contracting from lower exports and the impact including the knock-on effect of lower production in a given industry spreading to other industries using inter-industry input-output tables. Estimation results indicate the downward pressure that would arise in comparison to the case where Japan-China relations do not worsen (base scenario). Hence, our estimation does not include changes in China's economy.

First, in Scenario 1, the effect of worsening Japan-China relations is assumed to end in the short term and play out in three months. In this scenario, we assumed that exports would decline by about the same amount as they did after anti-Japan demonstrations in China in September 2012. At that time, a movement to boycott Japanese products greatly undermined automobile sales, and exports of automobiles and auto parts fell sharply. There was, however, no noticeable decline in the export of other items. In this scenario, GDP would shrink by Y117.8 billion (0.02% of nominal GDP).

In Scenario 2, the slide of exports is the same as in Scenario 1, but the effect is assumed to last for six months. In this scenario, Japan's GDP would shrink by Y206.2 billion (0.04% of nominal GDP).

In Scenario 3, we assumed that the effect of worsening Japan-China relations would further deepen than CY12 and that this effect would last for a long time (12 months). In this scenario, Japan's GDP would shrink by Y540.2 billion (0.11% of nominal GDP).

Summarizing the above, worsening Japan-China relations are estimated to place downward pressure of about 0.1% on Japan's GDP in the worst case, an impact that is not all that significant.

Impact on Japan's GDP of Lower Exports Due to Deterioration in Japan-China Relations **Chart 40**

		Scenario 1	Scenario 2	Scenario 3
Decline in GDP due to lower exports to China	(Y100 mil)	1,178	2,062	5,402
	(% of GDP)	(0.02)	(0.04)	(0.11)
Decline in GDP due to lower exports of automobiles and auto parts	(Y100 mil)	767	1,342	2,933
	(% of GDP)	(0.02)	(0.03)	(0.06)

Source: Ministry of Finance, Ministry of Internal Affairs and Communications, Cabinet Office; compiled by DIR.

Note: % of GDP=% of CY12 nominal GDP.

Assumptions: 1) Scenario 1: Exports to China will decline for three months by 80% for automobiles, 20% for auto parts, and 2% for all other items.

2) Scenario 2: Exports to China to decline for six months by the same degree as in Scenario 1.

3) Scenario 3: Exports to China to decline for 12 months by 80% for automobiles, 40% for auto parts, and 4% for all other items.

Risk 3: US fiscal issue

Should the fiscal issue materialize in the US, Japan's GDP would shrink by 0.8%

Chart 41 illustrates the effect on national and regional GDPs of fiscal expenditures being curtailed by 1% of GDP. Should the US fiscal issue materialize and should US fiscal expenditures be cut by about 4 percentage points of GDP (which corresponds to the top panel), Japan's GDP would shrink by around 0.8% (0.2% x 4). The direction of the US fiscal issue warrants close attention toward March 2013.

Impact on GDP from Sustained Fiscal Spending Cutbacks of 1% of GDP **Chart 41**

		Year 1	Year 2	Year 3	Year 4	Year 5
Cutback in US	US	-0.9	-1.0	-0.6	0.0	0.5
	Japan	-0.2	-0.2	-0.1	0.0	0.1
	Eurozone	-0.1	-0.1	-0.1	-0.1	0.0
	Total OECD	-0.4	-0.5	-0.3	0.0	0.2
	Total non-OECD	-0.2	-0.1	0.1	0.1	0.1
	World	-0.4	-0.4	-0.3	0.0	0.2

		Year 1	Year 2	Year 3	Year 4	Year 5
Cutback in Japan	US	0.0	-0.1	0.0	0.0	0.0
	Japan	-0.8	-0.9	-1.1	-0.9	-0.7
	Eurozone	0.0	0.0	0.0	0.0	-0.1
	Total OECD	-0.2	-0.2	-0.2	-0.2	-0.2
	Total non-OECD	-0.1	0.0	0.0	0.0	0.0
	World	-0.2	-0.2	-0.2	-0.2	-0.1

		Year 1	Year 2	Year 3	Year 4	Year 5
Cutback in Eurozone	US	-0.1	-0.1	0.0	0.0	0.1
	Japan	-0.1	-0.1	-0.1	0.0	0.0
	Eurozone	-0.8	-0.8	-0.5	-0.3	-0.1
	Total OECD	-0.3	-0.3	-0.2	-0.1	0.0
	Total non-OECD	-0.1	-0.1	0.1	0.1	0.1
	World	-0.2	-0.2	-0.1	0.0	0.0

Source: OECD, *The OECD's New Global Model*; compiled by DIR.
Note: Percentage deviation from OECD's baseline scenario.

Risk 4: Surge in crude oil prices stemming from geopolitical risk

Impact of higher crude oil prices on Japan's economy

The fourth risk is a surge in crude oil prices in the context of geopolitical risk ushering in mini-stagflation (rising prices during an economic downturn) in Japan. An analysis using our macroeconomic forecasting model indicates that crude oil prices rising by $10/bbl would reduce Japan's real GDP 0.1% in the first year and 0.2% in the second.

Crude oil prices increasing by 10% would reduce macro earnings around 5%

Chart 42 illustrates the results of simulating the impact on macro earnings of a 10% increase in crude oil prices. Stated simply, two factors determine the impact of higher crude oil prices on corporate earnings: (1) the percentage by which overall input prices (raw material prices) rise for the corporate sector when crude oil prices increase and (2) the degree to which companies are able to pass through the increase in raw material prices to selling prices. Three scenarios were established for each of these factors, and results were calculated for a total of nine cases (= 3 x 3).

With regard to (1) the percentage by which overall input prices (raw material prices) rise for the corporate sector when crude oil prices increase, we have assumed in our main scenario that crude oil prices rising 10% would increase input prices by 1.3%.

With regard to (2) the degree to which companies are able to pass through the increase in raw material prices to selling prices, given the recent disinflation of output prices, we believe it is realistic to assume that crude oil prices rising by 10% would cause corporate earnings to contract about 5%, which can be viewed as an intermediate scenario between (1) zero pass-through and (2) actual pass-through.

Impact of 10% Rise in Crude Prices on Profits **Chart 42**

			Change in input prices		
			+0.3%	+1.3%	+2.6%
Pass-through to output prices	1. Zero pass-through	0%	**-1.7%**	**-7.3%**	**-14.6%**
	2. Actual pass-through	41%	**-0.7%**	**-2.9%**	**-5.7%**
	3. Optimum pass-through	71%	**0.0%**	**0.0%**	**0.0%**

Source: Bank of Japan, Ministry of Internal Affairs and Communications, Ministry of Finance; compiled by DIR.
Notes: 1) Actual pass-through rate: average pass-through rate from 2005 to 2H 2007, when the rate was stable.
2) Optimum pass-through rate: one which offsets the effects of higher input prices.
3) Ratio of crude oil to intermediate input is 3%. Thus, theoretically, a 10% rise in crude prices will boost input prices by 0.3%. However, in actuality, a 10% rise in crude prices will boost other commodity prices, boosting input prices by 1.3%.

4. Supplement: Alternative scenarios

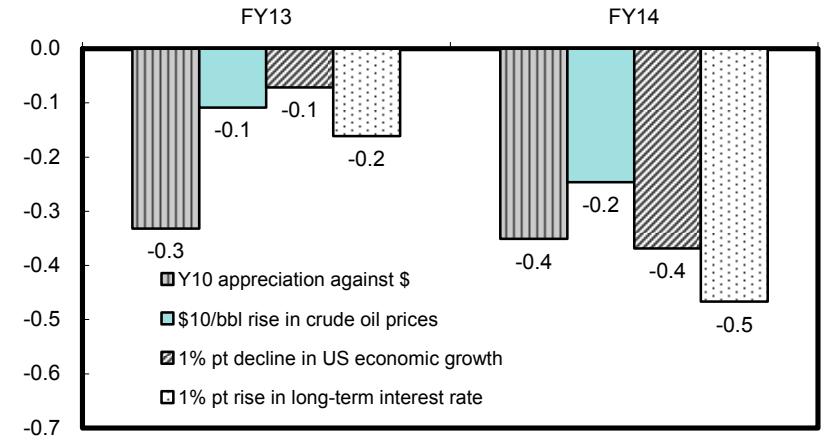
Here, we estimate likely economic effects from changes in our assumptions. The assumptions and effects of alternative scenarios are shown in the two charts below. We assumed alternative scenarios might emerge from Apr-Jun 2013.

Standard and Alternative Scenario Assumptions **Chart 43**

	Standard		Alternative
Case 1: Forex rate	Y95/$ in both FY13 and FY14	→	Y10 appreciation against $
Case 2: Crude oil prices (WTI futures)	$95/bbl in both FY13 and FY14	→	$10/bbl rise
Case 3: US economic growth	+2.0% in CY13 and +2.6% in CY14	→	1% pt decline
Case 4: Long-term interest rate	0.95% in FY13 and 1.11% in FY14	→	1% pt rise

Source: Compiled by DIR.

Effects on Real GDP
(percentage-point change from standard scenario) **Chart 44**



Source: Compiled by DIR.

Case 1: Yen appreciation

Appreciation of the yen could result in a decline in exports via weakened price competitiveness, which in turn would curb the production of export industries (electrical machinery, transportation equipment) and operations of related non-manufacturing industries (transportation, electric utilities, commerce), resulting in lower sales and profits, reducing cash flow and depressing the expected economic growth rate. Thus, capex would be restricted. Meanwhile, lower import prices (reflecting a stronger yen) would reduce general domestic prices, meaning lower prices of corporate and consumer goods. Thus, although the real purchasing power of households would increase, a stronger yen could adversely affect consumption because the decline in corporate profits could impact households through deterioration in the employment and income environment. However, considering the long time lag before effects on consumption are felt, the likely impact within our simulation period would be minimal. If the yen appreciates as indicated in our alternative scenario, real GDP is forecast to shrink 0.3 and 0.4 points in FY13 and FY14, respectively, compared to our standard scenario.

Case 2: Surge in crude oil prices

If crude oil prices rise by $10/bbl above our standard scenario, real GDP is forecast to shrink 0.1 and 0.2 points in FY13 and FY14, respectively, compared to our standard scenario.

Higher crude oil prices would increase the import deflator, which would increase nominal import value, a drag on net export value. This would lower nominal GDP. At the same time, higher oil prices would increase energy prices and push up the prices of final goods through higher material prices. This would lower the real purchasing power of the household sector and depress personal spending.

Higher material costs would lower corporate profits, leading to a slowdown in capex. Weakened business sentiment would negatively affect capex the following year. Meanwhile, lower corporate profits would worsen employment and income conditions, dampening consumer sentiment. This would also depress personal spending.

Case 3: Slowdown in US economic growth

If the US economy shrinks 1 point from our standard scenario, Japan's real GDP would shrink 0.1 and 0.4 points in FY13 and FY14, respectively, compared to our standard scenario.

A slowdown in the US economy would directly and indirectly reduce exports from Japan. Japan ships a substantial portion of its production to Asian trading partners, where imported parts/devices are assembled for export, centering on the US. Accordingly, a US economic slowdown would adversely affect exports to the US from Asia and production for export in Asia, which would in turn dampen exports to Asian trading partners from Japan. As a result, Japan's exports as a whole would lose considerable momentum, which would curb industrial production and capex in Japan. By the time such adverse effects of a US economic slowdown were felt in Japan, imports would have also declined.

Case 4: Higher interest rates

If long-term interest rates rise 1 point above our standard scenario, real GDP would contract 0.2 and 0.5 points in FY13 and FY14, respectively, compared to our standard scenario. Increased fund-raising costs due to higher interest rates would curb capex and housing investment. Such an adverse impact would accelerate once it took hold.

The direct impact on companies and households would depend on the amount of net interest-bearing liabilities. In the case of households, interest-bearing assets have exceeded interest-bearing liabilities. Consequently, higher interest rates would likely mean an increase in household income, which in turn would increase household consumption, assuming the propensity to consume remains unchanged.

As in the other cases, we did not allow for changes in the external environment when estimating the impact of higher interest rates. Interest rates do not usually rise independently, but increase in response to economic recovery or a shift to a positive economic outlook. In such instances, the expected rate of inflation also increases, which restricts the rise of real interest rates. As a result, the marginal return on investment (difference between return on investment and real interest rates) remains unchanged, which is not particularly negative for capex. It is therefore possible that our simulation overemphasizes the adverse effects of higher interest rates.

However, increases in long-term interest rates due to worsening of the fiscal balance (owing to economic stimulus measures and other fiscal commitments to spending) translate into crowding out of capex and housing investment. Thus, the impact of higher interest rates on the economy would likely be similar to that of our simulation.

Simulation Results — Chart 45

	Standard Scenario		Case 1 Y10 appreciation against $				Case 2 $10/bbl rise in crude oil prices			
	FY13	FY14	FY13		FY14		FY13		FY14	
Nominal GDP (Y/y %)	2.1	1.5	1.9	(-0.2)	0.9	(-0.5)	1.8	(-0.3)	1.0	(-0.5)
Real GDP (Chained [2005]; y/y %)	**2.7**	**0.4**	**2.3**	**(-0.3)**	**-0.0**	**(-0.4)**	**2.6**	**(-0.1)**	**0.1**	**(-0.2)**
GDP deflator (Y/y %)	-0.5	1.1	-0.4	(0.2)	0.9	(-0.2)	-0.8	(-0.2)	0.9	(-0.3)
All-industry Activity Index (Y/y %)	2.4	2.0	2.4	(-0.1)	1.7	(-0.3)	2.4	(-0.1)	1.9	(-0.1)
Industrial Production Index (Y/y %)	3.0	4.6	2.8	(-0.3)	3.5	(-1.1)	2.9	(-0.1)	4.3	(-0.3)
Tertiary Industry Activity Index (Y/y %)	2.2	1.4	2.2	(0.0)	1.3	(-0.2)	2.1	(-0.1)	1.2	(-0.2)
Corporate Goods Price Index (Y/y %)	1.3	3.2	0.2	(-1.0)	2.1	(-1.0)	1.3	(0.0)	3.2	(0.0)
Consumer Price Index (Y/y %)	0.2	2.6	0.0	(-0.1)	2.3	(-0.2)	0.2	(0.0)	2.6	(0.0)
Unemployment rate (%)	4.1	4.0	4.1	(0.0)	4.1	(0.1)	4.1	(0.0)	4.0	(0.0)
Trade balance (Y tril)	-9.5	-5.3	-7.6	(1.9)	-5.8	(-0.5)	-10.2	(-0.7)	-6.0	(-0.8)
Current balance (US$100 mil)	242.2	795.0	261.2	(18.9)	792.9	(-2.1)	240.4	(-1.9)	793.1	(-1.9)
Current balance (Y tril)	2.3	7.6	4.1	(1.8)	7.4	(-0.2)	2.1	(-0.2)	7.4	(-0.2)
Real GDP components (Chained [2005]; y/y %)										
Private consumption	1.5	-0.9	1.5	(0.0)	-1.0	(-0.1)	1.4	(-0.1)	-1.1	(-0.2)
Private housing investment	6.6	-4.9	6.6	(0.0)	-4.8	(0.1)	6.5	(-0.0)	-5.1	(-0.1)
Private non-housing investment	2.3	5.6	2.2	(-0.1)	4.2	(-1.3)	1.7	(-0.6)	4.2	(-1.3)
Government final consumption	1.4	1.1	1.3	(-0.1)	1.0	(-0.1)	1.5	(0.1)	1.3	(0.2)
Public fixed investment	10.8	-16.9	10.8	(0.0)	-16.8	(0.0)	10.8	(-0.0)	-16.9	(-0.1)
Exports of goods and services	2.8	8.7	1.3	(-1.5)	7.1	(-1.5)	2.8	(0.0)	8.7	(0.0)
Imports of goods and services	2.7	3.4	2.9	(0.2)	2.6	(-0.8)	2.4	(-0.3)	2.4	(-1.0)

	Case 3 1% pt decline in US economy				Case 4 1% pt rise in 10-yr JGB yield				(Reference) Y5 depreciation and $10/bbl rise in crude oil prices			
	FY13		FY14		FY13		FY14		FY13		FY14	
Nominal GDP (Y/y %)	2.0	(-0.1)	1.2	(-0.3)	2.0	(-0.1)	1.1	(-0.4)	1.9	(-0.2)	1.2	(-0.2)
Real GDP (Chained [2005]; y/y %)	**2.6**	**(-0.1)**	**-0.0**	**(-0.4)**	**2.5**	**(-0.2)**	**-0.1**	**(-0.5)**	**2.7**	**(0.1)**	**0.3**	**(-0.1)**
GDP deflator (Y/y %)	-0.5	(0.0)	1.2	(0.0)	-0.5	(0.0)	1.2	(0.1)	-0.9	(-0.3)	1.0	(-0.2)
All-industry Activity Index (Y/y %)	2.4	(-0.0)	1.8	(-0.2)	2.4	(-0.0)	1.9	(-0.1)	2.4	(-0.0)	2.1	(0.0)
Industrial Production Index (Y/y %)	2.8	(-0.2)	3.9	(-0.6)	2.8	(-0.2)	3.8	(-0.8)	3.0	(-0.0)	4.9	(0.3)
Tertiary Industry Activity Index (Y/y %)	2.2	(-0.0)	1.3	(-0.1)	2.2	(0.0)	1.4	(-0.0)	2.1	(-0.1)	1.3	(-0.1)
Corporate Goods Price Index (Y/y %)	1.3	(-0.0)	3.1	(-0.1)	1.3	(-0.0)	3.1	(-0.0)	1.8	(0.5)	3.7	(0.5)
Consumer Price Index (Y/y %)	0.2	(-0.0)	2.6	(-0.0)	0.2	(-0.0)	2.6	(-0.0)	0.3	(0.1)	2.8	(0.2)
Unemployment rate (%)	4.1	(0.0)	4.0	(0.0)	4.1	(0.0)	4.0	(0.0)	4.1	(0.0)	4.0	(-0.0)
Trade balance (Y tril)	-9.6	(-0.1)	-5.5	(-0.2)	-9.3	(0.2)	-4.7	(0.5)	-11.2	(-1.7)	-5.8	(-0.5)
Current balance (US$100 mil)	242.1	(-0.1)	794.8	(-0.2)	242.8	(0.6)	796.7	(1.6)	230.9	(-11.3)	794.2	(-0.8)
Current balance (Y tril)	2.3	(-0.0)	7.5	(-0.0)	2.4	(0.1)	7.7	(0.2)	1.2	(-1.1)	7.5	(-0.1)
Real GDP components (Chained [2005]; y/y %)												
Private consumption	1.5	(-0.0)	-1.0	(-0.1)	1.6	(0.0)	-0.8	(0.1)	1.4	(-0.1)	-1.0	(-0.1)
Private housing investment	6.6	(-0.0)	-5.0	(-0.0)	6.2	(-0.3)	-6.1	(-1.2)	6.5	(-0.1)	-5.1	(-0.2)
Private non-housing investment	2.1	(-0.2)	4.4	(-1.1)	1.2	(-1.1)	2.6	(-2.9)	1.8	(-0.5)	4.9	(-0.6)
Government final consumption	1.4	(-0.0)	1.1	(-0.0)	1.4	(-0.0)	1.0	(-0.1)	1.6	(0.2)	1.3	(0.2)
Public fixed investment	10.8	(-0.0)	-16.9	(-0.1)	10.8	(-0.0)	-16.9	(-0.1)	10.8	(-0.0)	-16.9	(-0.1)
Exports of goods and services	2.5	(-0.3)	7.6	(-1.1)	2.8	(0.0)	8.7	(0.0)	3.6	(0.7)	9.5	(0.7)
Imports of goods and services	2.5	(-0.2)	2.4	(-1.0)	2.2	(-0.4)	2.1	(-1.3)	2.3	(-0.4)	2.8	(-0.6)

Source: Compiled by DIR.
Note: Figures in parentheses indicate changes from those under standard scenario. Due to rounding, they do not necessarily conform to calculations based on figures shown.

5. Quarterly Forecast Tables

1.1 Selected Economic Indicators

	2011			2012				2013	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3 (E)	2011	2012 (E)	2011	2012
Nominal GDP (SAAR; Y tril)	463.9	474.4	474.0	480.6	478.0	472.9	470.9	472.5	473.3	473.6	470.6	475.7
Q/q %	-1.5	2.3	-0.1	1.4	-0.5	-1.1	-0.4	0.3				
Q/q %, SAAR	-5.8	9.4	-0.4	5.7	-2.2	-4.1	-1.8	1.4				
Y/y %	-3.7	-2.4	-1.8	2.3	2.9	-0.4	-0.3	-1.8	-1.4	0.1	-2.4	1.1
Real GDP (chained [2005]; SAAR; Y tril)	501.9	514.5	515.3	522.9	521.6	516.5	516.0	519.5	513.7	518.4	509.4	519.3
Q/q %	-0.9	2.5	0.2	1.5	-0.2	-1.0	-0.1	0.7				
Q/q %, SAAR	-3.4	10.4	0.6	6.0	-1.0	-3.8	-0.4	2.7				
Y/y %	-1.6	-0.5	-0.3	3.4	3.8	0.4	0.3	-0.7	0.3	0.9	-0.6	1.9
Contribution to GDP growth (% pt)												
Domestic demand	0.2	1.7	0.9	1.3	0.0	-0.3	0.1	0.6	1.3	1.7	0.3	2.8
Foreign demand	-1.0	0.8	-0.7	0.2	-0.3	-0.7	-0.2	0.1	-1.0	-0.9	-0.9	-0.9
GDP deflator (y/y %)	-2.1	-1.9	-1.5	-1.0	-0.9	-0.8	-0.6	-1.1	-1.7	-0.8	-1.9	-0.8
Index of All-Industry Activity (2005=100)	94.2	96.2	96.7	96.6	96.5	96.0	96.1	96.7	96.0	96.4	95.4	96.2
Q/q %; y/y %	-1.0	2.2	0.6	-0.1	-0.2	-0.5	0.1	0.6	0.2	0.4	-0.5	0.8
Index of Industrial Production (2005=100)	88.9	93.7	94.1	95.3	93.4	89.5	87.8	89.9	93.2	90.3	92.2	91.9
Q/q %; y/y %	-4.2	5.4	0.4	1.2	-2.0	-4.2	-1.8	2.4	-1.0	-3.1	-2.4	-0.3
Index of Tertiary Industry Activity (2005=100)	97.0	98.5	99.0	99.0	99.0	99.1	99.7	99.9	98.5	99.5	97.9	99.1
Q/q %; y/y %	-0.5	1.5	0.5	0.0	0.0	0.0	0.6	0.2	0.7	1.1	0.0	1.2
Corporate Goods Price Index components (2010=100)												
Domestic Company Goods Price Index	102.0	102.1	101.0	101.2	101.0	100.2	100.2	101.2	101.6	100.6	101.5	100.6
Y/y %	1.8	2.1	1.1	0.3	-0.9	-1.8	-0.9	-0.0	1.3	-0.9	1.5	-0.8
CPI (excl. fresh food; 2010=100)	100.0	99.9	99.7	99.6	99.9	99.6	99.6	99.2	99.8	99.6	99.8	99.7
Y/y %	-0.3	0.2	-0.2	0.1	-0.0	-0.2	-0.1	-0.4	-0.0	-0.2	-0.3	-0.1
Unemployment rate (%)	4.7	4.4	4.5	4.5	4.4	4.2	4.2	4.2	4.5	4.3	4.6	4.3
Call rate (end-period; %)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Government bond yield (10 year; %)	1.16	1.04	1.03	0.97	0.85	0.78	0.76	0.82	1.05	0.80	0.98	0.84
Money stock; M2 (y/y %)	2.8	2.8	3.0	3.0	2.4	2.4	2.3	2.1	2.9	2.3	2.7	2.5
Trade balance (SAAR; Y tril)	-4.4	-1.0	-4.7	-4.5	-4.4	-6.9	-7.6	-9.7	-3.5	-7.2	-1.6	-5.9
Current balance (SAAR; $100 mil)	924	1,310	870	749	756	484	364	124	964	433	1,197	585
Current balance (SAAR; Y tril)	7.5	10.2	6.7	5.9	6.1	3.8	3.0	1.1	7.6	3.5	9.6	4.7
(% of nominal GDP)	1.6	2.1	1.4	1.2	1.3	0.8	0.6	0.2	1.6	0.7	2.0	1.0
Exchange rate (Y/$)	81.7	77.8	77.3	79.3	80.1	78.6	81.2	91.8	79.0	82.9	79.8	79.8
(Y/Euro)	118.3	108.7	104.9	106.3	101.2	98.2	108.2	122.6	109.6	107.5	111.4	103.5

Source: Compiled by DIR.
Notes: 1) Quarterly figures (excl. y/y %) seasonally adjusted, other unadjusted.
2) Index of All-Industry Activity Index: excl. agriculture, forestry, and fisheries.
3) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

1.2 Selected Economic Indicators

	2013			2014				2015	FY		CY	
	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2013 (E)	2014 (E)	2013 (E)	2014 (E)
Nominal GDP (SAAR; Y tril)	476.8	480.3	485.3	491.6	486.3	488.9	491.7	495.8	483.6	490.8	478.8	489.8
Q/q %	0.9	0.7	1.0	1.3	-1.1	0.5	0.6	0.8				
Q/q %, SAAR	3.7	3.0	4.2	5.3	-4.3	2.2	2.3	3.4				
Y/y %	-0.2	1.6	2.9	4.1	2.0	1.8	1.4	0.8	2.1	1.5	0.6	2.3
Real GDP (chained [2005]; SAAR; Y tril)	524.3	528.8	534.3	541.2	530.7	532.9	534.9	537.8	532.2	534.1	526.8	535.0
Q/q %	0.9	0.9	1.0	1.3	-1.9	0.4	0.4	0.5				
Q/q %, SAAR	3.8	3.5	4.2	5.3	-7.5	1.7	1.5	2.1				
Y/y %	0.6	2.4	3.5	4.2	1.2	0.8	0.1	-0.6	2.7	0.4	1.4	1.6
Contribution to GDP growth (% pt)												
Domestic demand	0.8	0.8	1.0	1.2	-2.3	0.1	0.1	0.3	2.5	-0.6	1.8	1.0
Foreign demand	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.1	0.9	-0.3	0.5
GDP deflator (y/y %)	-0.7	-0.8	-0.6	-0.1	0.7	1.0	1.3	1.5	-0.5	1.1	-0.8	0.7
Index of All-Industry Activity (2005=100)	97.3	98.0	99.0	100.4	99.8	100.2	100.9	101.8	98.7	100.7	97.6	100.2
Q/q %; y/y %	0.6	0.7	1.1	1.4	-0.7	0.5	0.7	0.9	2.4	2.0	1.5	2.7
Index of Industrial Production (2005=100)	90.7	91.8	93.4	95.6	94.8	95.9	97.8	100.1	93.1	97.4	91.8	96.4
Q/q %; y/y %	0.8	1.3	1.7	2.4	-0.9	1.2	2.0	2.3	3.0	4.6	-0.0	5.0
Index of Tertiary Industry Activity (2005=100)	100.4	101.0	101.9	103.1	102.5	102.8	103.2	103.7	101.7	103.1	100.7	102.8
Q/q %; y/y %	0.5	0.6	0.9	1.2	-0.6	0.3	0.4	0.5	2.2	1.4	1.6	2.1
Corporate Goods Price Index components (2010=100)												
Domestic Company Goods Price Index	101.7	101.9	102.0	102.1	105.0	105.1	105.2	105.3	101.9	105.1	101.7	104.4
Y/y %	0.7	1.7	1.9	1.0	3.3	3.2	3.1	3.1	1.3	3.2	1.0	2.6
CPI (excl. fresh food; 2010=100)	99.8	99.8	99.8	99.6	102.1	102.3	102.5	102.5	99.7	102.3	99.6	101.6
Y/y %	-0.1	0.1	0.3	0.4	2.3	2.5	2.7	2.9	0.2	2.6	-0.0	2.0
Unemployment rate (%)	4.2	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.1	4.0	4.2	4.0
Call rate (end-period; %)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Government bond yield (10 year; %)	0.87	0.93	0.98	1.02	1.06	1.09	1.12	1.15	0.95	1.11	0.90	1.07
Money stock; M2 (y/y %)	1.8	1.8	1.6	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.8	1.5
Trade balance (SAAR; Y tril)	-9.5	-9.3	-9.3	-9.0	-7.6	-6.1	-4.5	-2.8	-9.5	-5.3	-9.5	-6.8
Current balance (SAAR; $100 mil)	172	220	259	316	497	690	887	1,098	242	795	192	594
Current balance (SAAR; Y tril)	1.6	2.1	2.5	3.0	4.7	6.6	8.4	10.4	2.3	7.6	1.8	5.6
(% of nominal GDP)	0.3	0.4	0.5	0.6	1.0	1.3	1.7	2.1	0.5	1.5	0.4	1.2
Exchange rate (Y/$)	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	94.2	95.0
(Y/Euro)	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	124.4	125.0

Source: Compiled by DIR.
Notes: 1) Quarterly figures (excl. y/y %) seasonally adjusted, other unadjusted.
2) Index of All-Industry Activity Index: excl. agriculture, forestry, and fisheries.
3) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

2.1 Real Gross Domestic Expenditure (chained [2005]; Y tril)

	2011	2012						2013	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3 (E)	2011	2012 (E)	2011	2012
Gross domestic expenditure	501.9	514.5	515.3	522.9	521.6	516.5	516.0	519.5	513.7	518.4	509.4	519.3
Q/q %, SAAR	-3.4	10.4	0.6	6.0	-1.0	-3.8	-0.4	2.7				
Y/y %	-1.6	-0.5	-0.3	3.4	3.8	0.4	0.3	-0.7	0.3	0.9	-0.6	1.9
Domestic demand	491.8	500.1	504.8	511.1	511.3	509.7	510.0	512.8	502.1	511.0	496.9	510.6
Q/q %, SAAR	0.8	6.9	3.8	5.1	0.1	-1.2	0.2	2.2				
Y/y %	-0.2	0.1	1.0	4.3	3.8	1.9	1.1	0.3	1.3	1.8	0.3	2.8
Private demand	372.8	381.1	386.1	389.4	387.8	385.3	384.7	386.6	382.5	386.0	378.1	386.8
Q/q %, SAAR	0.3	9.1	5.4	3.4	-1.6	-2.6	-0.6	2.0				
Y/y %	-0.5	0.1	1.5	4.7	3.9	1.1	-0.3	-0.9	1.4	0.9	0.5	2.3
Final consumption	299.9	304.0	305.6	309.2	309.2	307.8	309.1	309.4	304.7	308.9	301.8	308.8
Q/q %, SAAR	3.3	5.6	2.1	4.9	0.0	-1.9	1.8	0.4				
Y/y %	0.5	0.5	1.2	4.0	3.1	1.3	1.1	0.1	1.5	1.4	0.5	2.3
Residential investment	12.6	13.3	13.1	12.9	13.2	13.4	13.9	14.0	13.0	13.6	13.0	13.4
Q/q %, SAAR	-9.2	21.4	-3.4	-6.5	9.0	6.7	14.7	3.2				
Y/y %	3.5	8.2	3.3	-0.1	4.6	1.4	5.6	8.4	3.7	4.9	5.5	2.9
Non-residential investment	64.3	65.3	70.9	69.1	68.9	66.4	64.7	65.3	67.4	66.3	66.2	67.3
Q/q %, SAAR	-1.8	6.4	38.9	-10.0	-1.0	-13.7	-9.9	4.1				
Y/y %	-0.5	-0.2	9.9	6.8	7.3	1.5	-8.7	-5.3	4.1	-1.7	3.3	1.7
Change in inventories	-4.0	-1.5	-3.5	-1.8	-3.6	-2.3	-3.1	-2.2	-2.7	-2.8	-2.9	-2.7
Public demand	118.9	119.0	118.7	121.8	123.5	124.4	125.4	126.3	119.6	125.0	118.7	123.7
Q/q %, SAAR	2.3	0.2	-1.1	10.7	5.8	3.2	2.9	3.0				
Y/y %	0.9	0.4	-0.6	2.9	3.7	4.5	5.7	4.0	0.9	4.5	-0.1	4.2
Government final consumption	98.6	98.8	99.2	100.6	101.0	101.4	102.0	102.3	99.3	101.7	98.8	101.3
Q/q %, SAAR	1.2	1.1	1.4	6.0	1.6	1.5	2.4	1.2				
Y/y %	1.3	1.2	1.0	2.4	2.6	2.6	2.9	1.7	1.5	2.4	1.5	2.6
Fixed investment	20.3	20.1	19.5	21.1	22.4	23.0	23.3	23.9	20.2	23.2	20.0	22.4
Q/q %, SAAR	4.2	-4.1	-11.5	38.0	26.8	10.4	6.0	10.6				
Y/y %	-2.2	-4.7	-7.5	4.9	11.2	15.0	18.9	13.3	-2.3	14.8	-7.5	12.3
Change in inventories	0.1	0.1	0.0	-0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Net exports of goods and services	10.2	14.7	10.9	12.2	11.0	7.0	5.8	6.4	12.0	7.6	12.9	9.0
Exports of goods and services	77.9	84.6	82.0	84.8	84.8	80.5	77.5	78.9	82.3	80.4	82.1	81.8
Q/q %, SAAR	-25.5	39.4	-11.8	14.2	0.2	-19.0	-14.0	7.4				
Y/y %	-5.5	0.8	-2.6	0.9	9.2	-4.8	-5.7	-6.9	-1.6	-2.3	-0.4	-0.3
Imports of goods and services	67.7	69.9	71.1	72.6	73.8	73.4	71.7	72.5	70.3	72.8	69.2	72.9
Q/q %, SAAR	-2.0	13.7	7.0	8.6	6.8	-1.9	-9.0	4.5				
Y/y %	3.6	5.1	5.7	6.7	9.1	5.1	0.7	-0.1	5.3	3.6	5.9	5.3
Residual	-0.0	-0.3	-0.4	-0.5	-0.7	-0.2	0.3	0.3	-0.4	-0.2	-0.3	-0.3

Source: Compiled by DIR.
Notes: 1) Subtotals by demand (domestic demand, private demand, and public demand) are simple aggregates of respective components, which differ from figures released by the government.
2) Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
E: DIR estimate.

2.2 Real Gross Domestic Expenditure (chained [2005]; Y tril)

	2013			2014				2015	FY		CY	
	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2013 (E)	2014 (E)	2013 (E)	2014 (E)
Gross domestic expenditure	524.3	528.8	534.3	541.2	530.7	532.9	534.9	537.8	532.2	534.1	526.8	535.0
Q/q %, SAAR	3.8	3.5	4.2	5.3	-7.5	1.7	1.5	2.1				
Y/y %	0.6	2.4	3.5	4.2	1.2	0.8	0.1	-0.6	2.7	0.4	1.4	1.6
Domestic demand	517.1	521.0	525.9	532.2	520.1	520.8	521.3	522.8	524.2	521.1	519.2	523.6
Q/q %, SAAR	3.3	3.1	3.8	4.9	-8.7	0.5	0.4	1.1				
Y/y %	1.1	2.1	3.1	3.9	0.6	0.0	-1.0	-1.8	2.6	-0.6	1.7	0.8
Private demand	389.8	391.8	396.0	403.0	392.2	394.4	396.2	398.3	395.2	395.4	391.0	396.4
Q/q %, SAAR	3.4	2.0	4.3	7.3	-10.2	2.3	1.8	2.1				
Y/y %	0.6	1.7	2.9	4.4	0.5	0.7	-0.0	-1.0	2.4	0.0	1.1	1.4
Final consumption	310.0	311.0	313.8	319.4	308.9	310.4	311.2	312.1	313.6	310.7	311.1	312.5
Q/q %, SAAR	0.8	1.2	3.6	7.4	-12.6	2.0	1.0	1.2				
Y/y %	0.3	1.0	1.5	3.2	-0.4	-0.2	-0.8	-2.3	1.5	-0.9	0.7	0.4
Residential investment	14.1	14.4	14.8	14.8	13.9	13.7	13.8	13.9	14.5	13.8	14.3	14.1
Q/q %, SAAR	4.1	6.6	11.2	2.4	-23.2	-4.7	1.2	2.8				
Y/y %	7.1	7.0	6.3	6.0	-1.7	-4.4	-6.7	-6.6	6.6	-4.9	7.1	-1.9
Non-residential investment	66.1	67.1	68.1	69.5	69.8	70.9	72.0	73.2	67.8	71.6	66.6	70.5
Q/q %, SAAR	4.9	5.7	6.6	8.2	2.0	6.1	6.6	6.6				
Y/y %	-4.1	1.1	5.3	6.3	5.6	5.7	5.7	5.3	2.3	5.6	-1.0	5.9
Change in inventories	-0.5	-0.6	-0.7	-0.8	-0.4	-0.6	-0.8	-0.9	-0.6	-0.7	-1.0	-0.7
Public demand	127.2	129.2	129.9	129.2	127.9	126.3	125.1	124.5	129.0	125.8	128.2	127.2
Q/q %, SAAR	3.1	6.3	2.2	-2.2	-3.9	-4.8	-3.7	-2.0				
Y/y %	2.7	3.6	3.9	2.4	0.7	-2.0	-4.1	-4.2	3.2	-2.5	3.6	-0.8
Government final consumption	102.6	102.9	103.4	103.7	104.0	104.2	104.4	104.6	103.2	104.3	102.9	104.1
Q/q %, SAAR	1.2	1.2	1.6	1.2	1.2	0.8	0.8	0.8				
Y/y %	1.6	1.5	1.3	1.3	1.3	1.2	1.0	0.9	1.4	1.1	1.5	1.2
Fixed investment	24.6	26.2	26.5	25.5	23.9	22.1	20.7	19.9	25.8	21.4	25.3	23.1
Q/q %, SAAR	11.7	29.5	4.7	-14.6	-22.8	-26.6	-23.0	-15.2				
Y/y %	9.2	13.8	14.1	6.6	-2.6	-15.5	-22.0	-22.0	10.8	-16.9	12.8	-8.7
Change in inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net exports of goods and services	7.0	7.6	8.2	8.8	10.3	11.9	13.3	14.7	7.9	12.6	7.3	11.1
Exports of goods and services	80.3	81.8	83.5	85.1	86.9	88.8	90.9	93.0	82.7	89.9	81.1	88.0
Q/q %, SAAR	7.4	7.8	8.2	8.2	8.7	9.1	9.5	9.5				
Y/y %	-5.5	1.7	7.8	7.9	8.3	8.6	8.8	9.2	2.8	8.7	-0.9	8.4
Imports of goods and services	73.3	74.3	75.3	76.4	76.6	77.0	77.6	78.3	74.8	77.3	73.9	76.9
Q/q %, SAAR	4.5	5.3	5.7	5.7	1.2	2.0	3.2	3.6				
Y/y %	-0.7	1.1	5.1	5.3	4.5	3.6	3.0	2.5	2.7	3.4	1.3	4.1
Residual	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.4	0.3	0.3

Source: Compiled by DIR.
Notes: 1) Subtotals by demand (domestic demand, private demand, and public demand) are simple aggregates of respective components, which differ from figures released by the government.
2) Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
E: DIR estimate.

3.1 Nominal Gross Domestic Expenditure (Y tril)

	2011			2012				2013	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3 (E)	2011	2012 (E)	2011	2012
Gross domestic expenditure	463.9	474.4	474.0	480.6	478.0	472.9	470.9	472.5	473.3	473.6	470.6	475.7
Q/q %, SAAR	-5.8	9.4	-0.4	5.7	-2.2	-4.1	-1.8	1.4				
Y/y %	-3.7	-2.4	-1.8	2.3	2.9	-0.4	-0.3	-1.8	-1.4	0.1	-2.4	1.1
Domestic demand	470.3	478.1	481.5	488.2	486.0	483.3	483.7	486.7	479.6	484.8	474.9	485.2
Q/q %, SAAR	-0.1	6.9	2.9	5.7	-1.8	-2.2	0.4	2.5				
Y/y %	-1.1	-0.4	0.7	4.1	3.2	1.0	0.6	-0.3	0.8	1.1	-0.4	2.2
Private demand	352.9	360.6	364.8	368.4	365.4	361.9	361.6	363.4	361.8	363.0	358.0	364.4
Q/q %, SAAR	-0.9	9.0	4.7	4.0	-3.1	-3.8	-0.3	2.0				
Y/y %	-1.6	-0.6	1.1	4.4	3.4	0.3	-0.7	-1.5	0.8	0.3	-0.4	1.8
Final consumption	283.1	286.7	287.7	291.6	290.6	287.7	289.4	289.1	287.3	289.1	284.8	289.8
Q/q %, SAAR	2.2	5.2	1.4	5.5	-1.4	-3.8	2.3	-0.4				
Y/y %	-0.6	-0.0	0.7	3.6	2.6	0.3	0.5	-0.9	0.9	0.6	-0.4	1.7
Residential investment	13.1	13.8	13.6	13.3	13.6	13.8	14.4	14.6	13.5	14.1	13.5	13.8
Q/q %, SAAR	-7.9	22.0	-5.2	-7.4	8.3	5.5	17.2	6.6				
Y/y %	4.4	9.0	3.6	-0.3	3.8	0.2	5.4	9.3	4.2	4.6	6.2	2.3
Non-residential investment	60.8	61.9	67.0	65.2	65.1	62.6	61.0	61.9	63.8	62.6	62.7	63.5
Q/q %, SAAR	-3.0	7.2	37.0	-10.2	-0.7	-14.3	-10.3	6.6				
Y/y %	-2.1	-1.3	9.2	6.4	7.2	1.0	-8.9	-5.0	3.1	-1.9	1.9	1.3
Change in inventories	-4.2	-1.8	-3.5	-1.8	-3.8	-2.3	-3.0	-2.2	-2.8	-2.8	-3.0	-2.7
Public demand	117.3	117.5	116.7	119.9	120.5	121.4	122.1	123.3	117.9	121.8	116.9	120.9
Q/q %, SAAR	2.4	0.6	-2.6	11.1	2.3	3.0	2.2	4.1				
Y/y %	0.5	0.4	-0.5	3.1	2.4	3.4	4.4	3.2	0.9	3.4	-0.3	3.4
Government final consumption	96.2	96.5	96.4	98.0	97.3	97.6	97.9	98.3	96.8	97.7	96.2	97.6
Q/q %, SAAR	1.1	1.1	-0.1	6.5	-2.8	1.3	1.4	1.6				
Y/y %	0.8	1.0	0.9	2.5	1.0	1.2	1.3	0.2	1.3	0.9	1.1	1.5
Fixed investment	21.1	20.9	20.3	21.9	23.2	23.8	24.2	24.9	21.0	24.1	20.7	23.2
Q/q %, SAAR	6.1	-2.5	-12.4	36.0	27.5	9.6	6.6	13.3				
Y/y %	-1.5	-3.8	-6.7	5.3	11.0	14.0	18.7	14.0	-1.6	14.7	-6.9	12.1
Change in inventories	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0
Net exports of goods and services	-6.3	-3.7	-7.6	-7.6	-8.0	-10.4	-12.9	-14.3	-6.4	-11.1	-4.3	-9.5
Exports of goods and services	68.5	73.4	70.0	72.0	72.1	67.8	67.6	71.4	70.9	69.5	71.3	69.6
Q/q %, SAAR	-24.2	32.0	-17.5	11.9	0.9	-21.8	-1.3	24.7				
Y/y %	-8.0	-0.4	-5.1	-2.0	5.6	-7.6	-4.8	-0.7	-3.9	-2.0	-2.6	-2.3
Imports of goods and services	74.8	77.1	77.6	79.6	80.1	78.2	80.5	85.7	77.3	80.6	75.6	79.1
Q/q %, SAAR	11.1	12.9	2.2	11.1	2.7	-9.4	12.4	28.4				
Y/y %	9.7	13.6	12.1	9.5	7.2	1.2	1.3	7.5	11.2	4.3	12.1	4.7

Source: Compiled by DIR.
Note: Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
E: DIR estimate.

3.2 Nominal Gross Domestic Expenditure (Y tril)

	2013			2014				2015	FY		CY	
	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2013 (E)	2014 (E)	2013 (E)	2014 (E)
Gross domestic expenditure	476.8	480.3	485.3	491.6	486.3	488.9	491.7	495.8	483.6	490.8	478.8	489.8
Q/q %, SAAR	3.7	3.0	4.2	5.3	-4.3	2.2	2.3	3.4				
Y/y %	-0.2	1.6	2.9	4.1	2.0	1.8	1.4	0.8	2.1	1.5	0.6	2.3
Domestic demand	490.9	494.4	499.4	505.6	498.8	499.9	501.2	503.6	497.7	500.6	492.7	501.3
Q/q %, SAAR	3.5	2.9	4.1	5.1	-5.2	0.9	1.0	1.9				
Y/y %	1.0	2.3	3.2	4.1	1.6	1.2	0.2	-0.5	2.7	0.6	1.5	1.7
Private demand	366.4	368.1	372.0	378.7	373.0	375.5	377.9	380.8	371.4	376.9	367.4	376.2
Q/q %, SAAR	3.3	1.9	4.4	7.4	-5.9	2.8	2.5	3.1				
Y/y %	0.3	1.7	2.8	4.5	1.7	2.0	1.5	0.7	2.3	1.5	0.8	2.4
Final consumption	289.2	289.8	292.3	297.5	291.7	293.5	294.7	296.1	292.2	294.0	290.1	294.3
Q/q %, SAAR	0.2	0.8	3.5	7.4	-7.6	2.4	1.6	2.0				
Y/y %	-0.5	0.7	1.0	3.0	0.9	1.3	0.8	-0.5	1.1	0.6	0.1	1.5
Residential investment	14.8	15.0	15.5	15.6	14.7	14.6	14.7	14.8	15.2	14.7	15.0	14.9
Q/q %, SAAR	5.3	7.0	11.8	3.0	-20.1	-4.0	2.2	4.1				
Y/y %	8.5	8.9	7.7	6.7	-0.4	-3.0	-5.2	-5.0	8.0	-3.5	8.6	-0.7
Non-residential investment	62.9	63.8	65.0	66.4	66.9	68.1	69.4	70.7	64.6	68.9	63.3	67.6
Q/q %, SAAR	6.2	6.4	7.3	9.1	3.0	7.2	7.8	8.1				
Y/y %	-3.5	2.0	6.6	7.2	6.4	6.6	6.8	6.5	3.2	6.6	-0.3	6.8
Change in inventories	-0.5	-0.6	-0.7	-0.8	-0.4	-0.6	-0.8	-0.9	-0.6	-0.7	-1.0	-0.6
Public demand	124.6	126.4	127.4	126.9	125.9	124.4	123.3	122.8	126.3	123.7	125.3	125.1
Q/q %, SAAR	4.1	5.9	3.2	-1.6	-3.1	-4.7	-3.5	-1.6				
Y/y %	2.9	4.0	4.6	3.2	1.2	-1.6	-3.5	-4.1	3.7	-2.0	3.7	-0.2
Government final consumption	98.8	98.8	99.4	99.9	100.5	100.8	101.1	101.4	99.2	100.8	98.8	100.5
Q/q %, SAAR	1.8	-0.0	2.4	2.0	2.4	1.2	1.2	1.2				
Y/y %	1.6	1.2	1.6	1.7	1.7	2.0	1.7	1.5	1.5	1.7	1.1	1.7
Fixed investment	25.7	27.5	27.9	26.9	25.3	23.5	22.1	21.3	27.1	22.8	26.5	24.5
Q/q %, SAAR	13.5	31.1	5.9	-13.6	-21.7	-25.5	-21.8	-13.7				
Y/y %	10.4	15.5	15.9	8.0	-1.4	-14.4	-20.9	-20.8	12.3	-15.8	14.2	-7.6
Change in inventories	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Net exports of goods and services	-14.2	-14.1	-14.1	-14.0	-12.6	-11.0	-9.5	-7.7	-14.0	-10.0	-14.0	-11.5
Exports of goods and services	73.3	75.2	77.0	78.9	80.9	83.2	85.7	88.4	75.9	84.3	74.1	81.9
Q/q %, SAAR	10.9	10.4	10.0	10.2	10.9	11.7	12.6	13.1				
Y/y %	1.5	10.8	14.7	10.4	10.5	10.7	10.9	12.1	9.2	11.0	6.4	10.6
Imports of goods and services	87.5	89.2	91.1	92.8	93.5	94.2	95.2	96.1	89.9	94.3	88.1	93.5
Q/q %, SAAR	8.5	8.4	8.5	7.8	2.8	3.2	4.1	4.1				
Y/y %	9.1	14.2	14.5	8.4	6.9	5.5	3.9	3.5	11.5	4.9	11.3	6.1

Source: Compiled by DIR.
Note: Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
E: DIR estimate.

4.1 Gross Domestic Expenditure, Implicit Deflators (2005=100)

	2011	2012						2013	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3 (E)	2011	2012 (E)	2011	2012
Gross domestic expenditure	92.4	92.2	92.0	91.9	91.6	91.6	91.2	91.0	92.1	91.4	92.4	91.6
Q/q %, SAAR	-0.6	-0.2	-0.3	-0.1	-0.3	-0.1	-0.3	-0.3				
Y/y %	-2.1	-1.9	-1.5	-1.0	-0.9	-0.8	-0.6	-1.1	-1.7	-0.8	-1.9	-0.8
Private final consumption	94.4	94.3	94.2	94.3	94.0	93.5	93.6	93.4	94.3	93.6	94.4	93.8
Q/q %, SAAR	-0.3	-0.1	-0.2	0.1	-0.4	-0.5	0.1	-0.2				
Y/y %	-1.1	-0.6	-0.5	-0.3	-0.5	-1.0	-0.6	-1.0	-0.6	-0.7	-0.8	-0.6
Private residential investment	103.9	104.0	103.5	103.3	103.1	102.8	103.4	104.2	103.7	103.3	103.7	103.1
Q/q %, SAAR	0.3	0.1	-0.5	-0.2	-0.2	-0.3	0.5	0.8				
Y/y %	0.9	0.8	0.3	-0.2	-0.7	-1.2	-0.2	0.9	0.5	-0.3	0.6	-0.6
Private non-residential investment	94.6	94.8	94.5	94.4	94.5	94.3	94.2	94.8	94.6	94.5	94.7	94.4
Q/q %, SAAR	-0.3	0.2	-0.3	-0.0	0.1	-0.2	-0.1	0.6				
Y/y %	-1.6	-1.1	-0.7	-0.5	-0.1	-0.6	-0.3	0.3	-0.9	-0.1	-1.3	-0.4
Government final consumption	97.6	97.6	97.2	97.3	96.3	96.2	96.0	96.1	97.4	96.0	97.4	96.4
Q/q %, SAAR	-0.0	0.0	-0.4	0.1	-1.1	-0.1	-0.3	0.1				
Y/y %	-0.5	-0.1	-0.1	0.1	-1.5	-1.4	-1.5	-1.5	-0.2	-1.4	-0.3	-1.1
Public fixed investment	103.7	104.1	103.9	103.5	103.6	103.5	103.6	104.2	103.8	103.7	103.7	103.5
Q/q %, SAAR	0.5	0.4	-0.3	-0.4	0.1	-0.2	0.2	0.6				
Y/y %	0.7	1.0	0.9	0.4	-0.1	-0.8	-0.2	0.6	0.7	-0.1	0.6	-0.1
Exports of goods and services	87.9	86.7	85.3	84.9	85.0	84.3	87.2	90.6	86.2	86.4	86.8	85.1
Q/q %, SAAR	0.4	-1.4	-1.7	-0.5	0.2	-0.9	3.5	3.8				
Y/y %	-2.7	-1.2	-2.6	-2.9	-3.3	-2.9	0.9	6.6	-2.3	0.3	-2.2	-2.0
Imports of goods and services	110.5	110.3	109.1	109.7	108.6	106.5	112.2	118.2	109.9	110.6	109.2	108.6
Q/q %, SAAR	3.2	-0.2	-1.2	0.6	-1.0	-2.0	5.4	5.3				
Y/y %	5.9	8.0	6.1	2.7	-1.8	-3.7	0.6	7.6	5.6	0.7	5.8	-0.6

Source: Compiled by DIR.
Note: Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
E: DIR estimate.

4.2 Gross Domestic Expenditure, Implicit Deflators (2005=100)

	2013			2014				2015	FY		CY	
	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2013 (E)	2014 (E)	2013 (E)	2014 (E)
Gross domestic expenditure	90.9	90.8	90.8	90.8	91.6	91.7	91.9	92.2	90.9	91.9	90.9	91.6
Q/q %, SAAR	-0.0	-0.1	-0.0	0.0	0.9	0.1	0.2	0.3				
Y/y %	-0.7	-0.8	-0.6	-0.1	0.7	1.0	1.3	1.5	-0.5	1.1	-0.8	0.7
Private final consumption	93.3	93.2	93.1	93.1	94.5	94.5	94.7	94.9	93.2	94.6	93.2	94.2
Q/q %, SAAR	-0.1	-0.1	-0.0	-0.0	1.4	0.1	0.2	0.2				
Y/y %	-0.7	-0.3	-0.5	-0.3	1.3	1.4	1.7	1.8	-0.4	1.6	-0.6	1.0
Private residential investment	104.5	104.6	104.7	104.9	105.9	106.1	106.4	106.7	104.7	106.3	104.5	105.8
Q/q %, SAAR	0.3	0.1	0.1	0.2	1.0	0.2	0.2	0.3				
Y/y %	1.4	1.8	1.3	0.7	1.4	1.5	1.6	1.7	1.3	1.5	1.3	1.3
Private non-residential investment	95.1	95.2	95.4	95.6	95.8	96.0	96.3	96.7	95.3	96.2	95.1	95.9
Q/q %, SAAR	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4				
Y/y %	0.6	1.0	1.2	0.8	0.8	0.9	1.0	1.1	0.9	0.9	0.8	0.9
Government final consumption	96.2	95.9	96.1	96.3	96.6	96.7	96.8	96.9	96.1	96.7	96.0	96.5
Q/q %, SAAR	0.1	-0.3	0.2	0.2	0.3	0.1	0.1	0.1				
Y/y %	0.0	-0.3	0.2	0.3	0.4	0.8	0.7	0.6	0.1	0.6	-0.4	0.5
Public fixed investment	104.7	105.0	105.3	105.6	106.0	106.3	106.8	107.2	105.2	106.6	104.8	106.1
Q/q %, SAAR	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5				
Y/y %	1.0	1.6	1.6	1.3	1.2	1.2	1.4	1.5	1.4	1.3	1.2	1.3
Exports of goods and services	91.3	91.8	92.2	92.6	93.1	93.6	94.3	95.0	91.8	93.8	91.3	93.2
Q/q %, SAAR	0.8	0.6	0.4	0.5	0.5	0.6	0.7	0.8				
Y/y %	7.4	9.0	6.4	2.3	2.0	1.9	1.9	2.6	6.2	2.1	7.3	2.0
Imports of goods and services	119.3	120.2	120.9	121.6	122.0	122.4	122.7	122.8	120.1	121.9	119.3	121.6
Q/q %, SAAR	1.0	0.7	0.7	0.5	0.4	0.3	0.2	0.1				
Y/y %	9.9	13.0	9.0	2.9	2.3	1.8	0.8	1.0	8.6	1.5	9.8	2.0

Source: Compiled by DIR.
Note: Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
E: DIR estimate.

5.1 Contribution to Real GDP Growth by Component

	2011			2012				2013	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3 (E)	2011	2012 (E)	2011	2012
1) Q/q %												
GDP growth rate	-0.9	2.5	0.2	1.5	-0.2	-1.0	-0.1	0.7	0.3	0.9	-0.6	1.9
Domestic demand	0.2	1.7	0.9	1.3	0.0	-0.3	0.1	0.6	1.3	1.7	0.3	2.8
Private demand	0.0	1.7	1.0	0.7	-0.3	-0.5	-0.1	0.4	1.0	0.7	0.4	1.8
Private consumption	0.5	0.8	0.3	0.7	0.0	-0.3	0.3	0.1	0.9	0.8	0.3	1.4
Residential investment	-0.1	0.1	-0.0	-0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1
Private fixed investment	-0.1	0.2	1.1	-0.4	-0.0	-0.5	-0.3	0.1	0.5	-0.2	0.4	0.2
Change in private inventories	-0.3	0.5	-0.4	0.4	-0.4	0.3	-0.2	0.2	-0.5	-0.0	-0.5	0.0
Public demand	0.1	0.0	-0.1	0.6	0.4	0.2	0.2	0.2	0.2	1.0	-0.0	1.1
Government final consumption	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.3	0.5	0.3	0.5
Public fixed investment	0.0	-0.0	-0.1	0.4	0.3	0.1	0.1	0.1	-0.1	0.6	-0.3	0.5
Change in public inventories	0.0	0.0	-0.0	-0.0	0.0	0.0	-0.0	0.0	0.0	-0.0	0.0	0.0
Net exports of goods and services	-1.0	0.8	-0.7	0.2	-0.3	-0.7	-0.2	0.1	-1.0	-0.9	-0.9	-0.9
Exports of goods and services	-1.1	1.3	-0.5	0.5	0.0	-0.8	-0.5	0.3	-0.2	-0.4	-0.1	-0.0
Imports of goods and services	0.1	-0.5	-0.3	-0.3	-0.3	0.1	0.4	-0.2	-0.8	-0.5	-0.8	-0.9
2) Y/y %												
GDP growth rate	-1.6	-0.5	-0.3	3.4	3.8	0.4	0.3	-0.7	0.3	0.9	-0.6	1.9
Domestic demand	-0.2	0.1	1.0	4.3	3.9	2.0	1.2	0.4	1.3	1.7	0.3	2.8
Private demand	-0.4	0.0	1.1	3.5	3.0	0.9	-0.2	-0.6	1.0	0.7	0.4	1.8
Private consumption	0.3	0.3	0.7	2.3	1.9	0.8	0.7	0.0	0.9	0.8	0.3	1.4
Residential investment	0.1	0.2	0.1	-0.0	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1
Private fixed investment	-0.1	-0.0	1.2	1.0	0.9	0.2	-1.1	-0.8	0.5	-0.2	0.4	0.2
Change in private inventories	-0.8	-0.5	-0.9	0.2	0.1	-0.2	0.1	-0.1	-0.5	-0.0	-0.5	0.0
Public demand	0.2	0.1	-0.2	0.8	0.9	1.1	1.4	1.1	0.2	1.0	-0.0	1.1
Government final consumption	0.3	0.2	0.2	0.5	0.5	0.5	0.6	0.4	0.3	0.5	0.3	0.5
Public fixed investment	-0.1	-0.2	-0.4	0.3	0.4	0.6	0.9	0.7	-0.1	0.6	-0.3	0.5
Change in public inventories	0.0	0.1	0.0	0.0	-0.0	-0.0	-0.0	0.0	0.0	-0.0	0.0	0.0
Net exports of goods and services	-1.4	-0.6	-1.2	-0.9	-0.1	-1.6	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9
Exports of goods and services	-0.8	0.1	-0.4	0.1	1.4	-0.8	-0.8	-1.0	-0.2	-0.4	-0.1	-0.0
Imports of goods and services	-0.5	-0.7	-0.8	-1.1	-1.5	-0.8	-0.1	0.0	-0.8	-0.5	-0.8	-0.9

Source: Compiled by DIR.
Note: Q/q growth rates seasonally adjusted; y/y growth rates and FY and CY figures unadjusted.
E: DIR estimate.

5.2 Contribution to Real GDP Growth by Component

	2013			2014				2015	FY		CY	
	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2013 (E)	2014 (E)	2013 (E)	2014 (E)
1) Q/q %												
GDP growth rate	0.9	0.9	1.0	1.3	-1.9	0.4	0.4	0.5	2.7	0.4	1.4	1.6
Domestic demand	0.8	0.8	1.0	1.2	-2.3	0.1	0.1	0.3	2.5	-0.6	1.8	1.0
Private demand	0.6	0.4	0.8	1.4	-2.1	0.4	0.3	0.4	1.8	0.0	-0.1	0.2
Private consumption	0.1	0.2	0.5	1.1	-2.0	0.3	0.1	0.2	0.9	-0.5	0.4	0.3
Residential investment	0.0	0.0	0.1	0.0	-0.2	-0.0	0.0	0.0	0.2	-0.1	0.2	-0.1
Private fixed investment	0.2	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.3	0.7	-0.1	0.8
Change in private inventories	0.3	-0.0	-0.0	-0.0	0.1	-0.0	-0.0	-0.0	0.4	-0.0	-0.7	-0.7
Public demand	0.2	0.4	0.1	-0.2	-0.3	-0.3	-0.3	-0.1	0.8	-0.6	1.9	0.8
Government final consumption	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.2	0.3	0.2
Public fixed investment	0.1	0.4	0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.5	-0.8	0.6	-0.5
Change in public inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	1.0	1.0
Net exports of goods and services	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.1	0.9	-0.3	0.5
Exports of goods and services	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	1.4	-0.1	1.3
Imports of goods and services	-0.2	-0.2	-0.2	-0.3	-0.1	-0.1	-0.2	-0.2	-0.4	-0.5	-0.2	-0.8
2) Y/y %												
GDP growth rate	0.6	2.4	3.5	4.2	1.2	0.8	0.1	-0.6	2.7	0.4	1.4	1.6
Domestic demand	1.1	2.2	3.3	4.0	0.6	-0.0	-1.2	-2.0	2.5	-0.6	1.8	1.0
Private demand	0.5	1.3	2.2	3.4	0.4	0.5	-0.0	-0.8	1.8	0.0	-0.1	0.2
Private consumption	0.2	0.6	0.9	2.0	-0.2	-0.1	-0.5	-1.4	0.9	-0.5	0.4	0.3
Residential investment	0.2	0.2	0.2	0.2	-0.1	-0.1	-0.2	-0.2	0.2	-0.1	0.2	-0.1
Private fixed investment	-0.5	0.1	0.6	0.9	0.7	0.8	0.7	0.8	0.3	0.7	-0.1	0.8
Change in private inventories	0.6	0.3	0.4	0.3	0.0	-0.0	-0.0	-0.0	0.4	-0.0	-0.7	-0.7
Public demand	0.7	0.9	1.1	0.7	0.2	-0.6	-1.2	-1.2	0.8	-0.6	1.9	0.8
Government final consumption	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2
Public fixed investment	0.4	0.6	0.8	0.4	-0.1	-0.8	-1.4	-1.4	0.5	-0.8	0.6	-0.5
Change in public inventories	0.0	-0.0	0.0	0.0	-0.0	0.0	-0.0	-0.0	-0.0	-0.0	1.0	1.0
Net exports of goods and services	-0.7	0.1	0.3	0.2	0.5	0.7	0.8	1.0	0.1	0.9	-0.3	0.5
Exports of goods and services	-0.8	0.2	1.1	1.2	1.3	1.3	1.4	1.5	0.4	1.4	-0.1	1.3
Imports of goods and services	0.1	-0.2	-0.8	-1.0	-0.8	-0.7	-0.5	-0.5	-0.4	-0.5	-0.2	-0.8

Source: Compiled by DIR.
Note: Q/q growth rates seasonally adjusted; y/y growth rates and FY and CY figures unadjusted.
E: DIR estimate.

6.1 Major Assumptions

	2011			2012				2013	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3 (E)	2011	2012 (E)	2011	2012
1) World economy												
Economic growth of major trading partners												
Y/y %	3.9	3.8	2.8	2.9	2.7	2.6	3.3	2.9	3.4	3.1	3.9	3.1
Crude oil price (WTI futures; $/bbl)	102.3	89.5	94.1	103.0	93.4	92.2	88.2	95.5	97.2	92.3	95.1	94.1
Y/y %	31.1	17.5	10.3	8.9	-8.8	3.0	-6.2	-7.3	16.4	-5.1	19.5	-1.0
2) US economy												
Real GDP (chained [2005]; $ bil; SAAR)	13,265	13,307	13,441	13,506	13,549	13,653	13,648	13,743	13,380	13,648	13,299	13,589
Q/q %, SAAR	2.5	1.3	4.1	2.0	1.3	3.1	-0.1	2.8				
Y/y %	1.9	1.6	2.0	2.4	2.1	2.6	1.5	1.8	2.0	2.0	1.8	2.2
Consumer Price Index												
(1982-84 avg=100)	224.5	226.2	227.0	228.3	228.8	230.1	231.3	232.4	226.5	230.6	224.9	229.6
Q/q %, SAAR	4.4	3.1	1.3	2.5	0.8	2.3	2.1	2.0				
Y/y %	3.4	3.8	3.3	2.8	1.9	1.7	1.9	1.8	3.3	1.8	3.2	2.1
Producer Price Index												
(Finished goods; 1982=100)	190.3	192.3	193.1	194.0	192.4	195.2	196.4	197.5	192.1	195.1	190.5	194.2
Q/q %, SAAR	6.0	4.2	1.7	1.9	-3.4	6.1	2.3	2.4				
Y/y %	6.9	6.9	5.4	3.4	1.1	1.5	1.7	1.8	5.6	1.5	6.0	1.9
FF rate (%)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
(Target rate for the forecast period, end-period)												
Government bond yield (10 year; %)	3.21	2.43	2.05	2.04	1.82	1.64	1.71	1.84	2.43	1.75	2.79	1.80
3) Japanese economy												
Nominal government final consumption												
Y tril; SAAR	96.2	96.5	96.4	98.0	97.3	97.6	97.9	98.3	96.8	97.7	96.2	97.6
Q/q %, SAAR	1.1	1.1	-0.1	6.5	-2.8	1.3	1.4	1.6				
Y/y %	0.8	1.0	0.9	2.5	1.0	1.2	1.3	0.2	1.3	0.9	1.1	1.5
Nominal public fixed investment												
Y tril; SAAR	21.1	20.9	20.3	21.9	23.2	23.8	24.2	24.9	21.0	24.1	20.7	23.2
Q/q %, SAAR	6.1	-2.5	-12.4	36.0	27.5	9.6	6.6	13.3				
Y/y %	-1.5	-3.8	-6.7	5.3	11.0	14.0	18.7	14.0	-1.6	14.7	-6.9	12.1
Exchange rate (Y/$)	81.7	77.8	77.3	79.3	80.1	78.6	81.2	91.8	79.0	82.9	79.8	79.8
(Y/€)	118.3	108.7	104.9	106.3	101.2	98.2	108.2	122.6	109.6	107.5	111.4	103.5
Call rate (end-period; %)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Source: Compiled by DIR.
Note: Consumption tax hike in April 2014 assumed for Japan.
E: DIR estimate.

6.2 Major Assumptions

	2013 4-6 (E)	7-9 (E)	10-12 (E)	2014 1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	2015 1-3 (E)	FY 2013 (E)	FY 2014 (E)	CY 2013 (E)	CY 2014 (E)
1) World economy												
Economic growth of major trading partners												
Y/y %	3.3	3.4	3.6	3.7	3.8	4.0	4.1	4.2	3.5	4.0	3.3	3.9
Crude oil price (WTI futures; $/bbl)	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.1	95.0
Y/y %	1.8	3.0	7.7	-0.6	0.0	0.0	0.0	0.0	2.9	0.0	1.1	-0.1
2) US economy												
Real GDP (chained [2005]; $ bil; SAAR)	13,808	13,890	13,976	14,068	14,161	14,259	14,357	14,459	13,936	14,309	13,855	14,211
Q/q %, SAAR	1.9	2.4	2.5	2.6	2.7	2.8	2.8	2.9				
Y/y %	1.9	1.7	2.4	2.4	2.6	2.7	2.7	2.8	2.1	2.7	2.0	2.6
Consumer Price Index												
(1982-84 avg=100)	233.6	234.8	236.0	237.2	238.5	239.9	241.2	242.6	235.4	240.5	234.2	239.2
Q/q %, SAAR	2.1	2.1	2.0	2.1	2.2	2.3	2.3	2.3				
Y/y %	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.0	2.1
Producer Price Index												
(Finished goods; 1982=100)	198.7	199.7	200.9	202.2	203.5	204.9	206.4	207.9	200.1	205.4	198.9	204.0
Q/q %, SAAR	2.3	2.2	2.4	2.5	2.7	2.8	2.9	2.9				
Y/y %	3.3	2.3	2.3	2.3	2.4	2.6	2.7	2.8	2.6	2.7	2.4	2.5
FF rate (%)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
(Target rate for the forecast period, end-period)												
Government bond yield (10 year; %)	1.97	2.21	2.38	2.56	2.72	2.89	2.92	3.00	2.28	2.88	2.10	2.77
3) Japanese economy												
Nominal government final consumption												
Y tril; SAAR	98.8	98.8	99.4	99.9	100.5	100.8	101.1	101.4	99.2	100.8	98.8	100.5
Q/q %, SAAR	1.8	-0.0	2.4	2.0	2.4	1.2	1.2	1.2				
Y/y %	1.6	1.2	1.6	1.7	1.7	2.0	1.7	1.5	1.5	1.7	1.1	1.7
Nominal public fixed investment												
Y tril; SAAR	25.7	27.5	27.9	26.9	25.3	23.5	22.1	21.3	27.1	22.8	26.5	24.5
Q/q %, SAAR	13.5	31.1	5.9	-13.6	-21.7	-25.5	-21.8	-13.7				
Y/y %	10.4	15.5	15.9	8.0	-1.4	-14.4	-20.9	-20.8	12.3	-15.8	14.2	-7.6
Exchange rate (Y/$)	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	94.2	95.0
(Y/€)	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	124.4	125.0
Call rate (end-period; %)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Source: Compiled by DIR.
Note: Consumption tax hike in April 2014 assumed for Japan.
E: DIR estimate.