Daiwa Institute of Research

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Japan's Economic Outlook No. 182

In this report we examine the effect of the manpower shortage on Japan's economy: (1) The consumption tax hike, (2) The manpower shortage, (3) The export trend, and (4) The effect of the hot weather on business

Japan to see real GDP growth of +0.7% in FY14 and +1.5% in FY15, with nominal GDP growth of +2.7% in FY14 and +2.6% in FY15.

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Main Points

- **Main economic scenario for Japan:** In light of the first preliminary Apr-Jun GDP release (Cabinet Office), we have revised our economic growth outlook. We now forecast real GDP growth of +0.7% in comparison with the previous year for FY14 (+1.1% in the previous forecast) and +1.5% in comparison with the previous year for FY15 (+1.5% in the previous forecast). Japan's economy declined temporarily in the Apr-Jun 2014 period due to the effects of the increase in consumption tax, but is expected to get back on track and gradually move toward recovery during the Jul-Sep period. Japan's economy is gaining support from the following positive factors: (1) The negative factors associated with the increase in consumption tax have pretty much played themselves out, and (2) Firming up of exports due mostly to the US economic recovery.

- **Four major issues facing Japan's economy:** In this report we examine four major issues facing Japan's economy: (1) The consumption tax hike, (2) The manpower shortage, (3) The export trend, and (4) The effect of the hot weather on business.

- **Issue (1) The effects of the consumption tax hike:** The effects of the increase in consumption tax in April of this year admittedly exceeded our original expectations. However, consumption in some areas is showing the beginnings of recovery, though performance is spotty. The economy hit bottom in April after the tax hike and has since been gradually

recovering. Our current view is that the tax hike initially pushed the FY14 real GDP growth rate down by -1.33%pt, but we expect the FY15 real GDP growth rate to be up by +0.51% pt.

- **Issue (2) The effects of the manpower shortage on Japan's economy:** The supply and demand situation for labor is expected to continue to be extremely tight. This tight labor supply situation is expected to lead to an increase in wages and generally better working conditions, and this in turn will likely find more individuals searching for work under those improved conditions. The assumption is that this type of situation leads to an increase in labor force participation. Therefore the shortage in manpower in Japan is not expected to become a bottleneck to the degree that effects on the economy would become fatal, but if the above-mentioned mechanism does not work, the number of persons employed seen in FY2015 and FY2016 would each fall short by around 343,000 and 663,000 persons respectively. This would cause downward pressure on real GDP the equivalent of around 3.4 trillion yen in FY2015 and 7.2 trillion yen in FY2016. In order for growth in labor force participation alone to relieve the shortage, the labor force participation rate would have to grow by 0.4%pt in FY2015 and 0.8%pt in FY2016. Similarly, in order to patch up the holes with growth in productivity based on man hours worked, productivity would have to be raised by 0.6% in FY2015 and 1.3% in FY2016.

- **Issue (3) Will exports get back on track?:** Japan's exports are expected to gradually regain ground supported by the cyclical recovery in the US economy. However, of the 11.5 trillion yen trade deficit Japan carried as of 2013, approximately 7 trillion yen is due to the hollowing out effect, while another 4 trillion yen is attributed to the increase in imported oil and LNG after most of the country's nuclear power plants were shut down. Considering factors like these, Japan's trade balance will likely be bleeding red ink for some time to come.

- **Issue (4) The effect of extremely hot summers on business:** According to our calculations, each time the average summer temperature rises by 1°C, nominal household final consumption expenditures on a GDP statistical basis also go up a notch. Household expenditures are expected to grow 67.6 billion yen in July, then 87 billion yen in August, and 66.4 billion yen in September. On average, the hot weather promises to push consumption up by around 70 billion yen each month.

- **Four risk factors facing Japan's economy:** Risks that will need to be kept in mind regarding the Japanese economy are: (1) stagnant personal consumption due to the decline in real income, (2) China's shadow banking problem, (3) a surge in crude oil prices stemming from geopolitical risk, and (4) tumult in the economies of emerging nations in response to the US exit strategy.

- **BOJ's monetary policy:** We expect additional monetary easing measures by the BOJ to carry over beyond the 2015 Jan-Mar period. While there is still a chance that the BOJ might reach its price target, our outlook as of this point in time is that the growth rate in consumer prices will not reach 2%.

Our assumptions

- Public works spending will grow by +3.1% in FY14, then decline by -9.1% in FY15. Another consumption tax hike is planned in October 2015.

- Average exchange rate of Y102.0/$ in FY14 and Y102.0/$ in FY15.
- US real GDP growth of +1.2% in CY14 and +2.6% in CY15.

Main Economic Indicators and Real GDP Components

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	FY13 (Actual)	FY14 (Estimate)	FY15 (Estimate)	CY13 (Actual)	CY14 (Estimate)	CY15 (Estimate)
Main economic indicators						
Nominal GDP (y/y %)	1.9	2.7	2.6	0.9	2.9	2.6
Real GDP (chained [2005]; y/y %)	2.3	0.7	1.5	1.5	1.3	1.4
Domestic demand (contribution, % pt)	2.7	0.0	1.0	1.8	1.4	1.0
Foreign demand (contribution, % pt)	-0.5	0.6	0.5	-0.3	-0.1	0.4
GDP deflator (y/y %)	-0.4	2.1	1.1	-0.6	1.5	1.2
Index of All-industry Activity (y/y %)*	1.9	-1.0	2.0	0.8	0.1	1.4
Index of Industrial Production (y/y %)	3.2	1.2	6.0	-0.8	3.3	4.7
Index of Tertiary Industry Activity (y/y %)	1.3	-1.3	1.1	0.7	-0.4	0.7
Corporate Goods Price Index (y/y %)	1.8	4.0	1.9	1.3	3.5	2.1
Consumer Price Index (excl. fresh food; y/y %)	0.8	3.3	1.9	0.4	2.8	2.1
Unemployment rate (%)	3.9	3.5	3.4	4.0	3.6	3.4
Government bond yield (10 year; %)	0.69	0.61	0.77	0.70	0.59	0.73
Money stock; M2 (end-period; y/y %)	3.9	3.5	4.0	3.6	3.6	3.9
Balance of payments						
Trade balance (Y tril)	-11.0	-9.4	-8.1	-8.8	-10.9	-9.2
Current balance ($100 mil)	83	295	592	331	71	440
Current balance (Y tril)	0.8	3.0	6.0	3.2	0.7	4.5
(% of nominal GDP)	0.2	0.6	1.2	0.7	0.1	0.9
Real GDP components (Chained [2005]; y/y %; figures in parentheses: contribution, % pt)						
Private final consumption	2.5 (1.5)	-1.8 (-1.1)	1.2 (0.7)	2.0 (1.2)	-0.3 (-0.2)	0.7 (0.4)
Private housing investment	9.5 (0.3)	-7.3 (-0.2)	-0.9 (-0.0)	8.8 (0.3)	-2.5 (-0.1)	-0.4 (-0.0)
Private fixed investment	2.7 (0.4)	5.3 (0.7)	4.9 (0.7)	-1.5 (-0.2)	8.5 (1.1)	3.9 (0.6)
Government final consumption	1.8 (0.4)	0.9 (0.2)	1.3 (0.2)	2.0 (0.4)	0.7 (0.1)	1.2 (0.3)
Public fixed investment	15.1 (0.7)	0.0 (0.0)	-10.9 (-0.5)	11.3 (0.5)	4.3 (0.2)	-9.0 (-0.5)
Exports of goods and services	4.8 (0.7)	5.7 (0.9)	6.5 (1.1)	1.6 (0.2)	7.4 (1.2)	5.2 (0.9)
Imports of goods and services	7.0 (-1.2)	2.1 (-0.3)	4.0 (-0.6)	3.4 (-0.6)	6.8 (-1.3)	2.4 (-0.5)
Major assumptions:						
1. World economy						
Economic growth of major trading partners	3.2	3.4	3.8	3.1	3.3	3.9
Crude oil price (WTI futures; $/bbl)	99.1	100.7	100.0	98.0	100.4	100.0
2. US economy						
US real GDP (chained [2009]; y/y %)	2.3	1.3	2.8	2.2	1.2	2.6
US Consumer Price Index (y/y %)	1.4	2.1	2.1	1.5	1.9	2.1
3. Japanese economy						
Nominal public fixed investment (y/y %)	17.1	3.1	-9.1	12.8	7.2	-7.0
Exchange rate (Y/$)	100.2	102.0	102.0	97.6	102.2	102.0
(Y/€)	135.1	138.4	138.0	130.6	138.9	138.0
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 182)		Previous outlook (Outlook 181 Update)		Difference between previous and current outlooks	
	FY14	FY15	FY14	FY15	FY14	FY15
Main economic indicators						
Nominal GDP (y/y %)	2.7	2.6	2.8	2.6	-0.1	0.1
Real GDP (chained [2005]; y/y %)	0.7	1.5	1.1	1.5	-0.5	-0.0
Domestic demand (contribution, % pt)	0.0	1.0	0.9	0.9	-0.8	0.1
Foreign demand (contribution, % pt)	0.6	0.5	0.4	0.6	0.2	-0.1
GDP deflator (y/y %)	2.1	1.1	1.7	1.1	0.4	0.1
Index of All-industry Activity (y/y %)*	-1.0	2.0	-0.1	2.0	-0.9	0.1
Index of Industrial Production (y/y %)	1.2	6.0	2.9	6.0	-1.7	0.0
Index of Tertiary Industry Activity (y/y %)	-1.3	1.1	-0.6	1.0	-0.8	0.1
Corporate Goods Price Index (y/y %)	4.0	1.9	3.4	2.0	0.5	-0.1
Consumer Price Index (excl. fresh food; y/y %)	3.3	1.9	3.1	1.9	0.2	0.1
Unemployment rate (%)	3.5	3.4	3.6	3.5	-0.0	-0.0
Government bond yield (10 year; %)	0.61	0.77	0.67	0.84	-0.06	-0.07
Money stock; M2 (end-period; y/y %)	3.5	4.0	4.0	4.3	-0.5	-0.3
Balance of payments						
Trade balance (Y tril)	-9.4	-8.1	-12.5	-10.8	3.1	2.7
Current balance ($100 mil)	295	592	9	339	286	253
Current balance (Y tril)	3.0	6.0	0.1	3.4	2.9	2.6
(% of nominal GDP)	0.6	1.2	0.0	0.7	0.6	0.5
Real GDP components (chained [2005]; y/y %)						
Private final consumption	-1.8	1.2	-0.4	1.1	-1.5	0.1
Private housing investment	-7.3	-0.9	-1.1	-1.4	-6.2	0.4
Private fixed investment	5.3	4.9	8.3	4.8	-3.0	0.0
Government final consumption	0.9	1.3	1.1	1.0	-0.2	0.3
Public fixed investment	0.0	-10.9	-3.6	-11.4	3.6	0.5
Exports of goods and services	5.7	6.5	7.9	7.8	-2.2	-1.3
Imports of goods and services	2.1	4.0	6.1	4.9	-4.0	-0.8
Major assumptions:						
1. World economy						
Economic growth of major trading partners	3.4	3.8	3.5	3.9	-0.0	-0.0
Crude oil price (WTI futures; $/bbl)	100.7	100.0	100.0	100.0	0.7	0.0
2. US economy						
US real GDP (chained [2009]; y/y %)	1.3	2.8	2.5	3.0	-1.2	-0.2
US Consumer Price Index (y/y %)	2.1	2.1	1.7	2.0	0.4	0.0
3. Japanese economy						
Nominal public fixed investment (y/y %)	3.1	-9.1	-2.3	-10.2	5.4	1.1
Exchange rate (Y/$)	102.0	102.0	100.5	100.0	1.5	2.0
(Y/€)	138.4	138.0	140.3	140.0	-1.9	-2.0
Call rate (end-period; %)	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.
* Excl. agriculture, forestry, and fisheries.

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Summary

Main Economic scenario for Japan

In light of the first preliminary Apr-Jun GDP release (Cabinet Office), we have revised our economic growth outlook. We now forecast real GDP growth of +0.7% in comparison with the previous year for FY14 (+1.1% in the previous forecast) and +1.5% in comparison with the previous year for FY15 (+1.5% in the previous forecast). Japan's economy declined temporarily in the Apr-Jun 2014 period due to the effects of the increase in consumption tax, but is expected to get back on track and gradually move toward recovery during the Jul-Sep period. Japan's economy is gaining support from the following positive factors: (1) The negative factors associated with the increase in consumption tax have pretty much played themselves out, and (2) Firming up of exports due mostly to the US economic recovery.

Real GDP growth rate for the 2014 Apr-Jun period sees negative growth for the first time in two quarters due to reactionary decline in personal consumption

The real GDP growth rate for Apr-Jun 2014 (1st preliminary est) declined by -6.8% q/q annualized (-1.7% q/q), recording negative growth for the first time in two quarters. Performance was in line with market consensus (-7.0% q/q annualized and - 1.8% q/q). The primary reason for the major decline in real GDP was the reactionary decline in personal consumption following the raising of the consumption tax in April.

The decline in personal consumption was expected, but the extent of the decline (-5.0% q/q) came as a surprise, bringing a somewhat negative tone to the results. On the other hand, contribution of inventory investment rose considerably in comparison to the previous period by +1.0%pt, bringing the overall GDP figures back in line with previous expectations. Regarding the huge increase in inventory investment, this is considered to be partly an attempt to recover inventory levels after the temporary decline experienced as a result of last minute demand prior to the April tax hike, though the decline in domestic demand cannot be ignored as another major cause, hence this is not necessarily a positive element.

Trends by demand component: major decline in personal consumption due to reactionary decline, capex marks time

Performance by demand component shows personal consumption down by 5.0% q/q, its first decline in seven quarters. The reactionary decline in personal consumption in the Jan-Mar period following the last minute demand prior to the April tax hike brought major downward pressure on personal consumption. Durables, which experienced especially brisk last minute demand during the Jan-Mar period, suffered a major pounding in the second quarter with a -18.9% q/q plunge which in turn contributed much to the general downturn. Meanwhile semi-durables and non-durables, which did not see much last-minute demand in the last quarter, recorded declines of -12.3% q/q and -7.0% q/q respectively. Nominal employee compensation actually rose by +0.6% q/q, its first sign of growth in two quarters, but real employee compensation fell considerably at -1.8% q/q due to rising prices associated with the increase in consumption tax. This represents an obvious decline in household purchasing power, which has in turn brought downward pressure on personal consumption.

Housing investment fell for the first time in nine quarters at -10.3% q/q. Housing also suffered from the reactionary decline following the raising of the consumption tax. New housing starts peaked in December 2013 and have since continued to decline. Housing investment on a GDP basis, recorded on a progressive basis, also took a downward turn due to lagging housing starts.

Capex declined for the first time in five quarters at -2.5% q/q. The halting of Windows XP support by Microsoft during the Jan-Mar period produced last minute demand which produced considerable

growth, but then the inevitable reactionary decline came after. Capex activity was limited due to the influence of the higher consumption tax. In comparison to the extent of growth in the previous period, the downturn during the Apr-June period is considered to be small. Hence when everything is averaged out, performance during this period can be considered a continuation of the overall comeback trend.

Public investment was down by -0.5% in comparison to the previous period. The effects of past fiscal policy is now wearing thin and this represents the second consecutive quarter in which public investment has been in decline. Front-loading the FY2013 supplementary budget and the FY2014 budget has reduced the extent to which public investment otherwise would have declined on a q/q basis, hence in the final view it is continuing at a high level.

Exports were down -0.4% q/q, their first decline in three quarters. Exports to the US and EU continue their gradual growth, but Asian exports declined, thereby pulling down results for exports overall. However, imports have also been influenced by the reactionary decline in personal consumption following the raising of the consumption tax, as well as the increase in the petroleum and coal tax which led to a sharp increase in fuel imports during the Jan-Mar period followed by a reactionary decline this period, which saw figures down steeply by -5.6% q/q. All in all, this helped to push up contribution from external demand (net exports) by +1.1%pt, the first positive growth for exports in four quarters.

The GDP deflator grew for the third consecutive quarter by +1.7% q/q. The rate of growth increased considerably due to the consumption tax hike, which in turn caused the personal consumption deflator to achieve major gains. In annual terms the GDP deflator's y/y growth was +2.0%, the first time it has won growth since the Jul-Sep period of 2009. Nominal GDP was down by -0.4% annualized (-0.1% q/q), its first decline in seven quarters.

Jul-Sep 2014 GDP to turn in positive direction

As for the outlook for the Japanese economy, the period of Jul-Sep 2014 is expected to see a comeback in GDP, with a continuation of economic expansion foreseen. A great deal of attention will be drawn to the announcement of Jul-Sep 2014 period GDP figures in mid-November. This is because of the great weight they are expected to carry in determining whether or not to increase the consumption tax yet again (next hike planned in October 2015). Chances are good that GDP figures will return to positive growth during the Jul-Sep period.

The reactionary decline in personal consumption following the raising of the consumption tax in April brought major downward pressure on Apr-Jun GDP. However, if we look at performance on a monthly basis, we see that the economy hit bottom in April and then began making a comeback in May and June. Growth in personal consumption was high during the Jul-Sep period, and there was additional help from the monthly carryover effect. Moreover, public investment related orders have been growing rapidly since early in FY2014 as a result of the government's having front-loaded the budget. Public investment is expected to exhibit unequivocal growth during the Jul-Sep period, and is seen providing support for growth in real GDP. Meanwhile, capex is already beginning to recover, and is seen returning to a growth trend during the Jul-Sep period and beyond. Although recent production activity has been stagnant due to the effects of the reactionary decline after the tax hike went into effect, industry is showing signs of feeling a shortage in equipment and facilities especially in the non-manufacturing industries. Rising operating rates are expected to spark an increase in capex. The positive attitude of corporations toward capex has been reflected in various business surveys including the BOJ Tankan, and chances are good that capex will continue developing underlying strength. As for exports, weakening of the yen has continued of late, but has slowed some and is expected to level off for some time. However, shifting our view toward the external environment, we see that the US economy is exhibiting underlying strength and should continue moving toward recovery. Meanwhile the EU is slowly but surely moving toward economic expansion. China's economy continues its

slowdown, but economic stimulus policies are taking effect, and a comeback can be seen on the horizon. The world economy is gradually expanding, and Japan's exports are expected to gradually strengthen their growth trend.

Four major issues facing Japan's economy

In this report we examine four major issues facing Japan's economy as described below.

Issue (1) The effects of the consumption tax hike

The effects of the increase in consumption tax in April of this year admittedly exceeded our original expectations. However, some areas of the economy are showing the beginnings of recovery, though performance is spotty. The economy hit bottom in April after the tax hike and has since been gradually recovering. Our current view is that the tax hike initially pushed the FY14 real GDP growth rate down by -1.33%pt, but we expect the FY15 real GDP growth rate to be up by +0.51% pt.

Issue (2) The effects of the manpower shortage on Japan's economy

The supply and demand situation for labor is expected to continue to be extremely tight. This tight labor supply situation is expected to lead to an increase in wages and generally better working conditions, and this in turn will likely find more individuals searching for work under those improved conditions. The assumption is that this type of situation leads to an increase in labor force participation. Therefore the shortage in manpower in Japan is not expected to become a bottleneck to the degree that effects on the economy would become fatal, but if the above-mentioned mechanism does not work, the number of persons employed seen in FY2015 and FY2016 would each fall short by around 343,000 and 663,000 persons respectively. This would cause downward pressure on real GDP the equivalent of around 3.4 trillion yen in FY2015 and 7.2 trillion yen in FY2016. In order for growth in labor force participation alone to relieve the shortage, the labor force participation rate would have to grow by 0.4%pt in FY2015 and 0.8%pt in FY2016. Similarly, in order to patch up the holes with growth in productivity based on man hours worked, productivity would have to be raised by 0.6% in FY2015 and 1.3% in FY2016.

Issue (3) Will exports get back on track?

Japan's exports are expected to gradually regain ground supported by the cyclical recovery in the US economy. However, of the 11.5 trillion yen trade deficit Japan carried as of 2013, approximately 7 trillion yen is due to the hollowing out effect, while another 4 trillion yen is attributed to the increase in imported LNG after most of the country's nuclear power plants were shut down. Considering factors like these, Japan's trade balance will likely be bleeding red ink for some time to come.

Issue (4) The effect of extremely hot summers on business

According to our calculations, each time the average summer temperature rises by 1°C, nominal household final consumption expenditures on a GDP statistical basis also go up a notch. Household expenditures are expected to grow 67.6 billion yen in July, then 87 billion yen in August, and 66.4 billion yen in September. On average, the hot weather promises to push consumption up by around 70 billion yen each month.

Four risk factors facing Japan's economy

Risks that will need to be kept in mind regarding the Japanese economy are: (1) stagnant personal consumption due to the decline in real income, (2) China's shadow banking problem, (3) a surge in crude oil prices stemming from geopolitical risk, and (4) tumult in emerging markets in response to the US exit strategy.

BOJ's monetary policy

We expect additional monetary easing measures by the BOJ to carry over beyond the 2015 Jan-Mar period. While there is still a chance that the BOJ might reach its price target, our outlook as of this point in time is that the growth rate in consumer prices will not reach 2%.

1. Main economic scenario for Japan

Abenomics represents an appropriate set of economic policies in accord with global standards

In this section, we examine our main scenario for Japan's economy in light of recent developments. After hitting bottom in November 2012, Japan's economy has entered a recovery phase. We believe it will continue to expand steadily. Economic policies of the Abe administration (so-called "Abenomics") represent an appropriate set of policies with the potential of jump-starting the revival of the Japanese economy, and monetary policies in particular are yielding marked results. Japan's economy declined temporarily in the Apr-Jun 2014 period due to the effects of the increase in consumption tax, but is expected to get back on track and gradually move toward recovery during the Jul-Sep period. Japan's economy is gaining support from the following positive factors: (1) The negative factors associated with the increase in consumption tax have pretty much played themselves out, and (2) Firming up of exports due mostly to the US economic recovery.

Japan's economy continues to improve

Based on the recent economic indices, Japan's economy appears to be making its way gradually toward recovery.

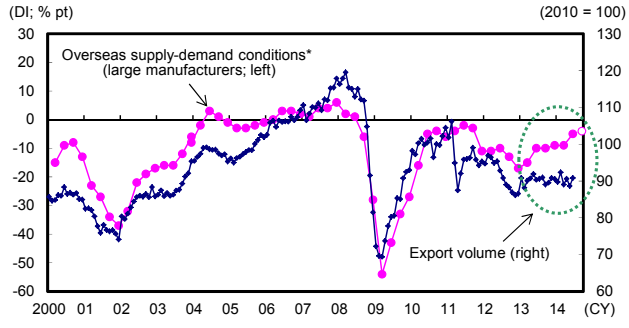
First, as indicated in Chart 1, the diffusion index for overseas supply and demand conditions for products (large manufacturers) in the BOJ Tankan survey of corporate sentiment, which displays a close relationship with Japan's export volume index, is improving.

Second, capex appears to be about to hit bottom (see Chart 2). According to statistics on machinery orders (released by the Cabinet Office), the outlook for 2014 Jul-Sep period private sector demand (excluding shipbuilding and electrical power) is expected to achieve growth of +2.9% q/q for the first time in two quarters.

Although capex took a negative turn in the Apr-Jun GDP figures, it is actually continuing its upward movement when the dramatic growth of the Jan-Mar period is included in considerations. In addition, various business surveys including the BOJ Tankan Survey, note the positive attitude of corporations toward capex. With business performance improving for both the manufacturing and non-manufacturing industries, an environment which encourages growth in capex has developed.

Overseas Supply and Demand Conditions vs. Export Volume

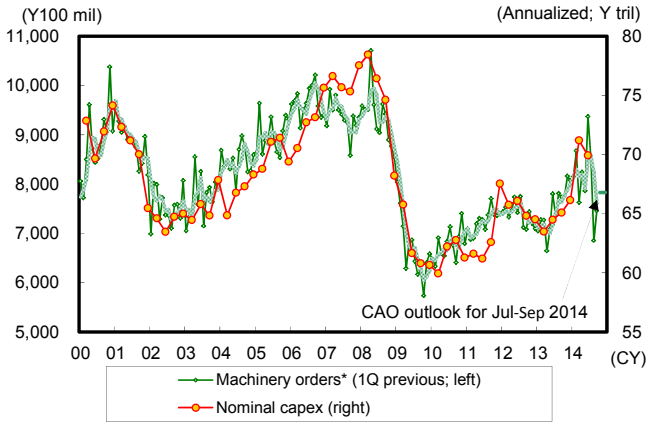
Chart 1



Source: Bank of Japan (BOJ), Cabinet Office; compiled by DIR.
*BOJ Tankan survey of corporate sentiment; "excess demand" minus "excess supply"; latest quarter=forecast.

Machinery Orders and Nominal GDP-based Capex (SA)

Chart 2



Source: Cabinet Office; compiled by DIR.
Note: *excl. those for shipbuilding and from electric utilities; thick line 3MMA basis.

Employment and income environment also heading toward improvement

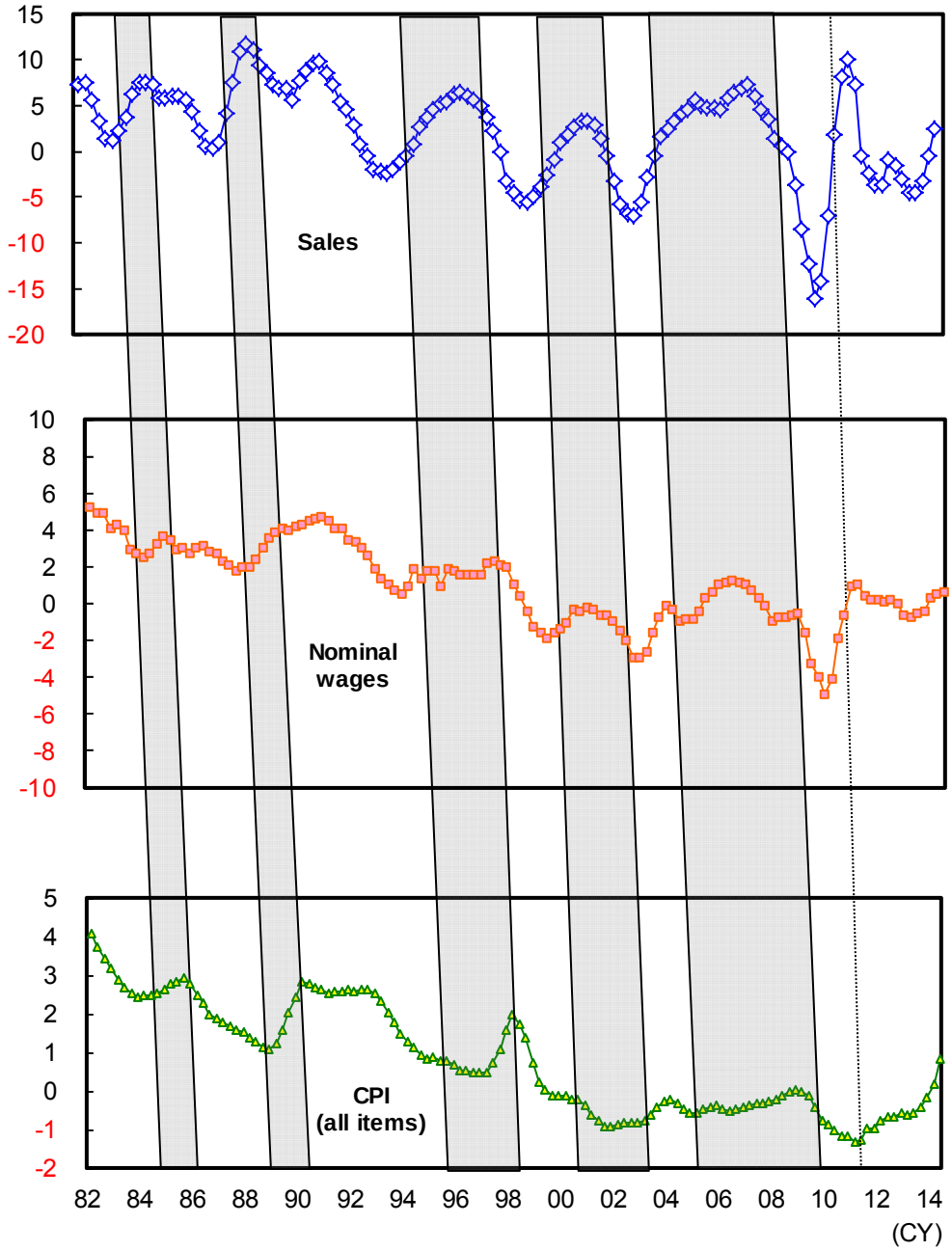
Third, the employment and income environment continues to improve.

Negative opinions in the media insist that the lives of Japanese citizens will become more painful under Abenomics since employee incomes have not risen along with inflation. However, according to Chart 3, historical data shows that there is a cycle in Japan's economy which moves through sales growth to wage increases, and then to increases in prices. In other words, wages in Japan tend to rise from six months to a year after corporate sales experience growth, and then after that point wages are increased. The tendency has been for CPI to rise approximately six months after a rise in wages.

Considering the above mechanism, the BOJ's daring financial easing measures, coupled with the government's pro-business policies which will encourage growth in corporate sales, are just the thing to beat deflation. It seems that the fundamental approach of Abenomics is right on target.

In actual fact the corporate sector has been favorable recently, and this should in turn lead to improvements in the employment and income environment. Gradually developments are occurring which will also be favorable for the personal sector. If you look at the big picture, Abenomics is actually right on schedule in realizing the virtuous circle of Production → Income → Consumption which it originally envisioned.

Sales, Wages, and Prices (y/y %) Chart 3



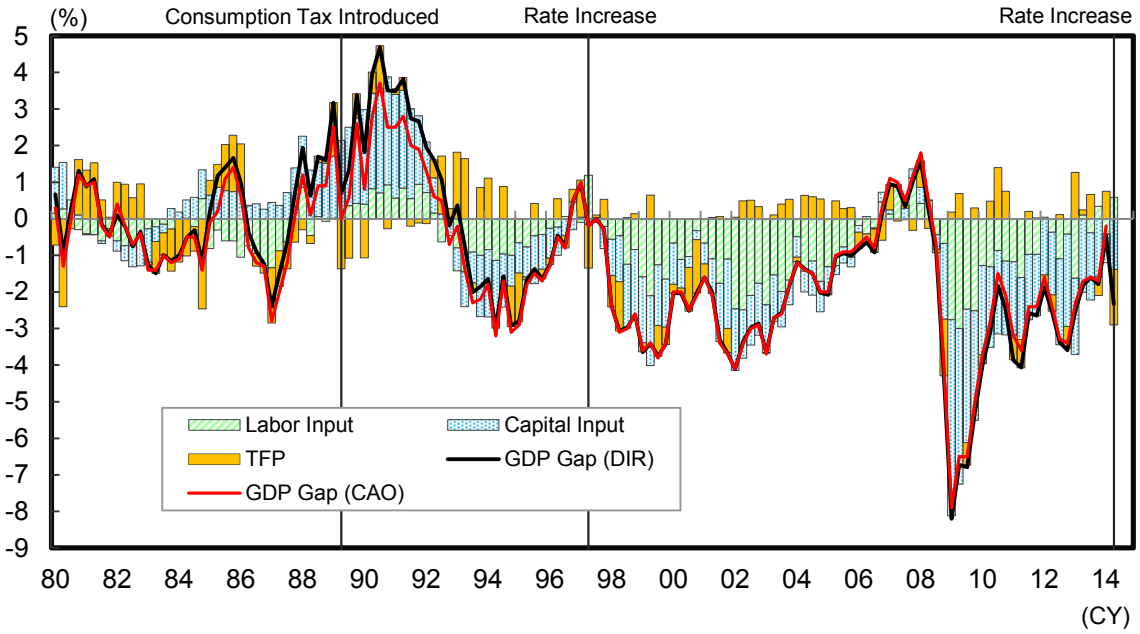
Source: Ministry of Finance, Ministry of Health, Labour and Welfare, Ministry of Internal Affairs and Communications; compiled by DIR.
Notes: 1) Y/y comparison of four-quarter moving average.
2) Shaded bars denote periods when sales were on uptrend. Bars tilted in order to show roughly 6-month lag from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

GDP gap influenced by reactionary decline after raising of consumption tax

We calculated the GDP gap based on the Apr-Jun GDP (1st preliminary est) at -2.3%. The degree of negative GDP gap increased by 1.8%pt in comparison with the -0.5% recorded during the Jan-Mar quarter. (see Chart 4). The rate of decline during the Apr-Jun quarter was large – just under 2%pt, and is attributed to the reactionary decline experienced after the last minute demand occurring just before the raising of the consumption tax rate, as well as the fact that the real GDP growth rate fell considerably below the potential GDP growth rate.

The GDP gap can be broken down into three major components: (1) the capital input factor, (2) the labor input factor, and (3) total factor productivity (TFP)[1]. First, having confirmed the degree of contraction in GDP, we find that one of the major causes of the decline is that the TFP, which was one of the factors contributing to the positive results obtained during the Jan-Mar quarter, shifted to the minus side in the Apr-Jun quarter. Total factor productivity includes a wide range of components excluding capital input and labor input. In past instances involving first the original introduction of the consumption tax and then later when the consumption tax rate was raised, TFP exhibited the same tendency. It is therefore highly probable that the temporary special factor of last minute demand before the increase in consumption tax followed by a reactionary decline was influential. If this is the case, then it can be assumed that as the negative effects of the reactionary decline let up, downward pressure on GDP attributed to TFP will also gradually ease off. Furthermore, considering the fact that the 2014 Apr-Jun period GDP growth rate was at about the same level as market consensus, it seems unnecessary to have an overly negative reaction to these most recent GDP figures.

Changes in GDP Gap and Contributing Factors **Chart 4**



Source: Cabinet Office, Ministry of Economy, Trade, and Industry, Ministry of Internal Affairs and Communications, and Ministry of Health, Labour and Welfare; compiled by DIR.
Notes: 1) GDP Gap = (Real GDP - Potential GDP) / Potential GDP x 100.
2) The GDP Gap estimate differs depending on definition and methods used for estimation. Hence it must be viewed with a certain amount of leeway.

Next we consider the factor of labor input. The extent of contribution of labor input to GDP was in continual decline until the Jan-Mar period of 2013. Then the employment environment improved due to the economy's getting back on its feet, and since the Apr-Jun period of 2013 contribution of labor

[1] GDP gap is also influenced by (1) the method of calculating potential GDP and (2) data period. For instance, if a calculation is performed using only data from the period just after Japan's financial bubble burst subsequent to the 1980s when Japan's economy became overheated, the GDP gap shifts upward. It is therefore necessary to remain aware that the GDP gap should be evaluated in terms of its direction, not its level.

input to GDP has fluctuated at around zero. Ever since the total unemployment rate fell to a level close to that of the structural unemployment rate, the negative gap of labor input can be considered to have resolved itself. But then how do we interpret the recent tightening of labor supply and demand? First of all, constraints on labor supply do not form a serious obstacle. As long as the number of employed persons grows with improvements in the labor environment, contribution of labor input to GDP will grow beyond its current level. Secondly, if a slowdown in the number of persons employed occurs due to constraints on labor supply such as employment mismatch or a decrease in the working population, growth in contribution of labor input to GDP will simply peak out. And thirdly, if the rate of decline in the working population accelerates due to a long-term failure for women and older people's labor force participation rate to improve, the contribution of labor input to GDP will lean in the minus direction again.

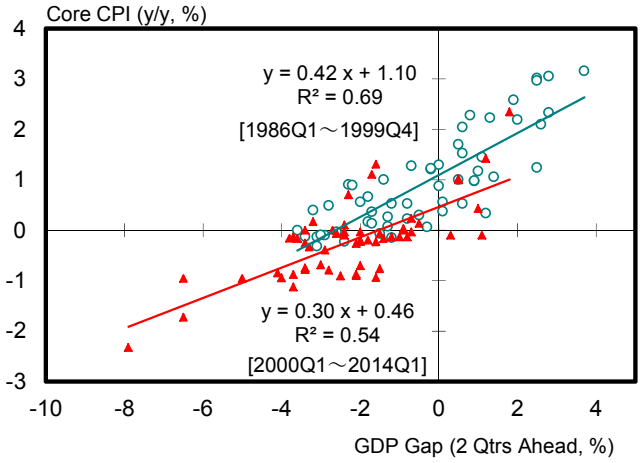
Finally, to mention causes of concern amongst the GDP gap variables, there is the failure to achieve any improvement in the downward pressure brought on by the capital input factor. Especially noticeable is the continuing decline in the manufacturing industry's utilization rate. The negative contribution comes from the fact that the production activities of Japanese corporations are slowing down as a result of the decline in domestic demand after the increase in consumption tax, and sluggish exports. In order to obtain a better grasp of where the GDP gap is going from here, we must first thoroughly monitor the possibilities for a recovery in production.

Size of negative GDP gap to shrink beginning in the Jul-Sep period

There is a strong correlation between the GDP gap, which indicates the balance of supply and demand in macroeconomy and core CPI. The increase in the degree of contraction in negative GDP gap produced downward pressure on prices 2-3 quarters later (see Chart 5). In response to these results, the Apr-Jun GDP gap may suppress growth in prices during the last half of FY2014. The tendency to cut prices in some areas became evident during the Apr-Jun period. This is interpreted as being the influence of the decline in demand after the increase in the consumption tax. Items effecting core CPI were consumer goods such as household electronics. Meanwhile, though not something which would be reflected in core CPI, automakers launched a number of specially equipped vehicles to help stimulate demand. These were mainly imports and lightweight vehicles, which in practical terms were a means of lowering prices by virtue introducing low-cost models.

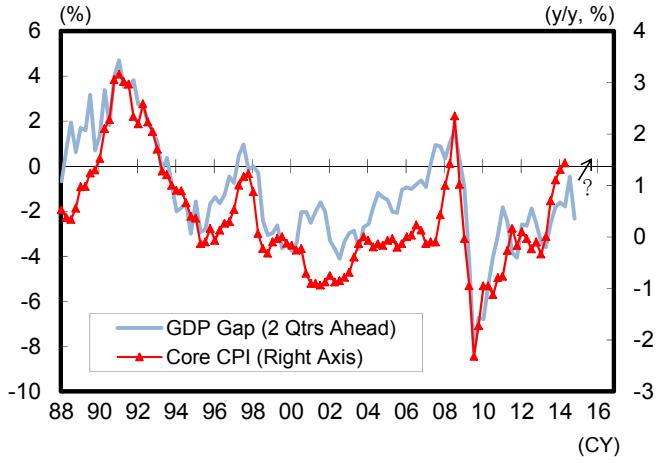
As for what the future holds, our basic scenario sees Japan's economy getting back on the road to recovery after the Jul-Sep period and beyond. Moreover, we expect the GDP gap to begin to contract somewhat (See Chart 6). Pressures inhibiting a further rise in prices, which had originally begun to increase due to the GDP gap, are expected to be gradually resolved as we move into the year 2015.

Correlation Between GDP Gap and Core CPI
Chart 5



Source: Ministry of Internal Affairs and Communications, Cabinet Office; compiled by DIR.
Notes: 1) Core CPI is the index for all items less fresh food.
2) The influence of consumption tax on core CPI was adjusted by the Cabinet Office and DIR.

Changes in GDP Gap and Core CPI
Chart 6



Source: Ministry of Internal Affairs and Communications, Cabinet Office; compiled by DIR.
Notes: 1) Core CPI is the index for all items less fresh food.
2) The influence of consumption tax on core CPI was adjusted by the Cabinet Office and DIR.

2. Four Major Issues Facing Japan's Economy

2.1 Issue (1) The effects of the consumption tax increase

Personal consumption to make gradual comeback after setback due to reactionary decline

In this report we examine four major issues facing Japan's economy: (1) The consumption tax hike, (2) The manpower shortage, (3) The export trend, and (4) The effect of the hot weather on business.

Our first issue is the effects of the consumption tax increase. The 2014 Apr-Jun period personal consumption figures took a major dive in response to the increase in consumption tax in April. GDP-based personal consumption declined by -5.0% q/q with durables taking a major blow at -18.9% q/q most likely in reaction to their heated pre-tax-hike rise due to last-minute demand. The reactionary decline after the tax increase was especially intense here. Meanwhile, the rise in prices due to the tax hike eroded real income, and as a result, even consumption in areas not so much effected by last-minute demand, such as semidurables, non-durables, and services, took a beating during the Apr-Jun period.

However, some areas of the economy are showing the beginnings of recovery, though performance is spotty. Personal consumption hit bottom in April after the tax hike and has since been gradually recovering. Chart 7 shows trends in retail sales by business category before and after the tax hike.

First we take a look at durables, which experienced the utmost of the effects of both the last-minute demand before the tax hike and the reactionary decline which came after. Automobiles suffered a steep drop just after the increase in consumption tax and continue in a gradual decline. Unit sales have not fallen to an extreme degree and maintain a steady undertone. However, performance has not yet managed a comeback, and recovery is expected to be a bit slower in comparison to performance after the previous tax hike. As for household electronic sales, a major reactionary decline occurred in April after the last-minute demand experienced immediately before the tax increase. The scale of reactionary decline for household electronic items exceeded that of the previous tax hike, but recovery has been steady since May.

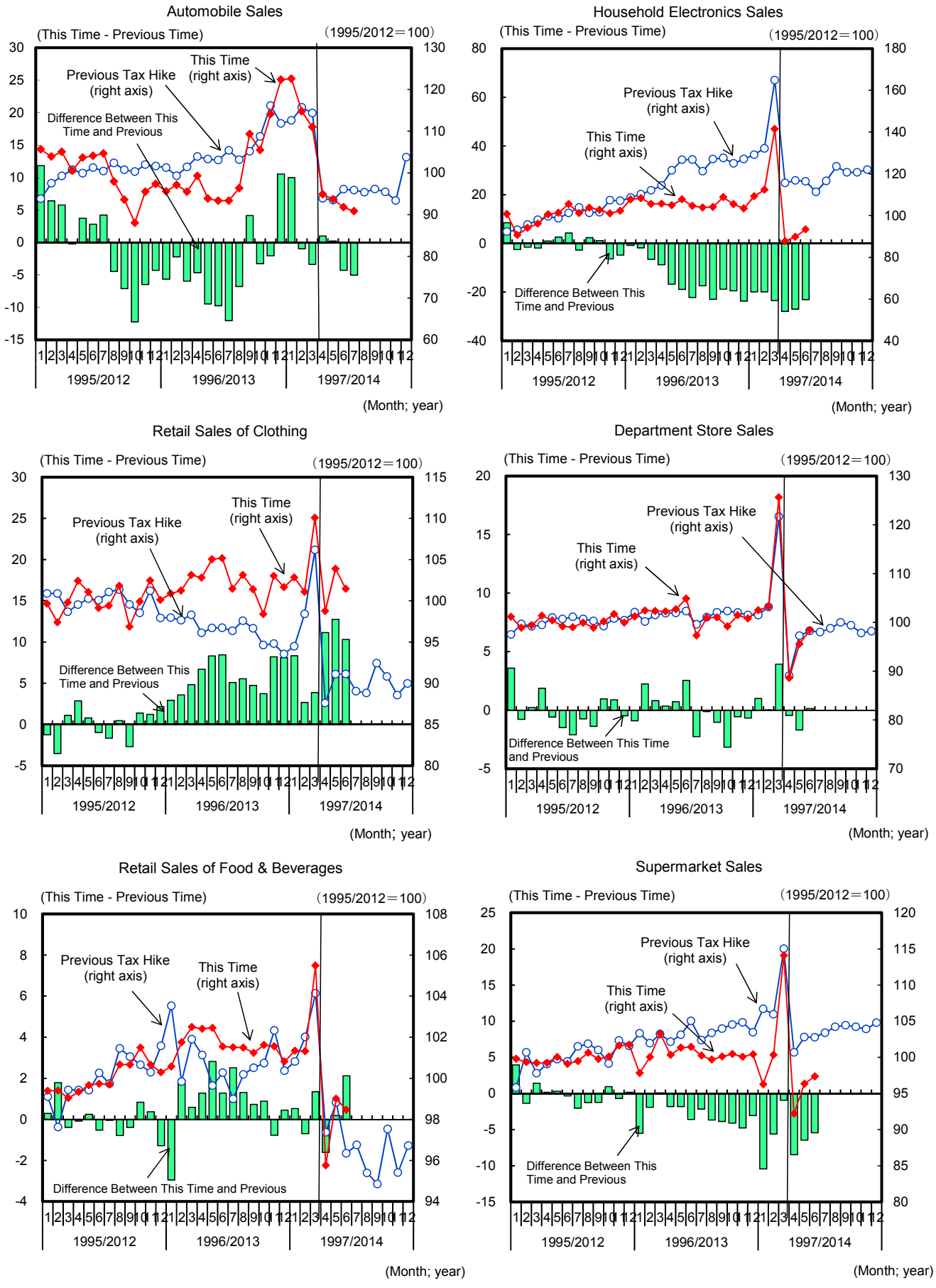
In the area of semidurables, retail sales of clothing had a much more minor effect of the reactionary decline than on the previous time the consumption tax was increased. Sales have already returned to their re-tax hike levels. Department stores experienced about the same degree of pre-tax hike rush and post-tax hike doldrums as they did during the previous increase in consumption tax. Sales amounts have recently been just a bit below pre-tax hike levels, and appear to be recovering more each month. This trend is very similar to the one seen during the previous tax hike.

Lastly, we look at retail sales of food and beverages, including supermarket sales. Sales of food and beverages grew considerably before the increase in the consumption tax then decreased as a result of the reactionary decline in April. Sales recovered somewhat in May, while in June, despite a slight recovery, business remained stagnant overall. After the reactionary decline experienced as a result of the previous tax hike, sales continued to decline. So with this in mind, we can conclude that this time around the industry retains a strong undertone. In the case of large supermarkets, last-minute demand before the increase in consumption tax was fairly concentrated, and the reactionary decline which followed was similarly steep. Supermarkets have also been a bit slower in getting back on their feet in comparison to their performance after the previous tax hike, but business hit bottom in April and has been slowly getting back on track since then.

To sum things up, while recovery has been somewhat slow for durables which experienced an especially large downturn during the Apr-Jun period, the negative influence of the reactionary decline in personal consumption has pretty much resolved itself. Considering the private consumption

integrated estimates (this index expresses the monthly trend in consumption from a macro-economic viewpoint) announced by the Cabinet Office, private consumption, which experienced a major downturn in April, is still at a fairly low level, but improvements have continued during May and June. Consumer confidence declined after the increase in the consumption tax, but is now making a comeback. With employment and income environments continuing a turnaround, personal consumption shows a very good possibility of gaining momentum and continuing to improve.

Personal Consumption Trend Since Tax Increase (Comparison with Previous Tax Hike) Chart 7



Source: Japan Automobile Dealers Association, Ministry of Economy, Trade and Industry; compiled by DIR.

Note: Seasonally adjusted. Automobile sales seasonally adjusted by DIR. For all other items, the Consumer Price Index was used, and real values deflated.

Effects of the consumption tax increase on the economy

Chart 8 shows the effects of the increase in consumption tax on the economy based on our calculations using a macro model. Last-minute demand occurred just before the tax hike causing personal consumption and housing investment to rise sharply. Then after the tax hike a reactionary decline occurred causing prices to increase and eroding real income, hence bringing downward pressure on demand.

Our estimation which takes the above into consideration indicates that last-minute demand before the increase in consumption tax lifted FY2013 personal consumption by 2.2 trillion yen, thereby giving overall GDP a boost of 3 trillion yen (there is an 0.57% rate of deviation from what the amount would have been if there had not been a tax hike). Last-minute demand as seen in personal consumption before the 1997 tax hike was worth around 2 trillion yen. During the current tax hike, last-minute demand prior to the increase in consumption tax was much larger than on the previous tax hike.

In contrast to the FY2013 results, FY2014 GDP was pushed down by around 3.9 trillion yen due to the reactionary decline and the shrinking of real income. And yet another increase in the consumption tax is expected in October of 2015, which will likely be accompanied by last-minute demand before the tax hike. This time around housing investment is expected to become a focus of last-minute demand. However, housing behaves quite differently from personal consumption which tends to be focused in the weeks immediately previous to the hike. Last-minute demand in the area of housing is expected to begin much earlier and be drawn out over a longer period of time. Housing investment arising from last-minute demand is expected to be seen as early as the Jan-Mar period of 2015. Of particular note here is that last-minute demand for housing associated with the expected October 2015 tax hike will likely give an important boost to FY2014 GDP.

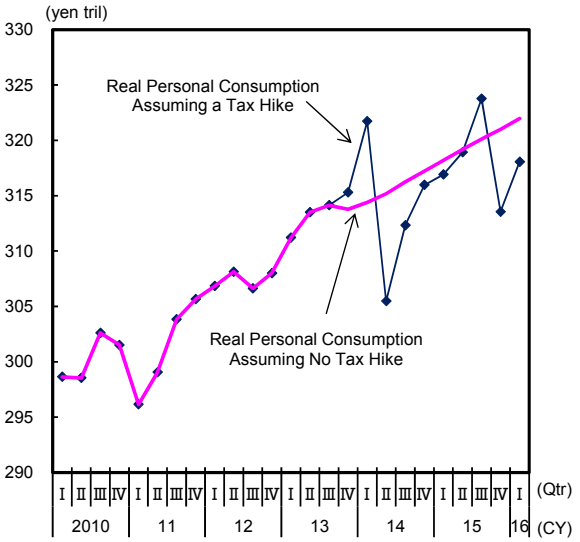
The October 2015 increase in consumption tax will take place within the same fiscal year, as will the last-minute demand and reactionary decline associated with it. Hence the economic effects are expected to be relatively small. Moreover, the appetite of consumers for replacement purchases of durables is believed to have been largely fulfilled during the last-minute demand which occurred before the April 2014 tax hike. The extent of the tax hike in 2015 will also be smaller, so last-minute demand and the subsequent reactionary decline are also expected to be limited.

In conclusion, we expect FY2014 real GDP growth rate to be pushed down by -1.33%pt as a result of the increase in consumption tax, while in FY2015, we predict that GDP will get a boost of +0.51%pt by the next tax hike.

Effects of the Consumption Tax Increase on the Economy

Chart 8

Effects of the Consumption Tax Increase on Real Personal Consumption



Source: Cabinet Office; compiled by DIR.

Notes: 1) Estimated figures for the "No Tax Hike" category taken after 3rd qtr of 2013, while those for the "Tax Hike" category are taken from after the 3rd quarter of 2014.

2) Calculation values are from the DIR short-term macro-economic model, Figures are different from those used in the economic outlook.

Effects of the Consumption Tax Increase on the Economy

Chart 8

Effects of the Consumption Tax Increase on the Economy

Rate of Deviation from "No Tax Hike" Case (yen tril)			
	FY2013	FY2014	FY2015
Real GDP	3.0	-3.9	-1.3
Private Sector Final Consumption Expenditure	2.2	-4.0	-2.0
Rate of Deviation from "No Tax Hike" Case (%)			
	FY2013	FY2014	FY2015
Real GDP	0.57	-0.73	-0.24
Private Sector Final Consumption Expenditure	0.70	-1.27	-0.62
Effect on Real GDP Growth Rate (%pt)			
	FY2013	FY2014	FY2015
Real GDP	0.58	-1.33	0.51
Private Sector Final Consumption Expenditure	0.43	-1.18	0.39

Source: Cabinet Office; Compiled by DIR.

Note: Calculation values are from the DIR short-term macro-economic model.

2.2 Issue (2) The effects of the manpower shortage on Japan's economy

As the economy expands led by personal consumption, non-manufacturing industries are faced with a lack of hiring

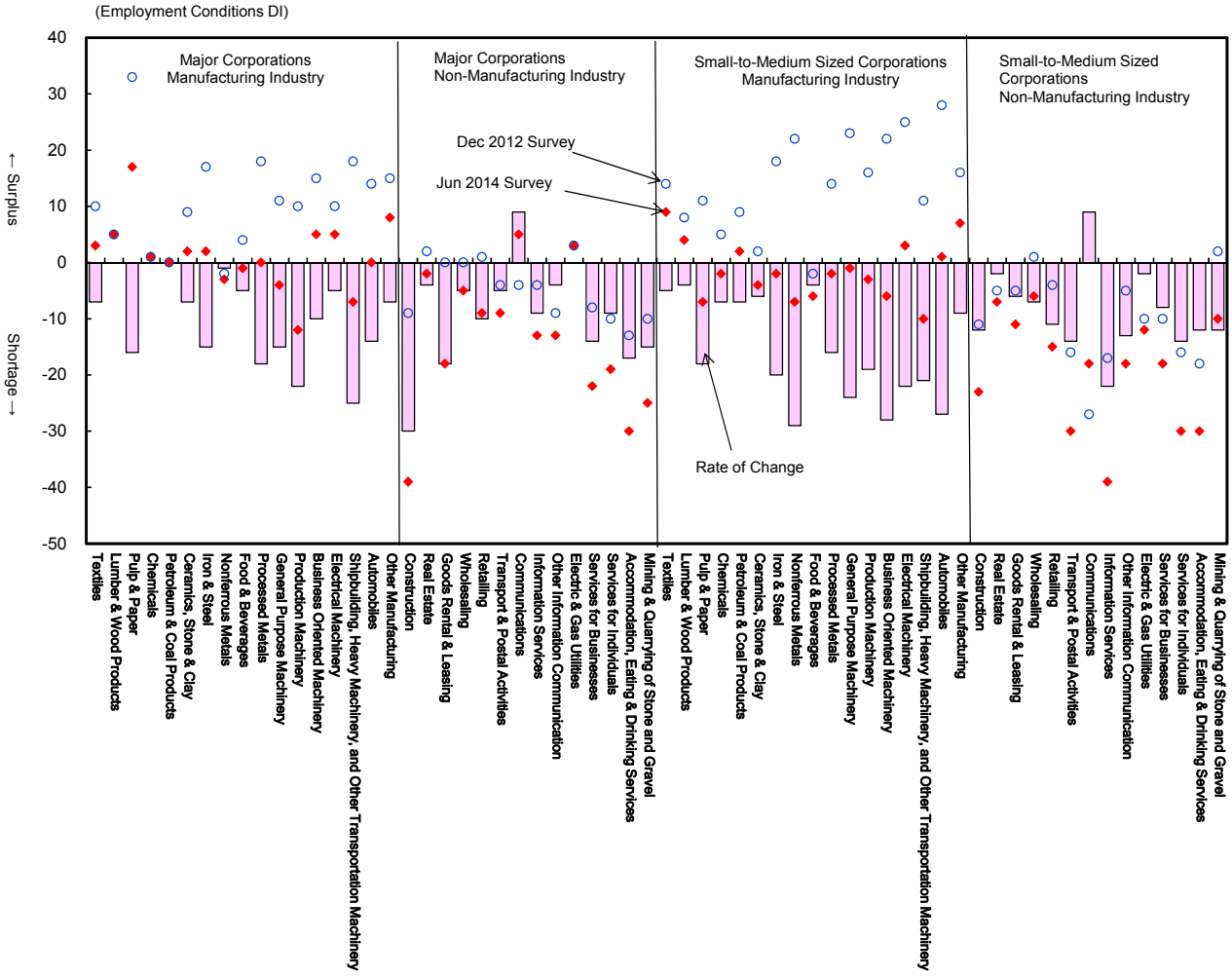
As Japan's economy recovers, demand for labor in the macro-economic sense also rises. The main feature of this recovery is an expansion in domestic demand as led by personal consumption. The last minute demand prior to the increase in the consumption tax caused a considerable acceleration of personal consumption in the last half of FY2013. The consumer-led economic expansion also influenced the labor market. As a result of the continuing economic expansion led by personal consumption, a lack of hiring develops in the macro-economic sense, and the non-manufacturing industries begin to feel the pinch from stringent supply and demand of labor.

Serious manpower shortage in small-to-medium-sized corporations and non-manufacturing industries

In this section we take a closer look at the current supply and demand conditions for labor by industry and by size of corporation. Chart 9 shows employment conditions DI according to the BOJ Tankan survey as of Dec 2012 when the economic expansion just got underway, and more recently in June 2014, with changes at various intervals between these two points. This chart shows clearly how serious the lack of hiring has become for the non-manufacturing industries in the current personal consumption led economic expansion. Moreover, this is not limited to services, or accommodation, eating or drinking services (industries most interrelated with personal consumption), but others as well, including business services and corporate services, where the labor shortage is worsening. In addition, the construction industry, which is associated with public investment and is influenced by reconstruction demand and economic policy, is also experiencing a shortage of manpower which is growing more serious.

In comparison to the non-manufacturing industries, the manufacturing industries are not experiencing as much of a stringent supply and demand situation in the area of labor. However, as the economy has gradually recovered, there is no longer the sense that there is a surplus of labor. This is especially evident in the case of small-to-medium sized corporations, which have an especially high rate of change (including in the non-manufacturing industries) in comparison to the previous survey. This also means that there is a lack of hiring in this sector.

Employment Conditions DI by Industry and by Scale of Business **Chart 9**



Source: BOJ; compiled by DIR.

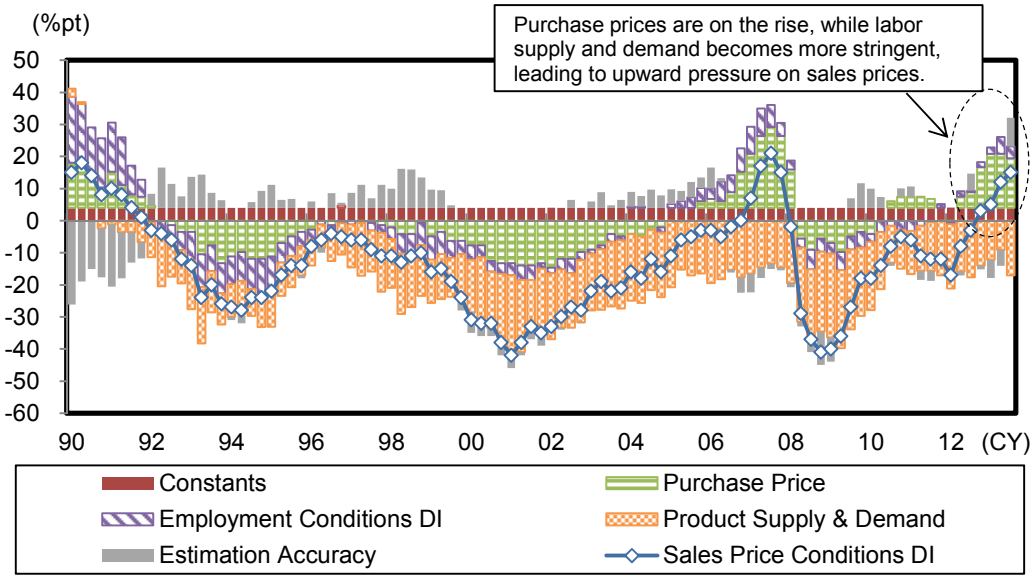
Tight supply and demand of labor puts upward pressure on prices

Chart 10 is a factor analysis of the sales price conditions DI of major corporations in the retail industry, examining factors including purchase price, supply and demand of finished goods, and employment conditions DI. The trend shows a downturn caused by the situation in supply and demand of finished goods, while the rise in purchase price has inflated the sales prices of corporations. In addition, employment conditions DI is also influencing corporate sales prices, pushing them in an upward direction. These data also confirm that another major factor in recent increases in sales prices is the stringent supply and demand situation for labor.

The stringent supply and demand situation for labor also places upward pressure on wages, but raising wages means taking on an increase in costs to the corporation. The fact that the employment conditions DI is one of the factors causing sales prices to rise means that costs have risen due to increases in wages, and many corporations are now passing these costs on to the consumer in the form of higher sales prices so that they can recover costs and maintain earnings. The supply and demand

situation for labor is expected to remain stringent for some time to come, and wages will also be pushed upwards due to this situation. At the same time, prices are also expected to continue to come under upward pressure.

Factor Analysis of Sales Price Conditions DI (Major Corporations in Retail Industry) **Chart 10**



Source: Bank of Japan; compiled by DIR.
Note: The sales conditions DI was estimated using the explanatory variables of other conditions DI. The estimation formula is shown below:
Sales Price Conditions DI = 3.99 + 0.7 x Purchase Price Conditions DI - 0.4 x Employment Conditions DI + 0.61 x Supply/Demand Conditions DI for Domestic Products
Coefficients are all given a significance of 1%.

Increase in labor force participation rate inhibits decline in unemployment rate

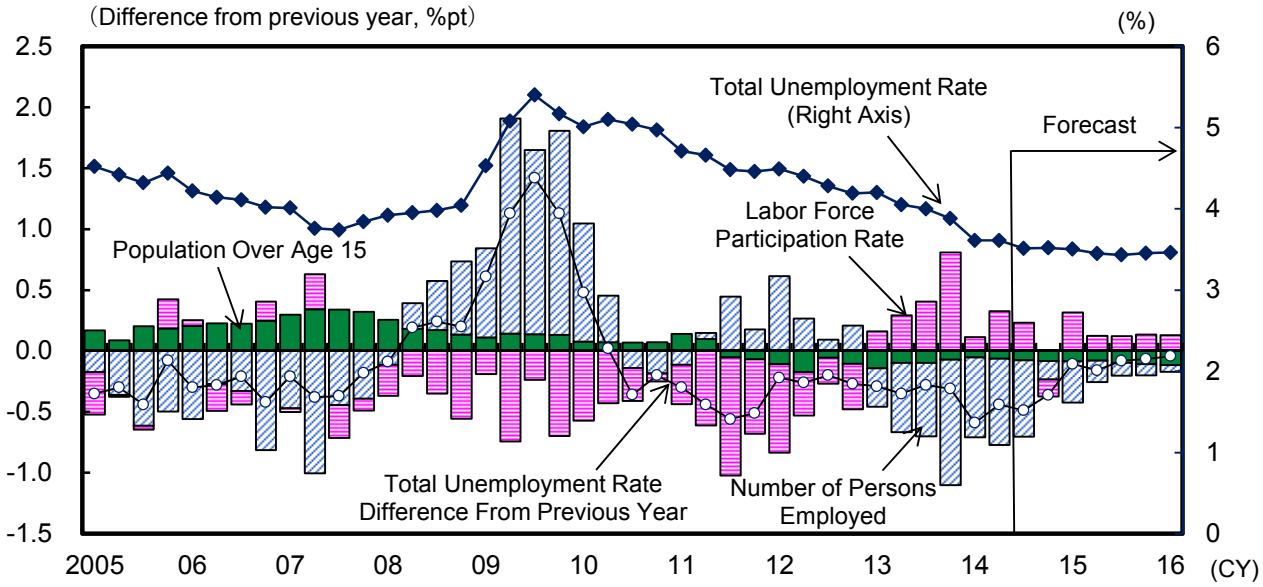
Employment indices such as the unemployment rate and the job opening-to-application ratio are heading toward improvement. However, while a decline in the unemployment rate and an increase in the job opening-to-application ratio are both positive developments for households, the flip side is that, as can be seen in the effective ratio of job offers to applicants, which has been maintaining figures exceeding 1.0, it has become difficult for corporations to hire new employees, and so the manpower shortage continues to worsen. The unemployment rate has recently reached the same level as structural unemployment rate, and as Japan comes closer to achieving full employment, fears that the limitations of labor supply will become a barrier to economic growth become more palpable.

Chart 11 shows a factor analysis of historical change in total unemployment rate and future projections. First of all, looking at past developments, we see that since the beginning of 2013, the number of employed persons grew as a result of economic expansion and as a result, the unemployment rate went down. However, at the same time, it is also worth noting that the labor force participation rate was a factor in pushing the unemployment rate back up. As the economy continues to grow led by domestic demand, wages for part-time workers tend to increase, while improving working conditions begin to attract people who had not been looking for jobs up till now (the non-labor force population) back into the labor market. The labor force population is now growing because women's labor force participation is making advances, and has compensated for declines in the supply of labor due to the shrinking population.

A for future developments, the same situation is expected to continue for the time being. The demand for labor is expected to continue to grow as the economy expands. However, the increase in the consumption tax has reduced real incomes, and this is expected to slow down the growth trend somewhat. This could also slow down the pace of growth in the number of persons employed. As for the demand for labor, future declines in population could become a negative factor, but support is expected to be provided by growth in the labor force participation rate as a result of rising wages

arising from the stringent supply and demand situation for labor. In conclusion, the unemployment rate is expected to gradually trend downward, while the shortage of labor is not expected to become a serious barrier to future economic growth.

Factor Analysis of Total Unemployment Rate **Chart 11**



Source: Ministry of Internal Affairs and Communications; compiled by DIR.
Note: The following mathematical formula was used to perform factor analysis on total unemployment.

$$\Delta u = -\frac{1}{aN}\Delta E + \frac{E}{aN^2}\Delta N + \frac{E}{a^2 N}\Delta a$$

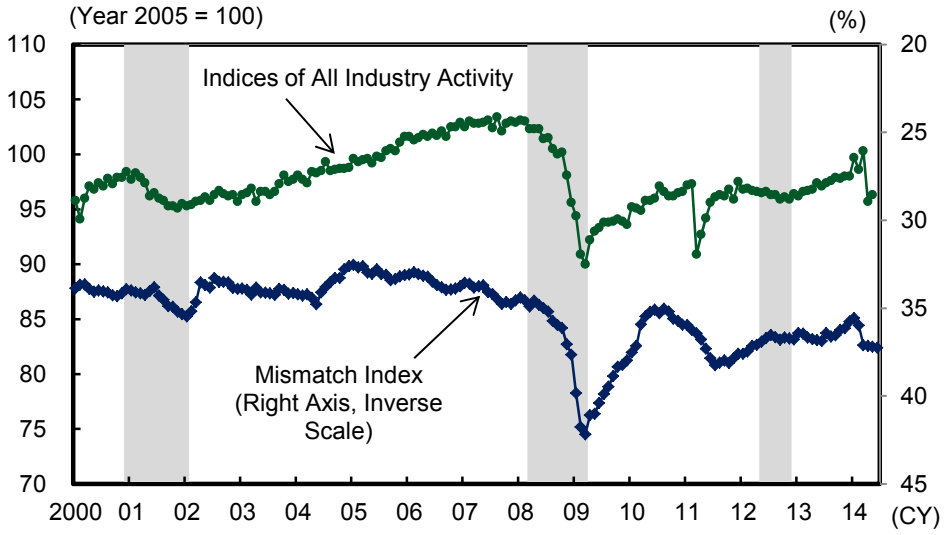
u: Total Unemployment Rate, E: Number of Persons Employed, a: Labor Force Participation Rate, N: Population Over Age 15

The issue of employment mismatch will be resolved by economic expansion

Fears are growing that the shortage of labor will hinder economic growth. One of the major factors behind this growing apprehension is the fact that the unemployment rate is now approaching the same level as the structural unemployment rate. Structural unemployment is a phenomenon which occurs when the personnel needs of corporations and the characteristics of job seekers (professional ability and experience, age, etc.) differ. In other words, unemployment which arises due to employment mismatch. As long as the issue of employment mismatch exists, there will always be a fixed level of unemployment. In this sense, structural unemployment rate is the lower limit of the unemployment rate, and the assumption is that unemployment cannot drop below this point. However, if the problem of employment mismatch is resolved, the structural unemployment rate itself will drop, leaving more room for the unemployment rate itself to decline further.

Chart 12 shows the mismatch index, which is calculated based on the number of job vacancies compared to job searches. The current trend shows an increase in employment mismatch, as well as the tendency for employment mismatch to increase during economic downturns. Conversely, when an upturn occurs in the economy, growth in employment mismatch comes to a halt. The assumption is that corporations loosen up job requirements when the supply and demand for labor becomes stringent during a period of economic expansion. The economy is expected to expand further in the near future, and possibilities are high that there will also be less employment mismatch, causing the structural unemployment rate itself to decline.

Economic Trends and Employment Mismatch **Chart 12**



Source: Health, Labour, and Welfare Ministry, Ministry of Economy, Trade and Industry; compiled by DIR.
Notes: 1) Mismatch Index = $1/2 \times \sum|(U_i / U) - (V_i / V)| \times 100$
$U_i =$ *Number of Category i Job Seekers*, $V_i =$ *Number of Category i Job Openings*, $U =$ Total Number of Job Seekers, $V =$ *Total Number of Job Openings. Categories correspond to different job classifications. Seasonal adjustment performed by DIR.*
2) The shaded areas represent economic downturns.

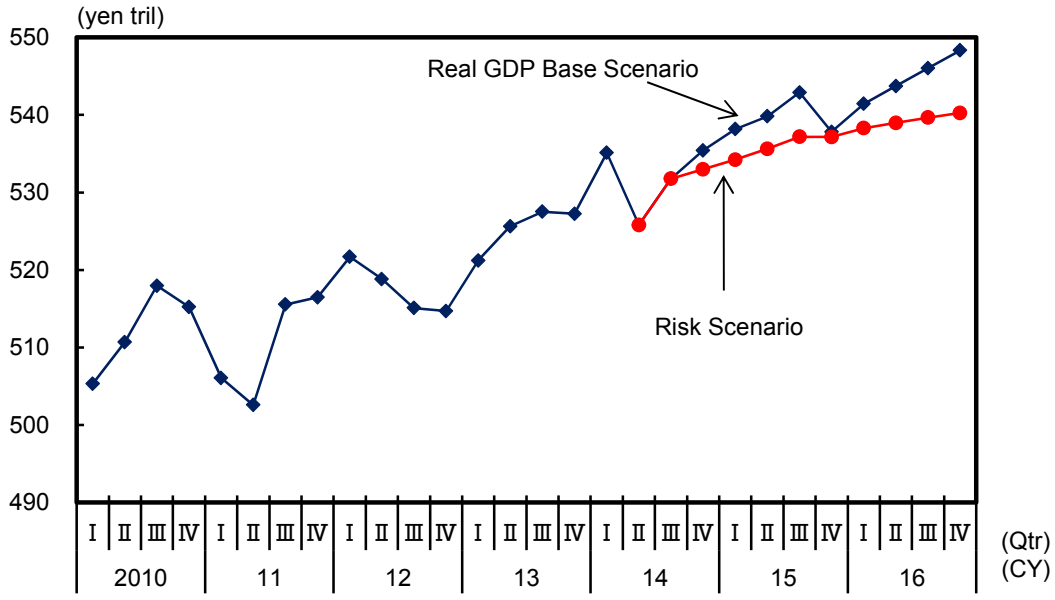
Without an increase in labor force participation rate and productivity, employment will become a barrier to economic growth

As has been mentioned previously, the extremely tight situation for supply and demand of labor is expected to continue, for now, the shortage of manpower is not expected to become a major hindrance to economic growth. However, this is based on the understanding that the stringent supply of labor will lead to an increase in wages and improvements in employee compensation, and consequently to an increase in the number of persons seeking work (in other words an increase in the labor force participation rate). If this mechanism does not operate as well as it should, the manpower shortage could become a factor in suppressing economic performance.

Chart 13 presents the results of an analysis used to figure the extent to which Japan's economy would be effected by the shortage of labor assuming the following: (1) the labor force participation rate continues the past trend and declines, (2) the structural unemployment rate remains about the same as it has been recently and the unemployment rate does not fall below the structural employment rate, and (3) labor productivity increases, repeating the trend seen in the 2000's. According to the simulation we ran, there will be a shortage of 343,000 in the number of persons employed in FY2015, while that number is expected to double to 663,000 in FY2016. Shortages in manpower are expected to be negative factors in real GDP in those years, pushing down GDP figures by 3.4 trillion yen in FY2015 and 7.2 trillion yen in FY2016. Moreover, in order for labor force participation alone to resolve this shortage in manpower, the labor force participation rate would have to grow by 0.4%pt in FY2015 and then by 0.8%pt in FY2016. In order to compensate with a manpower based increase in productivity, there would have to be growth in productivity of 0.6% in FY2015 and 1.3% in FY2016.

These calculations are based on relatively pessimistic assumptions, and realistically speaking, actual numbers would more than likely not be that high. However, it is important to note that the labor shortage is not a short-term problem. For the mid to long-term, the decline in population and Japan's progressively aging population will be extremely important issues effecting the economy. We must remain aware that the shortage in supply of labor very well could become a major drag on Japan's economy in the future.

Downward Pressure of Manpower Shortage on GDP Chart 13



Source: Ministry of Internal Affairs and Communications, Cabinet Office, Ministry of Health, Labour and Welfare; compiled by DIR.
Note: The risk scenario assumes the following: ① Labor participation rate trends downwards, ② Unemployment rate does not fall below structural unemployment, ③ Labor productivity trends upwards as in 2000's.

Manpower Shortage and Downward Pressure on GDP

	FY2014	FY2015	FY2016
Shortage in Number of Persons Employed (10,000)	4.7	34.3	66.3
Amount by which Real GDP Decreases (yen tril)	-1.6	-3.4	-7.2
Deviation Rate (%)	-0.3	-0.6	-1.3

Labor Force Participation Rate and Labor Productivity Required to Compensate for Manpower Shortage

	FY2014	FY2015	FY2016
Growth in Labor Force Participation Rate(%pt)	0.2	0.4	0.8
Growth in Labor Productivity (Manpower Based) (%)	0.3	0.6	1.3

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

2.3 Issue (3) Will exports get back on track?

Stagnant world economy leads to sluggish exports

For our third issue facing Japan's economy we examine the export trend. The yen has weakened rapidly since the end of 2012, yet despite this fact, export volume has remained stagnant. There are indications that progress in the hollowing out effect has made it structurally difficult for Japan's exports to grow. In this section, we consider factors contributing to Japan's sluggish exports.

Export volume from Japan is a product of the world's overall export volume (= import volume) and Japan's share of said volume. It is possible to view the former as reflecting the strength of overseas demand, while the latter can be understood as Japan's competitiveness. Chart 14 is a factor analysis of changes in Japan's export volume as seen from the viewpoint of changes in world import volume and Japan's share of world import volume. Focusing on developments from the 1990s on, the biggest factor influencing Japan's exports has been world import volume, in other words overseas demand. Influence from changes in share is relatively minor. World import volume has not grown much at all since 2012, and it is this sluggish condition of world demand that is the main cause of Japan's stagnant exports. Japan experienced an economic slowdown from mid-2012 till the end of the second half.

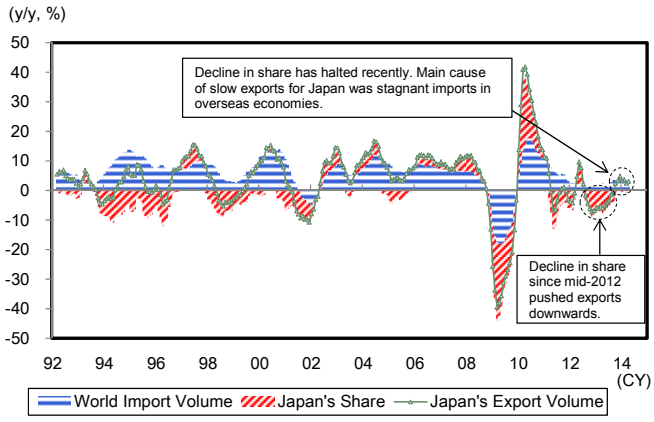
World demand was also stagnant during this time and Japan's share of world import volume brought the downturn in exports. By the end of 2012 Japan's share of world demand had stopped declining.

World import volume is basically an expression of how the world economy is doing. The major influence here is the economic condition of the advanced countries which hold the lion's share of the world's final demand. Chart 15 shows changes in economic trends of the advanced nations (OECD CLI) and import volume. The data tell us that the world economy bottomed out at the beginning of 2012 and has been continuing to improve since then, but import volume has been slower to improve, and is still comparatively sluggish. Structural factors may be partly responsible for sluggish import volume, such as the tendency for US manufacturers to bring production operations back home to domestic locations, but historical data show us that there is a tendency for improvement in import volume to lag somewhat behind a recovery in the overall economy. Therefore, in cyclical terms, the world's import volume should be increasing its growth rate in the near future.

In conclusion, we foresee according to our main economic scenario that Japan's exports will gradually get back on track supported by the cyclical recovery of the US economy. However, it must be kept in mind that in comparison to the trends seen before the US economic crisis, the speed of recovery in the advanced nations is much more gradual. Hypothetically speaking, if a slower growth rate becomes entrenched in the advanced nations, it follows that world import volume, or in other words Japan's export volume, will also experience slower growth than in the past. This is a possibility which should be made note of.

Factor Analysis of Japan's Export Volume

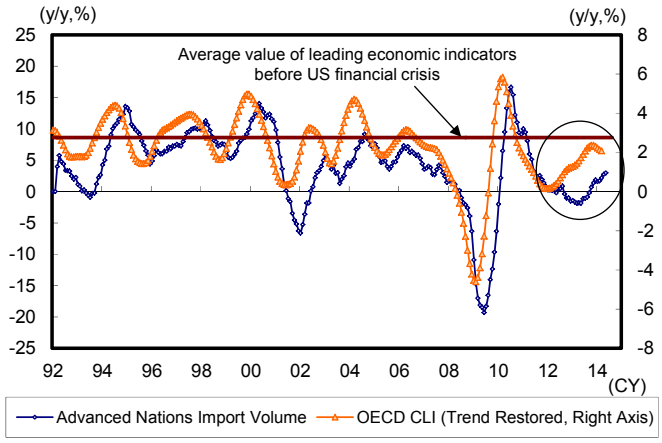
Chart 14



Source: Netherlands Bureau for Economic Policy Analysis; compiled by DIR.
Note: Comparison with previous year's 3-month moving average.

Import Volume of Advanced Nations and Leading Economic Indicators

Chart 15



Source: Netherlands Bureau for Economic Policy Analysis, OECD; compiled by DIR.

The weak yen is a plus, but growth in exports is hindered by the hollowing out effect

As of this point our investigations have confirmed that the major factor leading to sluggish export volume is the slow pace of world economic expansion. However, though Japan's share of exports has been showing signs of hitting bottom any time soon, it has somehow remained in the doldrums. Share of exports is an expression of Japan's export competitiveness. Increasing export competitiveness is an important issue in increasing Japan's economic vitality, so obtaining a sufficient grasp of the factors causing a stagnant share of exports is meaningful.

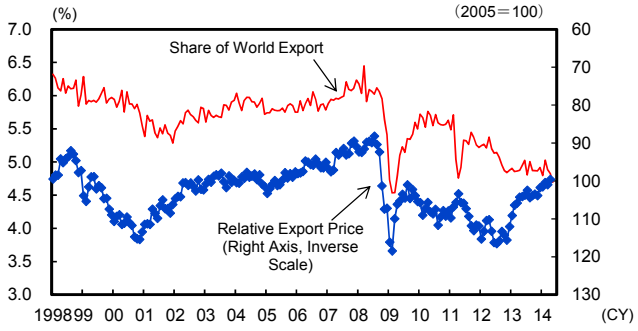
One of the main factors indicating export competitiveness is the exchange rate. When the value of a nation's currency goes down, prices denominated in that currency will then decline when expressed in another nation's currency. Hence corporations can get a price cut while still maintaining earnings, and

products gain price competitiveness against those of other countries. Japan's relative export price as shown in Chart 16 experienced rapid decline after the end of 2012. However, as was confirmed by the data in Chart 14, Japan's share of world exports has still not increased, even though the decline in share has been halted. The tendency in the past was for share of world exports and the relative export price to move in tandem, but recently, the weakening yen and improvement in price competitiveness has not led to an increase in share.

While Japan's export competitiveness rises as a result of the weak yen, its share of world exports remains stagnant. Behind this is a major structural factor – that of the hollowing out effect. When the practice of local (overseas) production of goods once produced domestically and then exported progresses, even if overseas demand remains fixed, Japan's exports decline as a result. We estimated Japan's share of world exports assuming the influence of the weak yen factor, as well as the overseas production factor, and found that although the weak yen helps to push up export share, said share is then immediately eroded by the growing tendency to carry out production of Japanese products overseas (see Chart 17). In conclusion, even if we include overseas production in the calculation of the share of world exports held by Japanese corporations (in which case we can see an improvement), the progress of the hollowing out effect has made it structurally difficult for Japan's exports to obtain growth.

Relative Export Price and Japan's Share of World Export Volume

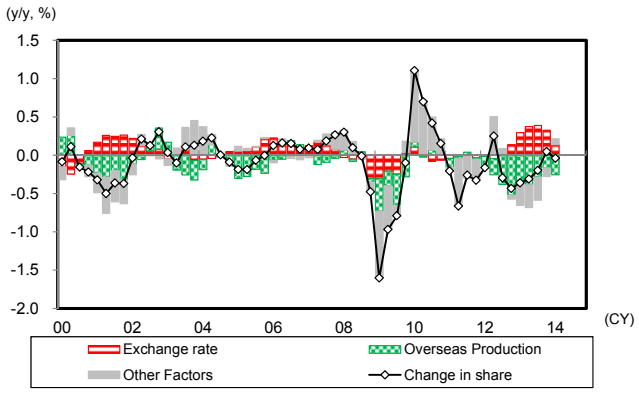
Chart 16



Source: Cabinet Office, IMF, Netherlands Bureau for Economic Policy Analysis; compiled by DIR.
Note: Relative export price = Japan's export price (US dlrs) / World import price.

Factor Analysis of Fluctuations in Export Share

Chart 17



Source: Ministry of Economy, Trade and Industry, Bank of Japan, Ministry of Finance, Netherlands Bureau for Economic Policy Analysis; compiled by DIR.
Note: Estimates calculated as follows:
Share = 12.84 -0.02*REER -0.12*FP.
Coefficients all have a significance of 1%.
Share: Share of world exports held by Japan's export volume.
REER: Real effective exchange rate.
FP: Sales of overseas subsidiaries / (Overseas subsidiary sales + Amount of Japanese exports).

Hollowing out effect adds 7 tril yen to trade deficit; nuclear power plant shutdown adds 4 tril yen

In this section we examine fluctuations in Japan's balance of trade in recent years as related to factors previously covered.

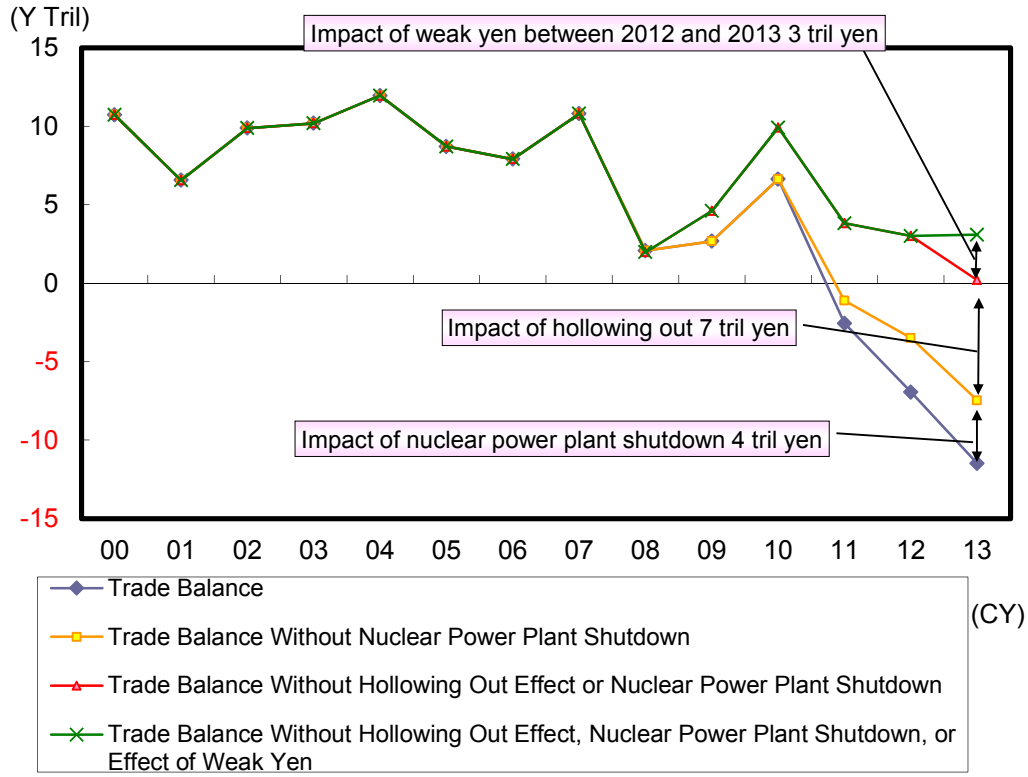
According to international balance of payments statistics gathered by the Ministry of Finance and the Bank of Japan, the 2013 current account balance was at 3.2 trillion yen, the smallest current account surplus Japan has had since 1985. The size of Japan's current account surplus has shrunk dramatically in recent years and is continuing to do so. There are those who say that if things don't change, the current account deficit will be here to stay. The main factor behind the current account deficit is the growing trade deficit. Japan's trade balance on a customs clearance basis in 2013 recorded a deficit of 11.5 trillion yen, or 8.8 trillion yen on an international balance of payments basis. Both of these figures are the largest ever for Japan.

Is Japan's trade deficit here to stay?
Japan's trade balance began recording deficits in 2011, and since then has continue to grow in leaps and bounds. The major factors behind this have been the growing tendency to move production overseas (the hollowing out effect) and the shutdown of the country's nuclear power plants after the earthquake and tsunami of 2011 [the Great East Japan Earthquake].

Chart 18 shows how the hollowing out effect and the shutdown of nuclear power plants have influenced the current account balance. As of 2013, out of the total trade deficit of 11.5 trillion yen, approximately 7 trillion yen was accounted for by the hollowing out effect, while around 4 trillion yen was associated with the shutdown of nuclear power plants.

In conclusion, we foresee according to our main economic scenario that Japan's exports will gradually get back on track supported by the cyclical recovery of the US economy. However, considering the above mentioned structural factors, Japan's trade balance will likely be bleeding red ink for some time to come.

Impact of Hollowing Out Effect and Nuclear Power Plant Shutdowns on Trade Balance **Chart 18**



Source: Ministry of Finance; compiled by DIR.

Resurgent US economy provides support for Asia's emerging markets

The key to future trends in exports is Asia and its emerging markets. In this section we consider trends in the emerging Asian economies from the perspective of the influence of the US and China.

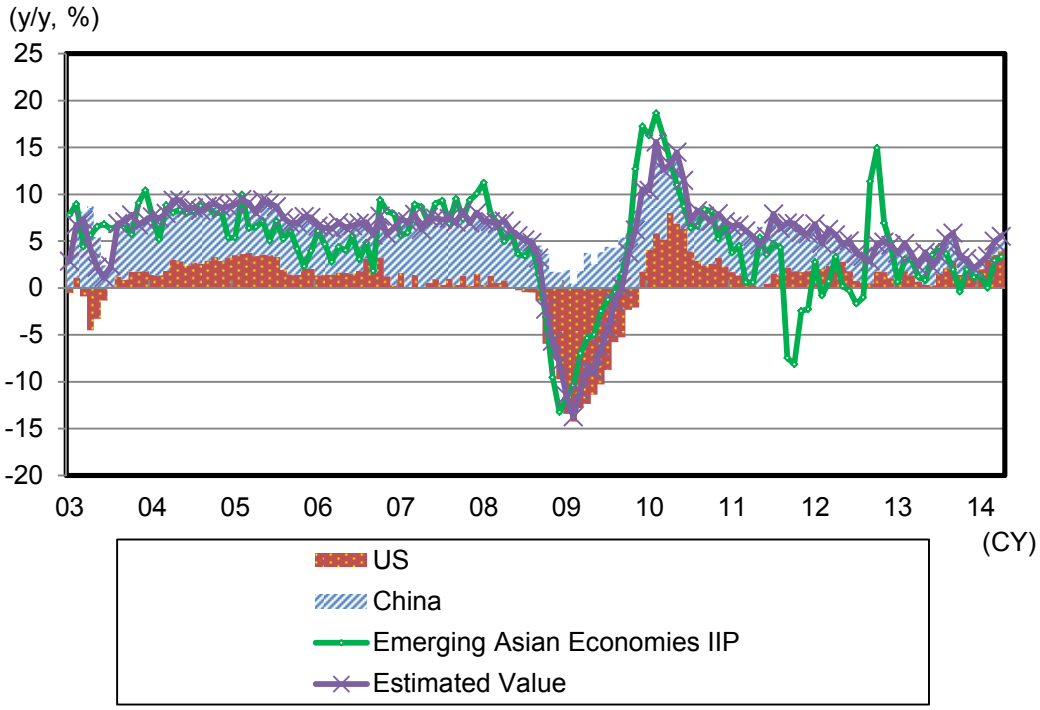
The cyclical recovery of the US economy is expected to provide support for improvements in the emerging economies of Asia. Meanwhile, from a structural viewpoint, China's economy is exhibiting increasing influence in the emerging economies of Asia.

Chart 19 performs a regression analysis to estimate the rate of influence US and Chinese production have over industrial production in the emerging economies of Asia.

The chart suggests that during the recovery phase of 2009 following the US financial crisis, it may have been the recovery in the Chinese economy which provided the impetus for improvement in the Asian emerging economies. In contrast to this, we can see that it is the increase in production in the US which provides fundamental support for production in the Asian emerging economies. In 2013 the FRB announced it would begin tapering its quantitative easing policy, creating turmoil in the financial markets. This in turn led to panic in the emerging Asian economies. However, more recently, improvements in the US real economy have provided the impetus for a sure-footed recovery in Asia.

We expect the US economy to continue a steady recovery, and for this cyclical recovery to in turn provide support for a recovery in the emerging Asian economies.

Factor Analysis of Industrial Production in Emerging Asian Economies **Chart 19**



Source: Haver Analytics; compiled by DIR.
Note: A rolling regression was performed in order to calculate extent of contribution of US IIP (y/y chg) and China's IIP (y/y chg) on the IIPs of the emerging Asian economies (y/y chg).

From a structural viewpoint, influence of China's economy on the emerging Asian economies should grow stronger in the future

Despite the above findings, the influence of China's economy on the emerging Asian economies has grown steadily stronger.

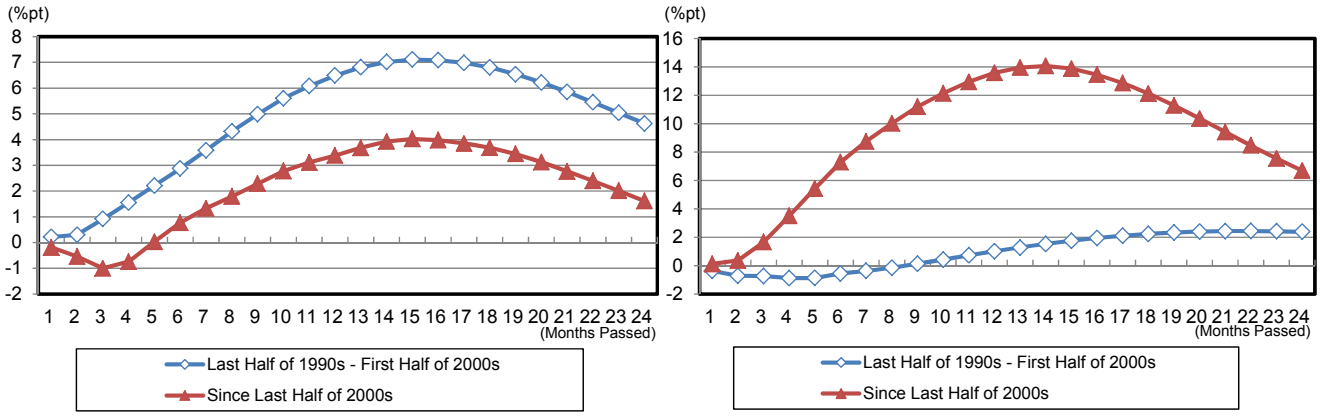
In Chart 20, a calculation is performed to figure the extent of influence of fluctuations in US and Chinese production on industrial production in the emerging Asian economies. The vertical axis represents the extent of influence on industrial production in the emerging Asian economies, while the horizontal axis indicates amount of time elapsed since occurrence of the shock.

Taking a look at the US economy's influence on Asian economies, we find that since the last part of the 2000s, there has been less influence than the period spanning the mid-1990s to the first half of the 2000s. In contrast, China's influence has grown stronger since the last half of the 2000s. This shows that the emerging Asian economies have become more susceptible to China's economic influence in structural terms, while also suggesting that US influence has declined.

Next, shifting our gaze over to the Chinese economy as it gains more influence, we see that as of the end of last year its economy slowed down. However, policies which support the economy have been effective more recently, and China is now showing signs of a comeback. China is faced with a variety of issues, including a real estate bubble and excess production capacity, but for the most part, these problems can be left on the side for the next year or two. Hence in the short-term, China's economy is not expected to hit bottom.

From both a cyclical and a structural point of view, recovery in the US and the Chinese economies is expected to provide underlying support for further improvement in the emerging Asian economies.

Influence on Industrial Production in Emerging Asian Economies (Left Side: US, Right Side: China) **Chart 20**



Source: Haver Analytics; compiled by DIR.
Notes: 1) US IIP (y/y), China IIP (y/y), and Emerging Asian Economies IIP (y/y) estimated using a VAR model.
2) Sample period "Last Half of 1990s - First Half of 2000s" utilizes data from January 1997 to December 2006, while sample period "Last Half of 2000s" utilizes data since January 2007.

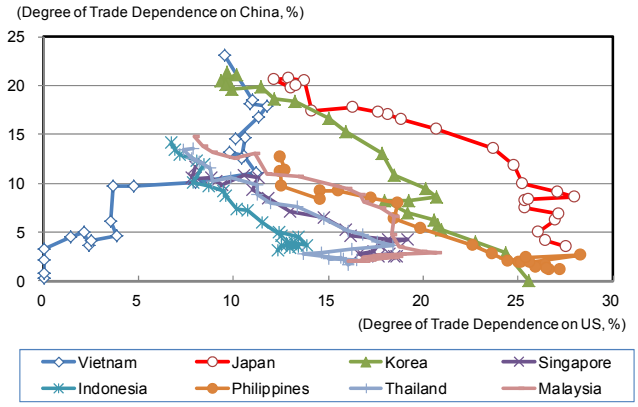
Dependence of emerging Asian economies on China is growing

In this section we consider the reasons for China's growing influence over the emerging Asian economies.

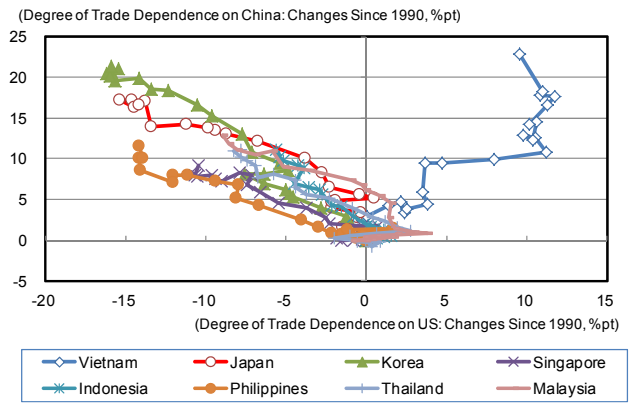
The major way in which the economy of one country has influence over economies of other countries is trade. Taking a look at the degree of trade dependence the emerging Asian nations have on China and the US, we see that most of the countries included in this category show a growing dependence on China, while the degree of dependence on the US is on the decline (see Chart 21). The degree of trade dependence is defined as the percentage of export and import value accounted for by trade with a particular country (China or the US).

Since 1990 China's economy has grown in leaps and bounds, and as its economy has expanded, the amount in trade it engages in has also grown. Trade relations have become particularly close with the Southeast Asian countries due to their close geographic location. Trade dependence of these countries on China is especially strong. As a result, trade dependence of the emerging Asian nations on the US has weakened. For a variety of structural reasons, the influence of China's economy on the emerging Asian nations continues to grow, while the influence of the US economy is on the decline.

Changes in Trade Dependence on the US and Chinese Economies **Chart 21**



Source: IMF statistics; compiled by DIR.



Source: IMF statistics; compiled by DIR.

Japan's participation in global value chains

Lastly, for comparative purposes, we consider the global value chain participation quotient of Japanese corporations.

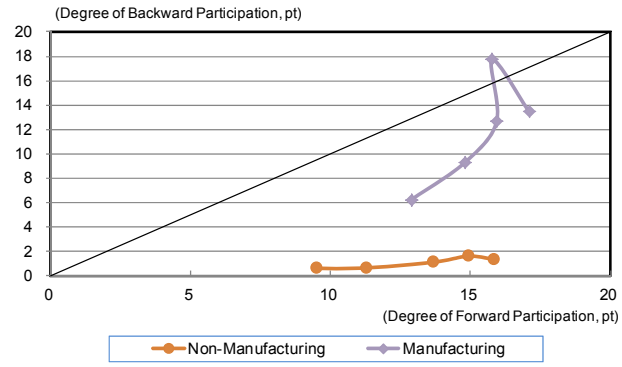
The concept of the global value chain takes into consideration the stage at which a country's production of goods and services links up with the global economy. Participation in cross-border production of export goods and services upstream is referred to as "forward participation", while participation downstream is called "backward participation".

Chart 22 indicates changes in Japan's participation quotient in global value chains

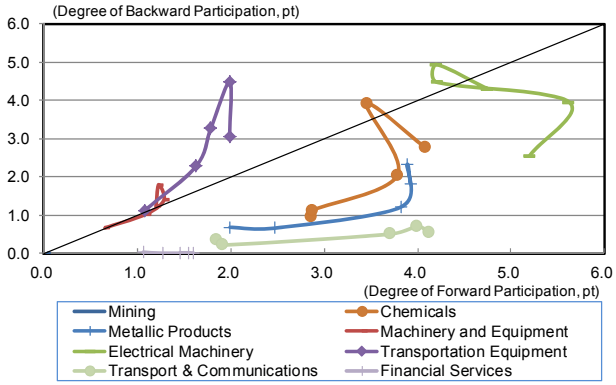
Taking a look at the global value chain activities of the manufacturing industry, with the exception of 2009 which was affected by the US financial crisis, the trend has been toward an increase in backward participation. In other words, in the process of Japan's manufacturing industry building a system of global division of labor, the tendency to use intermediate inputs from other countries in manufacturing products for export has become more common. On the other hand, Japan's forward participation in global value chains has increased as well. This is where Japan supplies intermediate goods for another country to produce products for export.

In contrast, the global value chain participation of Japan's non-manufacturing industry shows an excessively low degree of backward participation, while it has an excessively high degree of forward participation – proof that services such as transport and communications are now developing their businesses on the global level.

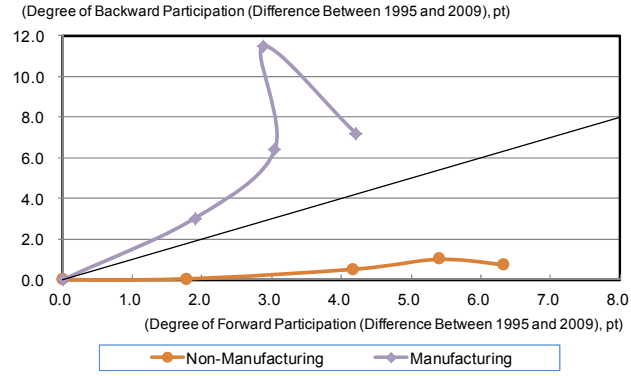
Changes in Global Value Chain Participation **Chart 22**



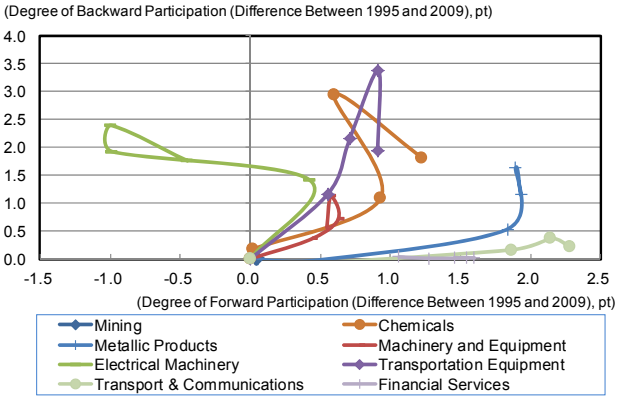
Source: OECD; compiled by DIR.



Source: OECD; compiled by DIR.



Source: OECD; compiled by DIR.



Source: OECD; compiled by DIR.

2.4 Issue (4) The Extremely Hot Summer

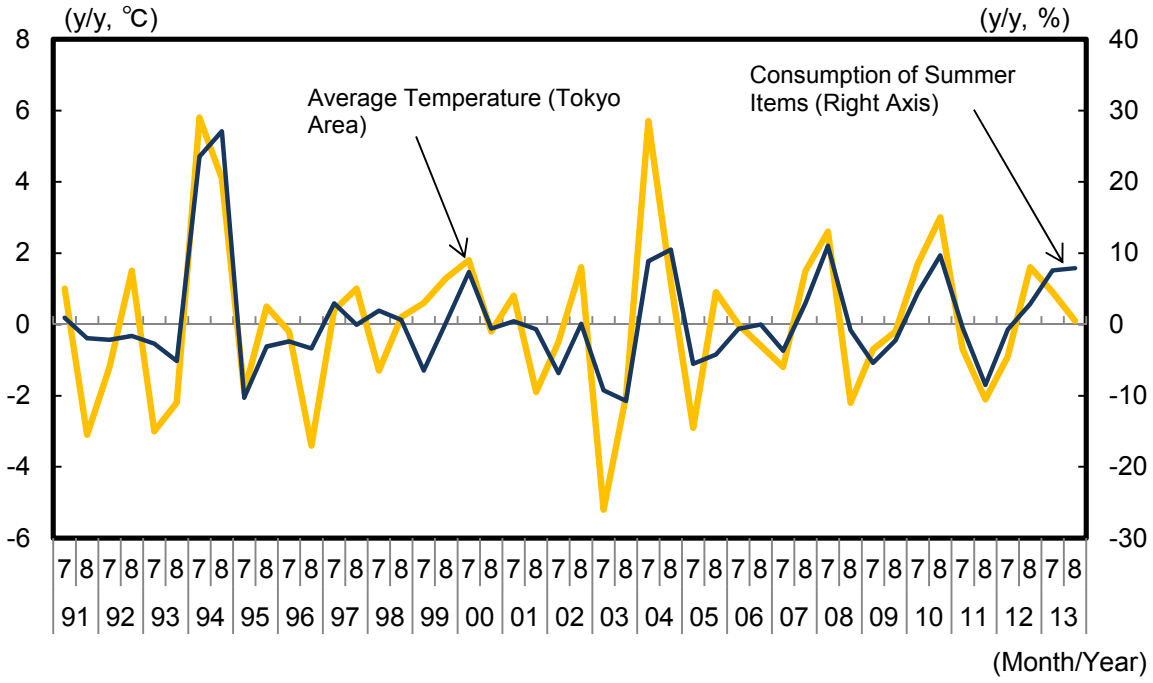
Effects of July & August weather grow

Household consumption declined dramatically in April with the increase in consumption tax, but since then have been in the process of making a comeback. In July, the influence of climate factors on household consumption grew noticeably. Sales of seasonal goods such as air conditioners, summer clothing, and beverages fluctuated greatly as summer progressed. In a study of twelve items selected as representative of summertime consumption (household consumption accounted for an approximately 8% share of overall consumption throughout the year 2013), we confirmed a relationship between their total value and average temperature over the long-term. In this study we confirmed that there is a noticeable trend for consumption of summer items to move in tandem with the average temperature (see Chart 23)[2].

While economic variables such as household disposable income and value of financial assets are important determining factors in mid to long-term household consumption, we found that it is necessary to verify data on the influence of change in average summer temperatures in order to obtain a clearer view of the extent to which household consumption promises to make a comeback during the Jul-Sep period after the steep decline it experienced during the Apr-Jun period due to the increase in the consumption tax.

[2] In 2013, change in consumption of summer items topped that of average temperature. This is thought to have been due to the acceleration of economic recovery as a result of the government's monetary easing measures and the effectiveness of economic policies.

Consumption of Summer Items and Change in Average Temperature **Chart 23**



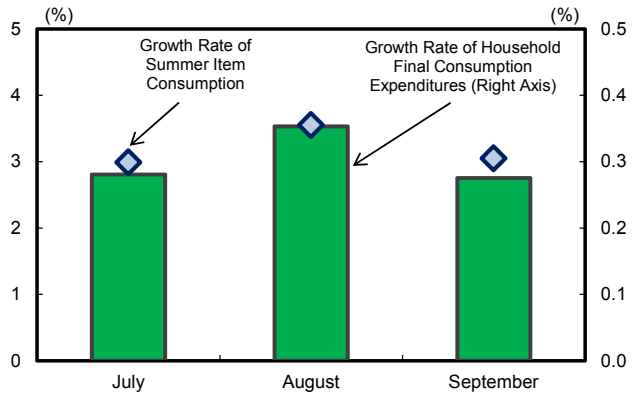
Source: Ministry of Internal Affairs and Communications, Meteorological Agency; compiled by DIR.
Note: Summer item consumption is the total value of ice cream and sherbet, beverages, beer, electricity expenses, water and sewage expenses, refrigerators, air conditioners, towels, insecticide and insect repellant, hats, shampoo, and beauty cream.

For each 1°C rise in average temperature, household consumption of summer items is increased by 70 billion yen per month

Chart 24 estimates the percentage increase in nominal household consumption of summer items each time the average temperature rose by 1°C since last year. Although these results are somewhat hypothetical and hence must be taken with a certain grain of salt, the rate of growth in consumption of summer items due to a 1°C rise in average temperature was 3.0% in July, 3.6% in August, and 3.1% in September. We can see here that the influence of average temperature is fairly significant. This study assumes that consumption other than that for summer items is neutral as far as temperature is concerned. According to our calculations, nominal household final consumption expenditures rose by 0.3% in July, 0.4% in August and 0.3% in September. On a GDP statistical basis household expenditures are expected to grow 67.6 billion yen in July, then 87 billion yen in August, and 66.4 billion yen in September. On average, the hot weather promises to push consumption up by around 70 billion yen each month (see Chart 25).

Consumption of Summer Items and Growth Rate of Household Consumption

Chart 24

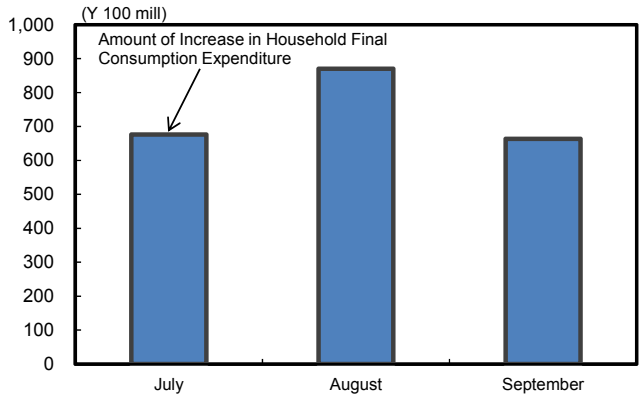


Source: Meteorological Agency, Ministry of Internal Affairs and Communications, Ministry of Health, Labour, and Welfare; compiled by DIR.

Note: Growth rate of consumption of summer items when weather increases by 1℃ in comparison with previous year is the estimated value represented by the value β in the below calculation. Estimation period is 1990 - 2013, Jul-Sep, each month having 1% significance. ln (Summer Item Consumption) = α + β x Average Temperature + γ x ln (Total Cash Earnings)

Growth in Amount of Household Consumption

Chart 25



Source: Meteorological Agency, Ministry of Internal Affairs and Communications, Ministry of Health, Labour, and Welfare, Cabinet Office; compiled by DIR.

Note: Converted to GDP based amount in household consumption expenditure using growth rate of consumption of summer items when weather increases by 1℃ in comparison with previous year (DIR estimated value, estimation period 1990 - 2013) and results of household survey.

3. Four Risk Factors Facing Japan's Economy

3.1 Risk (1): Stagnant personal consumption due to decline in real income

Wage increases in Japan will be encouraged by (1) the weak yen, and (2) stable prices

The first major risk facing Japan's economy which will be discussed here is the problem of stagnant personal consumption due to a decline in real income.

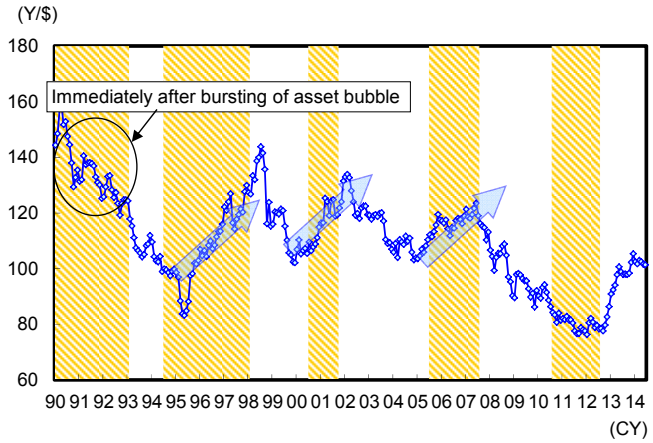
In our main scenario, we forecast two important developments in the Japanese economy. These are (1) a virtuous circle will develop in the economy made up of the following elements: production → personal income → consumption, and (2) the rise in prices associated with the increase in the consumption tax in April this year will eventually pass, and FY2015 real employee compensation will grow by +0.4% in comparison with the previous year.

Charts 26 and 27 analyze the data to identify the type of environment in which growth in real wages would be encouraged. The shaded areas in the charts indicate periods when the growth rate in nominal wages exceeded the growth rate in the consumer price index. In other words, these are growth periods for real wages. According to the charts, two common conditions tend to occur at the same time as these growth phases for real wages. First, as shown in Chart 26, the yen weakens against the dollar. Secondly, as shown in Chart 27, prices on the commodities markets trend downwards.

Interpreting these conditions is highly complex. When the yen is weak, corporate business performance improves. When this occurs, it is naturally easier for wages to rise. On the other hand, when the yen is weak, the price of imports goes up, and this can easily cause an increase in corporate business expenses. Therefore, the second situation mentioned above, that of a decline in commodities prices, is essential in order or the desired environment to develop. When commodities prices are in a downward trend, the extent to which corporate business expenses will rise is limited.

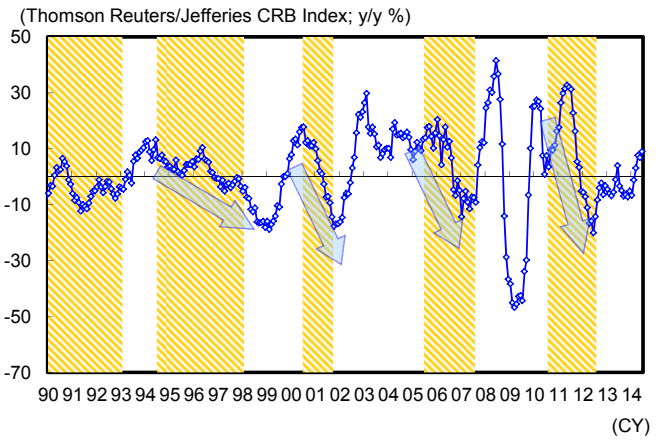
To summarize, the yen has become progressively weaker due to the BOJ's monetary easing policy. Theoretically, this should produce an environment where it is easier for real wages to increase. However, there is also the problem of the shutdown of nuclear power plants causing a sharp rise in imports of oil and LNG. The important factor now is whether commodities prices begin to decline at some point in the future in order to limit the extra cost. We suggest keeping a sharp eye on developments in this area in the future.

Growth in Real Wages and Exchange Rates
Chart 26



Source: Banks of Japan, Ministry of Internal Affairs and Communications; compiled by DIR
Note: Shaded areas indicate periods when growth rate in nominal wages exceeded that of the consumer price index.

Growth in Real Wages and Commodities Prices
Chart 27



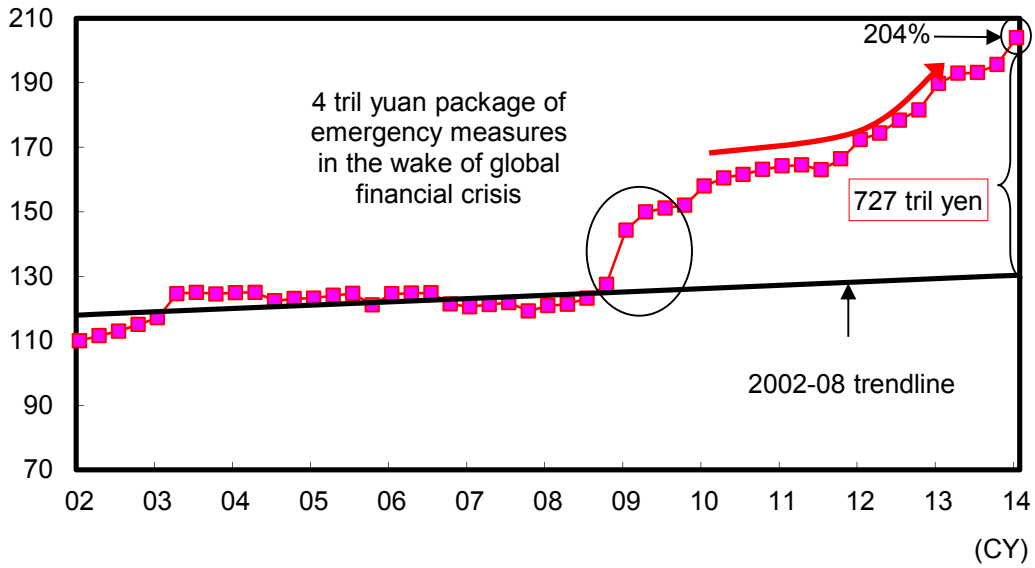
Source: Ministry of Internal Affairs and Communications, Haver Analytics; compiled by DIR
Note: Shaded areas indicate periods when growth rate in nominal wages exceeded that of the consumer price index.

3.2 Risk (2): China's shadow banking problem

The second major risk facing Japan's economy is China's shadow banking problem

Excessive lending has become a problem in China in the wake of its response to the global financial crisis in 2008. Chart 28 provides an estimate of total social financing in China as a proportion of China's GDP. Such financing jumped from its long-term trend in 2009 and has continued to expand, reaching 204% of nominal GDP at the end of March 2014. Comparing current levels to the long-term trend, we estimate excessive lending in China to be around Y727 trillion. Should part of these assets become non-performing, this could cause major turbulence in China and global financial markets. Risk scenarios that should be kept in mind include (1) China drawing down its foreign currency reserves (around $3.5 tril) to deal with non-performing debt, causing long-term interest rates to surge in the US, and (2) the yen appreciating from a global flight to quality.

China's Total Social Financing (% of GDP) **Chart 28**



Source: People's Bank of China, National Bureau of Statistics of China; compiled by DIR.
Assumption: Outstanding balance of total social financing as of end-Mar 2002 to be 1.1 times bank lending.

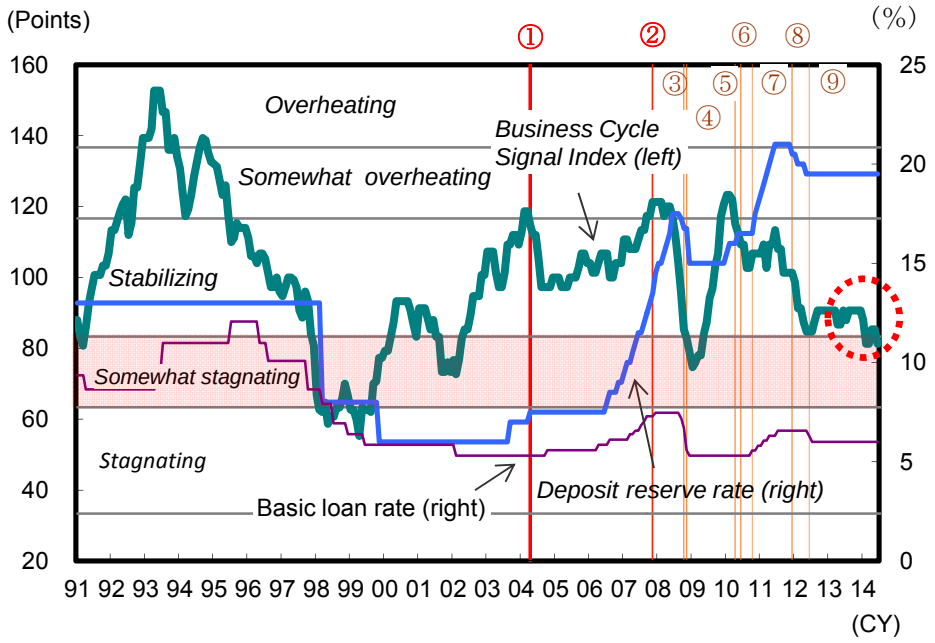
How will the world economy be affected by the collapse of China's debt bubble?

We believe that the impact on the world economy of the collapse of China's debt bubble should not be excessively overstated. Chart 29 presents the Business Cycle Signal Index for China. According to this index, we can confirm that China's economy has slowed significantly. After peaking at 123.3 in February 2010, the index has fallen to the lower bound of the zone signaling stability, between 83.33 and 116.66. Similar to previous instances when the economy has slowed to this extent, the likelihood is high that authorities will respond with some form of a stimulus measure and that the collapse of China's economy will be avoided one way or another.

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

China being a socialist market economy rather than a pure capitalist economy may also be a factor supporting the economy for the time being. During the change in political leadership that occurs once a decade, it is natural for leaders to want to circumvent a rapid deceleration of the economy as much as possible. Politically speaking, collective leadership and a policy of gradualism could also be factors that preclude a short-term relapse of the Chinese economy. In fact, there are growing views that the lower limit for the growth rate of real GDP in China is currently around 7% based on comments such as those recently made by Premier Li Keqiang.

China: Business Cycle Signal Index — Chart 29



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

3.3 Risk (3): A surge in crude oil prices stemming from geopolitical risk

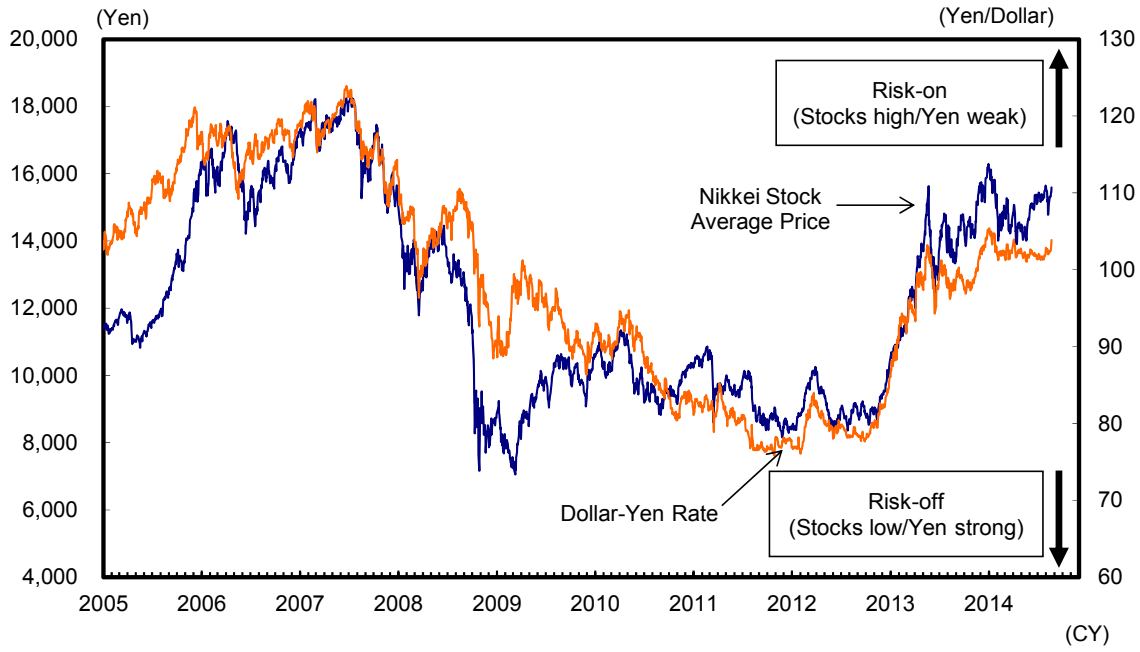
Will investors switch from risk-on to risk-off?

The third risk factor which the Japanese economy faces is geopolitical.

When the sense of caution increases in the business world due to geopolitical risk, the global financial markets tend to move away from risk-on to risk-off investment behavior. Chart 30 shows changes in the yen/dollar rate and the Nikkei stock average price over the last several years. In recent years, the yen exchange rate and the Nikkei average have exhibited a close linkage. As the global economy has begun to recover, investors have shown more willingness to take risks in their investments. This is called "risk-on" behavior. The Bank of Japan's monetary easing measures have also had an effect on investor behavior, and ever since the last part of 2012, investors have acted with a positive, risk-on behavior. The weak yen and rising stock prices have been moving in tandem since that time. In the future, caution in regard to geopolitical risk may encourage investors to switch to a risk-off approach, and the yen could strengthen again, influencing Japan's export business negatively. If this occurs, caution will also be necessary in regard to downward pressure on personal consumption due to falling stock prices.

In addition to a strong yen and falling stock prices, if a greater sense of urgency regarding the situation in the Middle East develops, there will also be the risk of surging oil prices. Over 80% of Japan's oil imports are shipped through the Strait of Hormuz. In Chapter 4 of this report, "Supplement: Alternative scenarios," we provide macro simulations on a variety of factors including this one. According to this simulation, if crude oil prices rise by $50/bbl above our standard scenario, real GDP level is forecast to shrink by 0.2% in FY2015.

Dollar-Yen Rate and Nikkei Stock Average **Chart 30**



Source: Bloomberg; compiled by DIR.

Which countries are most susceptible to geopolitical risk?

Next we examine how the economies of various countries might be affected by geopolitical risk if the Russia-Ukraine situation, as well as developments in Iraq, get any worse (see Chart 31).

First we take a look at geopolitical risk in Russia. Considering Russia's trade relations, we see that the greater share of Russia's exports are to the Netherlands, Italy, and Germany. Russia is closely linked with the EU via energy exports. The balance of credit to Russia is also significant for members of the EU such as France and Italy. As far as we can see by the above data, if geopolitical risk associated with Russia were to worsen in the near future, it is quite possible that Europe would be most susceptible to negative influence in both the financial area and in the real economy.

In contrast, if geopolitical risk in Iraq worsens, direct influence on the EU would be limited, as trade levels and credit balance are rather low. However, there is some collateral risk such as the possibility of a surge in the price of crude oil. Countries with an especially high dependence on imported oil could see economic conditions deteriorate rapidly. Hence geopolitical risk in these areas should be continually monitored.

Trade Relations with Russia and Iraq **Chart 31**

Russian Imports & Exports (2013)

Exports		Imports	
Country	Share (%)	Country	Share (%)
EU	39.4	EU	31.2
Netherlands	13.3	China	16.9
Italy	7.5	Germany	12.0
Germany	7.0	USA	5.3
China	6.8	Ukraine	5.0
Turkey	4.8	Italy	4.6
Ukraine	4.5	Belarus	4.4
Belarus	3.8	Japan	4.3
Japan	3.7	France	4.1
Poland	3.7	Korea	3.3

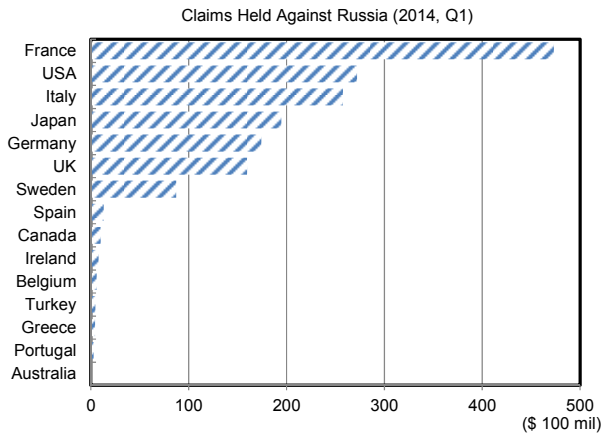
Source: Statistics from IMF; compiled by DIR.

Iraq Imports & Exports (2013)

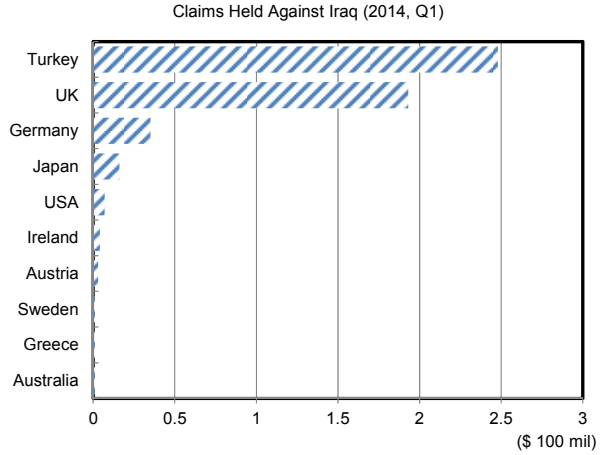
Exports		Imports	
Country	Share (%)	Country	Share (%)
India	21.6	Turkey	25.4
China	19.8	Syria	18.1
EU	15.1	China	14.7
USA	14.6	EU	11.2
Korea	10.2	USA	4.3
Greece	5.3	Korea	4.2
Italy	4.3	Germany	3.5
Canada	3.8	Italy	3.5
Singapore	3.3	Jordan	2.6
Japan	2.9	India	2.0

Source: Statistics from IMF; compiled by DIR.

Claims Held Against Russia and Iraq **Chart 31**



Source: Statistics from BIS; compiled by DIR.



Source: Statistics from BIS; compiled by DIR.

3.4 Risk (4): Tumult in emerging markets in response to the US exit strategy

The US exit strategy will be a plus for the Japanese economy

The fourth risk factor facing Japan's economy is the question of whether or not the US exit strategy will cause tumult in the emerging markets.

In this section we contemplate how the global financial markets have been evaluating the US exit strategy since 2013.

We believe that the US exit strategy will hold many beneficial points for the Japanese economy. Possibilities are good that the US long-term interest rate will rise gradually in a mirroring of the recovery in the actual economy. Chart 32 shows changes in the US long-term interest rate and TOPIX. Movements of these two indices have fairly close linkage.

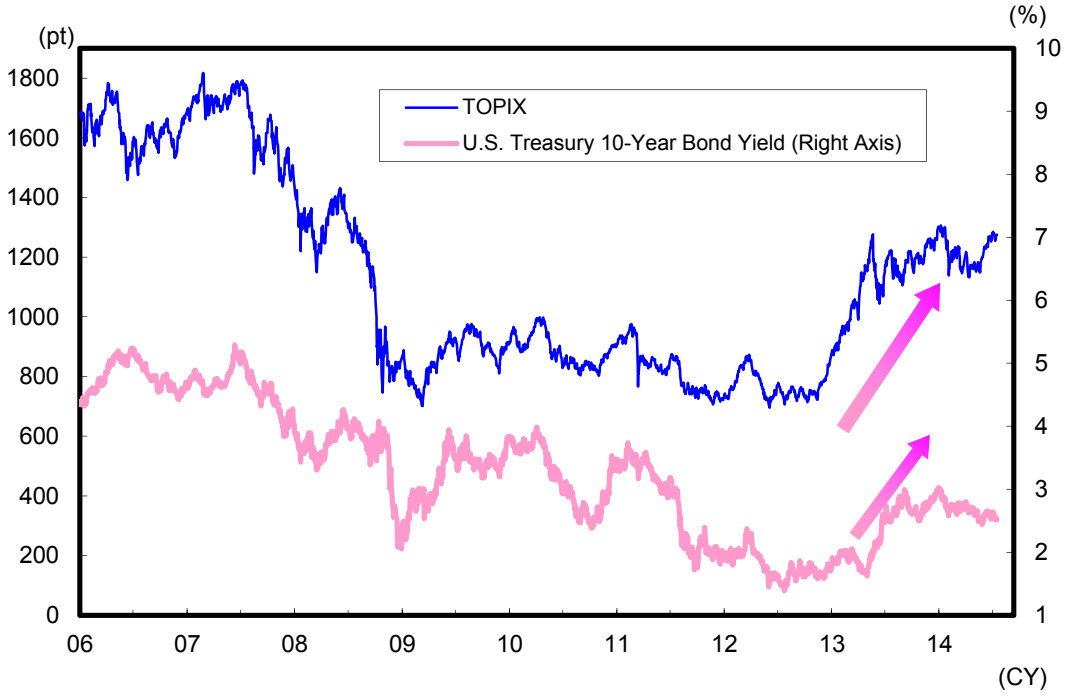
The question is why are the US long-term interest rate and Japanese stocks so closely linked?

The first reason is that the difference between US and Japan interest rates widens the more the US long-term interest rate rises, and this becomes a factor in the current weak yen/strong dollar relationship. As yen depreciation progresses, the amount of exports that Japan's corporations can achieve grows.

The second reason is that when the US long-term interest rate is tending upwards, it is usually because the US economy is strong. A favorable US economy provides fundamental support for Japan's overall exports.

Finally, if the FRB gives its official stamp to the recovery of the actual US economy, allowing for the moving ahead of a serious exit strategy, this will provide more confidence in the economy. FRB chair Janet Yellen recently announced that she would gradually move forward with an exit strategy while carefully observing the recovery in the actual economy. In conclusion, we believe that any risk of the FRB's exit strategy being too fast, hence leading to major confusion in the international markets, especially emerging nations, is extremely limited.

TOPIX and U.S. Treasury 10-Year Bond Yield **Chart 32**



Source: Tokyo Stock Exchange and FRB; compiled by DIR.

Simulation of influence US exit strategy and growth rate in domestic demand will have on world economy

In considering the future of the global economy, it is necessary to pay particular attention to the direction of the US. At this time there are a few factors causing a bit of concern, but all in all, the US economy is continuing growth with a steady undertone, focusing on domestic demand. With the turnaround of the economy, the FRB is now starting to decrease the extent of its quantitative monetary easing (i.e., tapering). Some observers report that interest rates will be raised some time in 2015.

US economic growth, which will be followed by growth in imports, will jump-start the world economy. On the other hand, the raising of US interest rates may bring pressure for a correction in global money flow, and therefore could have the effect of slowing the global economic growth rate due to the raising of interest rates and fluctuation in exchange rates in the advanced nations and emerging nations.

The question for the future will be whether, amongst all of the factors present which will influence the rest of the world, it will all come down more on the positive or the negative side. A simplified model is shown in Chart 33, which analyzes the influence which the pace of the US exit strategy and trends in US domestic demand will have on the world economy. The results of this analysis indicate that the emerging nations will be influenced by the pace of the US exit strategy, while the advanced nations will find trends in US domestic demand to be more important.

For instance, if the pace of the raising of US interest rates is moved up to the beginning of 2015 and the increase in interest rates progresses rapidly, GDP in the emerging nations will fall 0.89% below the base scenario in 2016. In comparison, the percentage of decline in the advanced nations would be only 0.09%, a rather more limited effect than in the case of the emerging nations.

Looking at the influence brought by fluctuation in US domestic demand, a slowdown of around 1.01% for the advanced nations can be assumed, while a downward swing of 0.16% can be predicted for the emerging nations. In other words, those advanced nations with a direct connection to the US will be more influenced by fluctuations in US domestic demand.

To sum up the above analysis, if the Federal Reserve takes a careful approach to its exit strategy, going at an appropriate pace in relation to the recovery of the real economy, then the world economy will also get back on the road to steady recovery.

Influence of US Exit Strategy and Growth in Domestic Demand on World Economy **Chart 33**

Deviation (%) from 2016 GDP Base Scenario		Growth Rate of US Domestic Demand					
		Slower Pace		Base Scenario		Rapid	
Pace of Exit Strategy	Gradual	Advanced Nations	-0.92	Advanced Nations	0.09	Advanced Nations	1.12
		Emerging Nations	0.72	Emerging Nations	0.89	Emerging Nations	1.06
		World	-0.39	World	0.35	World	1.10
	Base Scenario	Advanced Nations	-1.01	Base Scenario		Advanced Nations	1.03
		Emerging Nations	-0.16			Emerging Nations	0.17
		World	-0.74			World	0.75
	Rapid	Advanced Nations	-1.10	Advanced Nations	-0.09	Advanced Nations	0.93
		Emerging Nations	-1.06	Emerging Nations	-0.89	Emerging Nations	-0.72
		World	-1.09	World	-0.35	World	0.40

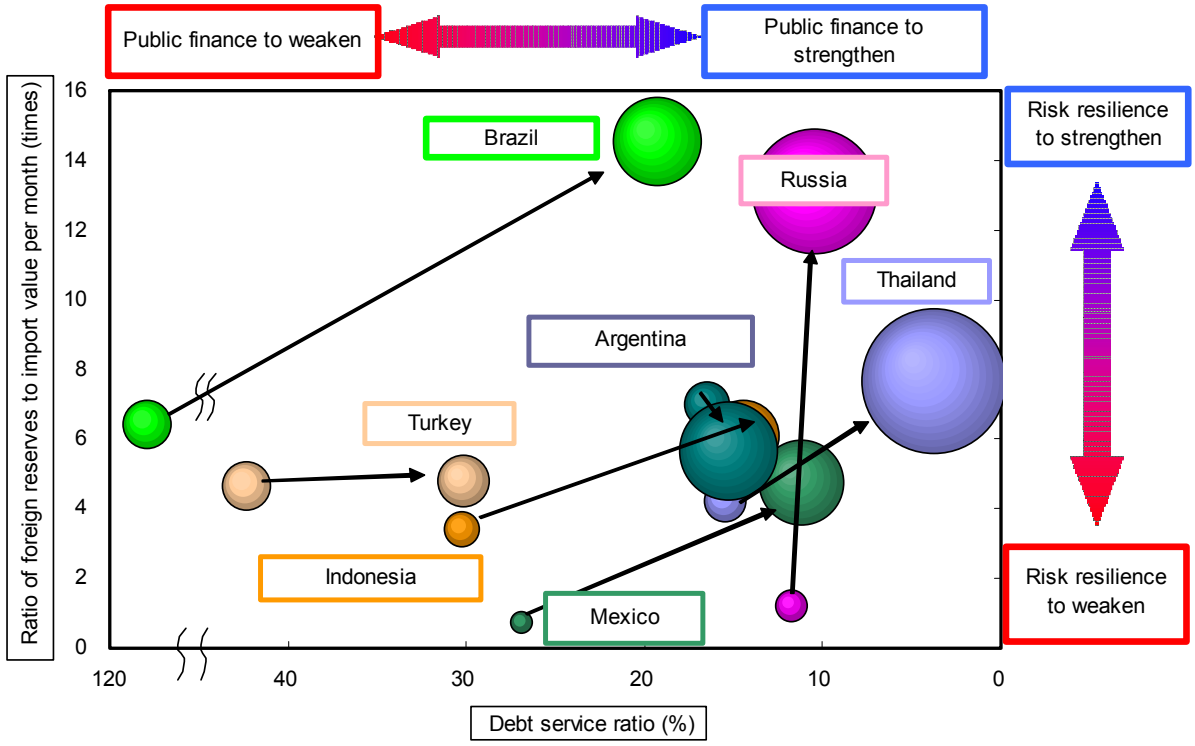
Source: Compiled by DIR.
Note: Growth rate of US domestic demand since 2014 and estimated fluctuations in term premium. The more rapidly the exit strategy progresses, the more steep the term premium's rise. Here influence of increases in term premium of the US Treasury bond on real interest of advanced nations and emerging nations was calculated, along with the influence of the growth rate in US domestic demand on world export/import volume.

Possibility of a serious crisis in emerging economies is limited

We believe there is a limited possibility that emerging economies will experience a serious crisis similar to the Asian currency crisis in 1997. Chart 34 depicts changes in risk resilience of emerging market nations from the year each nation experienced a financial crisis. Learning from past financial crises, these nations have amassed huge foreign currency reserves. Not only has the absolute size of such reserves increased, but the size of foreign currency reserves relative to goods and services imports (vertical axis) and that relative to short-term foreign debt (the sizes of circles) have also improved for most nations. Moreover, the debt service ratio, defined as debt service payments for external debt as a percentage share of good and service exports, a leading indicator used to determine country risk, has fallen for the most part (conditions have improved) since the financial crisis.

As far as we can see from this chart, the possibilities of turmoil occurring in the world financial markets after January 2014 are rather slim. The ignition point for the last crisis was Argentina, but it seems to be an exception. Looking at the emerging nations overall, we see steady improvement in the fundamentals.

Risk Resilience of Emerging Market Economies **Chart 34**



Source: Haver Analytics; compiled by DIR.
Notes: 1) Arrows denote shift of positions at critical moments to 2012.
2) Year of crises defined as 1994 for Mexico, 1997 for Thailand and Indonesia, 1998 for Russia, 1999 for Brazil, 2001 for Turkey, and 2002 for Argentina.
3) Size of circles shows ratio of foreign reserves to foreign debt with less than one-year maturity. The larger the circle, the greater the resilience.

4. Supplement: Alternative scenarios

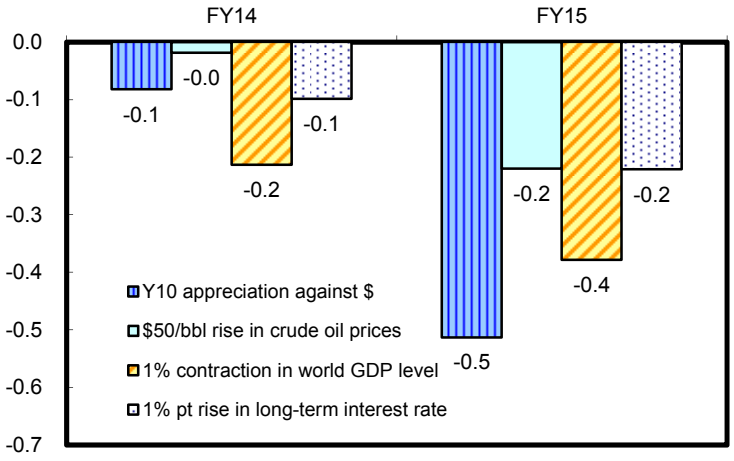
Here, we estimate likely economic effects from changes in our assumptions. The assumptions and effects of alternative scenarios are shown in the two charts below. We assumed alternative scenarios might emerge from Oct-Dec 2014.

Standard and Alternate Scenario Assumptions

	Standard scenario	Alternate scenario (in each quarter in both years)
Case 1: Forex rate	Y102.0/$ in FY14 and Y102.0/$ in FY15	Y10 appreciation against $
Case 2: Crude oil prices (WTI futures)	$100.7/bbl in FY14 and 100.0/bbl in FY15	$50/bbl rise
Case 3: World GDP	+3.3% y/y in CY14 and +3.9% y/y in CY15	1% contraction in world GDP level
Case 4: Long-term interest rate	0.61% in FY14 and 0.77% in FY15	1% pt rise

Source: Compiled by DIR.

Effects on Real GDP (% change from standard scenario) **Chart 35**



Source: Compiled by DIR.

4.1 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 level is forecast to shrink 0.1% and 0.5% in FY14 and FY15, respectively, compared to our standard scenario.

4.2 Surge in crude oil prices

If crude oil prices rise by $50/bbl above our standard scenario, real GDP level is forecast to shrink 0.0% and 0.2% in FY14 and FY15, 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.

4.3 Contraction of world GDP

If world demand (GDP) contracts by 1% from our standard scenario, Japan's real GDP level would shrink 0.2% and 0.4% in FY14 and FY15, respectively, compared to our standard scenario.

A slowdown in world demand would reduce exports from Japan, and the lower sales of the manufacturing sector would worsen corporate profits. Also, the decline of production activities in the manufacturing sector would spread to the non-manufacturing sector and would broadly undermine corporate profits. In addition to the decrease in corporate profits, capex would diminish due to a lower capacity utilization rate stemming from the waning of industrial production and due to the growing sentiment of excess capacity. Moreover, the decrease in corporate profits would place downward pressure on wages, and demand in the household sector in the form of personal consumption and housing investment would falter with a lag. Should such a situation arise, imports would also contract from the decrease in domestic demand.

4.4 Higher interest rates

If long-term interest rates rise 1 point above our standard scenario, real GDP level would contract 0.1% and 0.2% in FY14 and FY15, 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. Earned income will suffer a decline due to the slowing of investment, but this will be offset by an increase in income from property. Therefore we believe the effect on personal consumption will be minor.

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 36

	Standard Scenario		Case 1 Y10 appreciation against $				Case 2 $50/bbl rise in crude oil prices			
	FY14	FY15	FY14		FY15		FY14		FY15	
Nominal GDP (Y/y %)	2.7	2.6	2.4	(-0.3)	2.1	(-0.8)	2.6	(-0.1)	2.5	(-0.3)
Real GDP (Chained [2005]; y/y %)	**0.7**	**1.5**	**0.6**	**(-0.1)**	**1.1**	**(-0.5)**	**0.6**	**(-0.0)**	**1.3**	**(-0.2)**
GDP deflator (Y/y %)	2.1	1.1	1.9	(-0.2)	1.0	(-0.3)	1.9	(-0.1)	1.2	(-0.1)
All-industry Activity Index (Y/y %)	-1.0	2.0	-1.3	(-0.3)	1.7	(-0.6)	-1.0	(0.0)	2.0	(0.0)
Industrial Production Index (Y/y %)	1.2	6.0	0.3	(-0.9)	4.8	(-2.0)	1.2	(0.0)	5.6	(-0.4)
Tertiary Industry Activity Index (Y/y %)	-1.3	1.1	-1.5	(-0.2)	0.8	(-0.4)	-1.3	(0.1)	1.1	(0.1)
Corporate Goods Price Index (Y/y %)	4.0	1.9	3.3	(-0.7)	1.2	(-1.3)	4.5	(0.5)	2.3	(0.9)
Consumer Price Index (Y/y %)	3.3	1.9	3.2	(-0.1)	1.8	(-0.2)	3.4	(0.1)	2.0	(0.1)
Unemployment rate (%)	3.5	3.4	3.5	(-0.0)	3.4	(0.0)	3.5	(-0.0)	3.5	(0.1)
Trade balance (Y tril)	-9.4	-8.1	-8.9	(0.5)	-7.6	(0.5)	-11.0	(-1.6)	-9.8	(-1.6)
Current balance (US$100 mil)	295	592	487	(192)	616	(24)	234	(-61)	566	(-26)
Current balance (Y tril)	3.0	6.0	4.6	(1.6)	6.0	(-0.1)	2.4	(-0.6)	5.8	(-0.3)
Real GDP components (Chained [2005]; y/y %)										
Private consumption	-1.8	1.2	-1.8	(-0.0)	1.1	(-0.1)	-1.9	(-0.0)	1.2	(-0.0)
Private housing investment	-7.3	-0.9	-7.4	(-0.1)	-1.3	(-0.4)	-7.3	(0.0)	-1.3	(-0.3)
Private non-housing investment	5.3	4.9	4.9	(-0.3)	3.6	(-1.6)	5.5	(0.1)	3.5	(-1.1)
Government final consumption	0.9	1.3	0.9	(0.0)	1.4	(0.2)	0.9	(-0.0)	1.2	(-0.1)
Public fixed investment	0.0	-10.9	0.3	(0.3)	-10.6	(0.6)	-0.2	(-0.2)	-11.0	(-0.4)
Exports of goods and services	5.7	6.5	5.5	(-0.2)	5.8	(-0.9)	5.7	(-0.0)	6.1	(-0.4)
Imports of goods and services	2.1	4.0	2.0	(-0.2)	4.4	(0.1)	2.0	(-0.1)	3.3	(-0.8)

	Case 3 1% contraction of World GDP				Case 4 1% pt rise in 10-yr JGB yield				(Reference) Y5 depreciation and $50/bbl rise in crude oil prices			
	FY14		FY15		FY14		FY15		FY14		FY15	
Nominal GDP (Y/y %)	2.5	(-0.2)	2.5	(-0.4)	2.6	(-0.1)	2.5	(-0.2)	2.7	(0.0)	2.8	(0.1)
Real GDP (Chained [2005]; y/y %)	**0.5**	**(-0.2)**	**1.3**	**(-0.4)**	**0.6**	**(-0.1)**	**1.4**	**(-0.2)**	**0.7**	**(0.0)**	**1.5**	**(0.0)**
GDP deflator (Y/y %)	2.1	(-0.0)	1.1	(-0.0)	2.1	(0.0)	1.1	(0.0)	2.0	(-0.0)	1.2	(0.1)
All-industry Activity Index (Y/y %)	-1.2	(-0.1)	1.9	(-0.2)	-1.1	(-0.1)	2.0	(-0.1)	-0.9	(0.2)	2.2	(0.3)
Industrial Production Index (Y/y %)	0.5	(-0.6)	5.7	(-0.9)	1.0	(-0.2)	5.7	(-0.4)	1.6	(0.4)	6.2	(0.6)
Tertiary Industry Activity Index (Y/y %)	-1.4	(-0.0)	1.0	(-0.1)	-1.4	(-0.0)	1.0	(-0.1)	-1.2	(0.1)	1.3	(0.3)
Corporate Goods Price Index (Y/y %)	3.9	(-0.0)	1.8	(-0.1)	4.0	(0.0)	1.9	(-0.0)	4.8	(0.8)	2.6	(1.5)
Consumer Price Index (Y/y %)	3.3	(-0.0)	1.9	(-0.0)	3.3	(0.0)	1.9	(-0.0)	3.4	(0.1)	2.1	(0.3)
Unemployment rate (%)	3.5	(-0.0)	3.4	(0.0)	3.6	(0.0)	3.5	(0.0)	3.5	(-0.0)	3.5	(0.0)
Trade balance (Y tril)	-9.8	(-0.4)	-8.4	(-0.3)	-9.2	(0.2)	-7.5	(0.6)	-11.2	(-1.8)	-10.0	(-1.9)
Current balance (US$100 mil)	330	(35)	633	(41)	402	(107)	443	(-150)	138	(-156)	554	(-38)
Current balance (Y tril)	3.4	(0.4)	6.5	(0.4)	4.1	(1.1)	4.5	(-1.5)	1.6	(-1.4)	5.8	(-0.2)
Real GDP components (Chained [2005]; y/y %)												
Private consumption	-1.9	(-0.0)	1.2	(-0.1)	-1.9	(-0.0)	1.2	(-0.0)	-1.9	(-0.0)	1.3	(0.0)
Private housing investment	-7.4	(-0.0)	-1.2	(-0.3)	-7.6	(-0.3)	-1.3	(-0.7)	-7.3	(0.1)	-1.1	(-0.1)
Private non-housing investment	5.2	(-0.1)	4.4	(-0.5)	4.7	(-0.6)	3.9	(-1.6)	5.6	(0.3)	4.2	(-0.4)
Government final consumption	0.9	(0.0)	1.3	(0.0)	0.9	(0.0)	1.3	(0.0)	0.8	(-0.0)	1.1	(-0.2)
Public fixed investment	0.0	(0.0)	-10.9	(0.0)	0.0	(-0.0)	-10.9	(0.0)	-0.4	(-0.4)	-11.2	(-0.7)
Exports of goods and services	4.4	(-1.2)	6.2	(-1.6)	5.7	(-0.0)	6.5	(-0.0)	5.8	(0.1)	6.4	(0.0)
Imports of goods and services	1.9	(-0.2)	4.0	(-0.3)	2.0	(-0.2)	3.6	(-0.6)	2.1	(-0.0)	3.2	(-0.9)

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.

Quarterly Forecast Tables

1.1 Selected Economic Indicators

	2012	2013						2014	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	2012	2013	2012	2013
Nominal GDP (SAAR; Y tril)	474.2	469.9	470.8	475.9	477.4	478.8	480.2	487.7	472.6	481.4	473.8	478.1
Q/q %	-1.3	-0.9	0.2	1.1	0.3	0.3	0.3	1.6				
Q/q %, SAAR	-5.2	-3.6	0.8	4.4	1.3	1.2	1.1	6.4				
Y/y %	2.1	-0.9	-1.0	-1.0	0.7	1.9	2.0	2.9	-0.2	1.9	0.5	0.9
Real GDP (chained [2005]; SAAR; Y tril)	518.8	515.1	514.7	521.2	525.6	527.5	527.3	535.1	517.6	529.3	517.5	525.4
Q/q %	-0.5	-0.7	-0.1	1.3	0.9	0.4	-0.0	1.5				
Q/q %, SAAR	-2.2	-2.8	-0.3	5.2	3.4	1.4	-0.2	6.1				
Y/y %	3.2	-0.2	-0.3	0.1	1.2	2.3	2.5	3.0	0.7	2.3	1.5	1.5
Contribution to GDP growth (% pt)												
Domestic demand	-0.2	-0.2	0.1	0.9	0.8	0.8	0.5	1.7	1.4	2.7	2.3	1.8
Foreign demand	-0.4	-0.5	-0.1	0.4	0.1	-0.4	-0.6	-0.2	-0.8	-0.5	-0.9	-0.3
GDP deflator (y/y %)	-1.1	-0.8	-0.7	-1.0	-0.6	-0.4	-0.4	-0.1	-0.9	-0.4	-0.9	-0.6
Index of All-Industry Activity (2005=100)	96.6	96.2	96.1	96.5	97.1	97.6	97.9	99.5	96.2	98.0	96.5	97.3
Q/q %; y/y %	-0.2	-0.4	-0.0	0.4	0.6	0.5	0.3	1.6	0.2	1.9	1.2	0.8
Index of Industrial Production (2010=100)	99.1	95.9	94.1	94.6	96.1	97.8	99.6	102.5	95.8	98.9	97.8	97.0
Q/q %; y/y %	-2.1	-3.3	-1.8	0.5	1.6	1.7	1.8	3.0	-3.0	3.2	0.6	-0.8
Index of Tertiary Industry Activity (2005=100)	99.0	99.0	99.3	99.8	100.1	100.2	100.0	101.8	99.2	100.5	99.3	100.0
Q/q %; y/y %	0.0	0.0	0.3	0.5	0.4	0.0	-0.2	1.8	0.8	1.3	1.4	0.7
Corporate Goods Price Index components (2010=100)												
Domestic Company Goods Price Index	100.9	100.2	100.1	100.9	101.6	102.4	102.6	102.8	100.5	102.4	100.6	101.9
Y/y %	-1.0	-1.9	-1.0	-0.3	0.6	2.2	2.5	1.9	-1.0	1.8	-0.9	1.3
CPI (excl. fresh food; 2010=100)	99.9	99.6	99.6	99.3	99.9	100.3	100.7	100.6	99.6	100.4	99.7	100.1
Y/y %	-0.0	-0.2	-0.1	-0.3	0.0	0.7	1.1	1.3	-0.2	0.8	-0.1	0.4
Unemployment rate (%)	4.4	4.3	4.2	4.2	4.0	4.0	3.9	3.6	4.3	3.9	4.3	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; %)	0.85	0.78	0.76	0.66	0.77	0.73	0.64	0.61	0.76	0.69	0.84	0.70
Money stock; M2 (y/y %)	2.4	2.4	2.3	2.9	3.5	3.8	4.2	4.0	2.5	3.9	2.5	3.6
Trade balance (SAAR; Y tril)	-3.8	-5.3	-4.1	-7.8	-6.7	-9.3	-11.2	-15.6	-5.2	-11.0	-4.3	-8.8
Current balance (SAAR; $100 mil)	574	397	685	400	747	229	0	-536	508	83	587	331
Current balance (SAAR; Y tril)	4.6	3.1	5.6	3.7	7.4	2.3	0.0	-5.5	4.2	0.8	4.7	3.2
(% of nominal GDP)	1.0	0.7	1.2	0.8	1.5	0.5	0.0	-1.1	0.9	0.2	1.1	0.7
Exchange rate (Y/$)	80.1	78.6	81.2	92.3	98.8	98.9	100.4	102.8	83.1	100.2	79.8	97.6
(Y/Euro)	101.2	98.2	108.2	122.0	129.6	130.7	139.9	140.3	107.4	135.1	103.5	130.6

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

	2014	2015						2016	FY		CY	
	4-6	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2014 (E)	2015 (E)	2014 (E)	2015 (E)
Nominal GDP (SAAR; Y tril)	487.2	493.4	497.3	500.5	502.9	506.2	508.0	512.7	494.6	507.7	491.7	504.6
Q/q %	-0.1	1.3	0.8	0.6	0.5	0.6	0.4	0.9				
Q/q %, SAAR	-0.4	5.2	3.2	2.6	1.9	2.6	1.5	3.7				
Y/y %	1.9	3.1	3.5	2.4	3.3	2.6	2.2	2.5	2.7	2.6	2.9	2.6
Real GDP (chained [2005]; SAAR; Y tril)	525.8	531.7	535.3	538.0	539.8	543.0	538.0	541.7	532.8	540.8	532.2	539.8
Q/q %	-1.7	1.1	0.7	0.5	0.3	0.6	-0.9	0.7				
Q/q %, SAAR	-6.8	4.6	2.8	2.0	1.3	2.4	-3.7	2.8				
Y/y %	-0.1	0.9	1.5	0.4	2.7	2.1	0.5	0.8	0.7	1.5	1.3	1.4
Contribution to GDP growth (% pt)												
Domestic demand	-2.8	1.1	0.6	0.4	0.3	0.7	-1.7	0.4	0.0	1.0	1.4	1.0
Foreign demand	1.1	-0.0	0.1	0.1	0.0	-0.1	0.7	0.3	0.6	0.5	-0.1	0.4
GDP deflator (y/y %)	2.0	2.2	2.0	2.0	0.5	0.5	1.7	1.8	2.1	1.1	1.5	1.2
Index of All-Industry Activity (2005=100)	95.7	96.7	97.6	98.1	98.8	100.2	98.1	98.9	97.0	99.0	97.4	98.8
Q/q %; y/y %	-3.8	1.0	0.9	0.5	0.7	1.4	-2.2	0.9	-1.0	2.0	0.1	1.4
Index of Industrial Production (2010=100)	98.6	99.0	100.6	102.3	104.4	107.0	105.8	107.4	100.1	106.1	100.2	104.8
Q/q %; y/y %	-3.8	0.4	1.6	1.7	2.0	2.4	-1.1	1.6	1.2	6.0	3.3	4.7
Index of Tertiary Industry Activity (2005=100)	97.9	99.0	99.7	100.0	100.4	101.6	99.2	99.8	99.1	100.2	99.6	100.2
Q/q %; y/y %	-3.8	1.2	0.7	0.2	0.4	1.2	-2.4	0.7	-1.3	1.1	-0.4	0.7
Corporate Goods Price Index components (2010=100)												
Domestic Company Goods Price Index	106.1	106.3	106.5	106.8	107.1	107.4	109.4	109.8	106.4	108.4	105.4	107.7
Y/y %	4.4	3.8	3.8	3.8	1.0	1.1	2.7	2.8	4.0	1.9	3.5	2.1
CPI (excl. fresh food; 2010=100)	103.3	103.6	103.9	103.9	104.6	104.8	106.7	106.7	103.7	105.7	102.9	105.0
Y/y %	3.3	3.3	3.2	3.3	1.3	1.2	2.6	2.7	3.3	1.9	2.8	2.1
Unemployment rate (%)	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.5	3.5	3.4	3.6	3.4
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; %)	0.59	0.55	0.63	0.67	0.71	0.75	0.79	0.83	0.61	0.77	0.59	0.73
Money stock; M2 (y/y %)	3.3	3.4	3.6	3.8	3.8	4.0	4.1	4.2	3.5	4.0	3.6	3.9
Trade balance (SAAR; Y tril)	-8.7	-9.7	-9.7	-9.5	-9.7	-10.6	-6.9	-5.3	-9.4	-8.1	-10.9	-9.2
Current balance (SAAR; $100 mil)	251	254	315	360	364	280	756	970	295	592	71	440
Current balance (SAAR; Y tril)	2.6	2.6	3.2	3.7	3.7	2.9	7.7	9.9	3.0	6.0	0.7	4.5
(% of nominal GDP)	0.5	0.5	0.6	0.7	0.7	0.6	1.5	1.9	0.6	1.2	0.1	0.9
Exchange rate (Y/$)	102.1	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.2	102.0
(Y/Euro)	139.5	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.4	138.0	138.9	138.0

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)

	2012	2013						2014	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	2012	2013	2012	2013
Gross domestic expenditure	518.8	515.1	514.7	521.2	525.6	527.5	527.3	535.1	517.6	529.3	517.5	525.4
Q/q %, SAAR	-2.2	-2.8	-0.3	5.2	3.4	1.4	-0.2	6.1				
Y/y %	3.2	-0.2	-0.3	0.1	1.2	2.3	2.5	3.0	0.7	2.3	1.5	1.5
Domestic demand	509.2	508.0	508.4	512.6	516.4	520.1	522.8	531.7	509.6	523.3	508.9	517.9
Q/q %, SAAR	-0.6	-1.0	0.3	3.3	3.1	2.9	2.1	7.0				
Y/y %	3.3	1.4	0.5	0.6	1.4	2.3	2.9	4.1	1.4	2.7	2.3	1.8
Private demand	389.2	387.9	387.7	390.1	392.2	394.1	396.3	405.9	388.7	397.5	388.3	393.1
Q/q %, SAAR	0.4	-1.3	-0.2	2.5	2.2	2.0	2.2	10.1				
Y/y %	4.0	1.4	-0.0	0.5	0.8	1.5	2.2	4.5	1.4	2.3	2.4	1.2
Final consumption	308.1	306.6	308.0	311.2	313.5	314.1	315.3	321.7	308.5	316.2	307.3	313.5
Q/q %, SAAR	1.7	-1.9	1.8	4.2	3.0	0.8	1.5	8.4				
Y/y %	3.0	0.9	0.7	1.5	1.8	2.4	2.3	3.5	1.5	2.5	2.0	2.0
Residential investment	13.2	13.6	13.8	13.9	14.2	14.8	15.2	15.5	13.6	14.9	13.3	14.5
Q/q %, SAAR	17.5	11.8	4.2	3.1	8.7	20.3	10.1	8.2				
Y/y %	4.8	1.7	5.9	9.4	6.8	8.5	10.4	12.1	5.4	9.5	2.9	8.8
Non-residential investment	69.9	68.9	68.4	67.0	68.0	68.4	69.3	74.7	68.5	70.3	69.2	68.1
Q/q %, SAAR	2.3	-5.7	-2.6	-7.9	5.7	2.5	5.5	34.6				
Y/y %	8.3	3.9	-4.2	-3.4	-2.7	-0.9	1.2	11.6	0.7	2.7	3.7	-1.5
Change in inventories	-2.1	-1.2	-2.5	-2.0	-3.4	-3.2	-3.5	-5.9	-1.9	-4.0	-1.5	-3.0
Public demand	120.1	120.1	120.7	122.4	124.2	125.9	126.5	125.8	120.9	125.8	120.6	124.8
Q/q %, SAAR	-3.8	0.1	1.8	6.0	6.0	5.7	1.9	-2.3				
Y/y %	1.1	1.3	2.4	0.9	3.3	4.8	5.3	2.9	1.4	4.0	1.9	3.5
Government final consumption	99.7	100.1	100.7	101.7	102.1	102.3	102.5	102.4	100.6	102.4	100.2	102.2
Q/q %, SAAR	-2.5	1.7	2.7	3.8	1.8	0.7	0.8	-0.4				
Y/y %	1.3	1.5	2.0	1.4	2.5	2.2	1.8	0.7	1.5	1.8	1.7	2.0
Fixed investment	20.4	20.0	19.9	20.9	22.1	23.7	24.0	23.4	20.3	23.4	20.4	22.7
Q/q %, SAAR	-9.1	-8.6	-0.8	20.1	25.2	31.6	5.8	-9.8				
Y/y %	0.3	0.9	4.8	-0.8	8.1	18.9	20.8	11.6	1.3	15.1	2.9	11.3
Change in inventories	-0.0	0.0	-0.0	-0.1	-0.0	-0.0	0.0	0.0	-0.0	0.0	0.0	-0.0
Net exports of goods and services	10.4	7.6	6.5	9.0	9.8	7.9	5.3	5.7	8.4	7.2	9.1	8.0
Exports of goods and services	84.3	80.9	78.3	81.6	84.1	83.5	83.8	89.2	81.3	85.2	82.0	83.3
Q/q %, SAAR	-1.9	-15.2	-12.0	18.1	12.7	-2.8	1.2	28.6				
Y/y %	9.2	-4.9	-5.1	-3.4	-0.1	3.2	6.9	9.4	-1.3	4.8	-0.2	1.6
Imports of goods and services	73.8	73.3	71.8	72.7	74.3	75.7	78.5	83.5	72.9	78.0	72.8	75.3
Q/q %, SAAR	7.2	-3.0	-7.6	4.8	9.6	7.3	15.7	28.0				
Y/y %	9.0	4.9	0.9	0.2	0.8	3.2	9.2	15.0	3.6	7.0	5.3	3.4

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.
3) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

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

	2014	2015						2016	FY		CY	
	4-6	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2014 (E)	2015 (E)	2014 (E)	2015 (E)
Gross domestic expenditure	525.8	531.7	535.3	538.0	539.8	543.0	538.0	541.7	532.8	540.8	532.2	539.8
Q/q %, SAAR	-6.8	4.6	2.8	2.0	1.3	2.4	-3.7	2.8				
Y/y %	-0.1	0.9	1.5	0.4	2.7	2.1	0.5	0.8	0.7	1.5	1.3	1.4
Domestic demand	516.7	522.7	525.9	528.0	529.7	533.5	524.6	526.5	523.5	528.6	524.5	529.0
Q/q %, SAAR	-10.8	4.7	2.5	1.7	1.3	2.9	-6.6	1.5				
Y/y %	-0.1	0.5	0.5	-0.7	2.6	2.1	-0.4	-0.2	0.0	1.0	1.3	0.9
Private demand	390.7	395.3	398.8	401.9	404.0	408.0	399.2	401.3	396.8	403.2	397.9	403.2
Q/q %, SAAR	-14.2	4.8	3.6	3.1	2.2	4.0	-8.3	2.1				
Y/y %	-0.5	0.3	0.5	-1.1	3.4	3.2	0.0	0.0	-0.2	1.6	1.2	1.3
Final consumption	305.5	309.8	312.2	313.8	314.7	319.1	310.2	312.4	310.4	314.2	312.5	314.5
Q/q %, SAAR	-18.7	5.7	3.2	2.0	1.2	5.7	-10.7	2.8				
Y/y %	-2.5	-1.4	-1.0	-2.5	3.0	3.0	-0.7	-0.4	-1.8	1.2	-0.3	0.7
Residential investment	13.9	13.5	13.7	14.2	14.4	14.6	13.2	12.6	13.8	13.7	14.2	14.1
Q/q %, SAAR	-35.3	-9.6	4.9	15.2	7.0	4.5	-33.2	-16.8				
Y/y %	-1.9	-8.5	-9.8	-8.5	4.0	7.7	-3.7	-11.2	-7.3	-0.9	-2.5	-0.4
Non-residential investment	72.8	73.4	74.3	75.3	76.4	77.8	77.9	78.3	74.1	77.7	73.9	76.8
Q/q %, SAAR	-9.7	3.6	4.9	5.5	5.9	7.4	0.4	2.4				
Y/y %	7.1	7.5	7.3	0.8	5.0	5.9	4.7	4.1	5.3	4.9	8.5	3.9
Change in inventories	-1.5	-1.5	-1.5	-1.5	-1.6	-3.6	-2.1	-2.1	-1.5	-2.3	-2.6	-2.2
Public demand	126.0	127.4	127.0	126.2	125.7	125.5	125.3	125.2	126.7	125.4	126.6	125.8
Q/q %, SAAR	0.8	4.3	-1.1	-2.7	-1.6	-0.4	-0.6	-0.4				
Y/y %	1.3	1.1	0.3	0.2	0.0	-1.3	-1.6	-1.0	0.7	-1.0	1.4	-0.7
Government final consumption	102.8	103.0	103.4	103.7	104.0	104.3	104.7	105.0	103.3	104.6	102.9	104.2
Q/q %, SAAR	1.5	1.1	1.2	1.2	1.3	1.3	1.3	1.3				
Y/y %	0.6	0.7	0.8	1.3	1.2	1.2	1.3	1.3	0.9	1.3	0.7	1.2
Fixed investment	23.3	24.3	23.7	22.5	21.7	21.2	20.7	20.2	23.4	20.8	23.7	21.5
Q/q %, SAAR	-2.0	19.6	-10.3	-18.8	-13.9	-8.2	-9.8	-8.6				
Y/y %	5.2	2.6	-1.5	-3.7	-6.9	-12.8	-12.7	-10.2	0.0	-10.9	4.3	-9.0
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	10.0	10.0	10.4	10.9	11.0	10.4	14.3	16.2	10.3	13.0	9.0	11.7
Exports of goods and services	88.8	89.3	90.3	91.6	93.1	94.7	96.7	99.0	90.0	95.9	89.4	94.1
Q/q %, SAAR	-1.8	2.0	4.9	5.7	6.6	7.4	8.7	9.5				
Y/y %	5.5	6.9	7.8	2.6	4.8	6.1	7.1	8.1	5.7	6.5	7.4	5.2
Imports of goods and services	78.8	79.3	79.9	80.7	82.0	84.3	82.4	82.8	79.7	82.9	80.4	82.3
Q/q %, SAAR	-20.5	2.4	3.2	3.6	7.0	11.7	-8.9	2.0				
Y/y %	6.0	4.8	1.9	-3.4	4.1	6.3	3.1	2.7	2.1	4.0	6.8	2.4

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.
3) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

3.1 Nominal Gross Domestic Expenditure (Y tril)

	2012	2013						2014	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	2012	2013	2012	2013
Gross domestic expenditure	474.2	469.9	470.8	475.9	477.4	478.8	480.2	487.7	472.6	481.4	473.8	478.1
Q/q %, SAAR	-5.2	-3.6	0.8	4.4	1.3	1.2	1.1	6.4				
Y/y %	2.1	-0.9	-1.0	-1.0	0.7	1.9	2.0	2.9	-0.2	1.9	0.5	0.9
Domestic demand	483.1	480.5	481.7	486.8	488.2	493.8	498.1	507.4	483.0	497.3	483.2	491.7
Q/q %, SAAR	-3.8	-2.2	1.0	4.3	1.1	4.6	3.6	7.7				
Y/y %	2.4	0.4	-0.1	-0.2	1.0	2.7	3.4	4.7	0.6	3.0	1.6	1.8
Private demand	366.2	363.1	363.7	366.6	367.3	370.5	374.2	383.6	364.8	374.2	365.1	369.6
Q/q %, SAAR	-2.0	-3.4	0.7	3.2	0.8	3.5	4.0	10.4				
Y/y %	3.3	0.4	-0.6	-0.3	0.3	2.0	2.8	5.2	0.6	2.6	1.7	1.2
Final consumption	288.9	285.6	287.6	290.3	291.9	293.3	295.6	301.6	288.1	295.7	287.7	292.7
Q/q %, SAAR	-0.4	-4.5	2.8	3.8	2.2	1.9	3.2	8.4				
Y/y %	2.2	-0.3	-0.0	0.5	1.1	2.6	2.8	4.1	0.6	2.6	1.2	1.8
Residential investment	13.6	13.9	14.2	14.4	14.9	15.6	16.2	16.6	14.0	15.8	13.7	15.3
Q/q %, SAAR	14.1	9.4	7.3	7.6	12.2	22.2	15.1	10.9				
Y/y %	3.8	0.2	5.4	9.9	9.1	11.8	14.2	15.3	4.7	12.7	2.2	11.4
Non-residential investment	66.1	64.8	64.5	63.5	64.5	65.1	66.1	71.2	64.7	66.9	65.3	64.7
Q/q %, SAAR	2.0	-7.4	-1.9	-6.2	6.4	3.8	6.6	34.3				
Y/y %	8.2	3.2	-4.5	-3.3	-2.3	0.2	2.4	12.4	0.5	3.5	3.4	-0.9
Change in inventories	-2.4	-1.3	-2.6	-1.6	-3.9	-3.5	-3.7	-5.8	-1.9	-4.2	-1.6	-3.2
Public demand	116.9	117.4	118.0	120.3	120.9	123.3	123.9	123.9	118.1	123.1	118.0	122.1
Q/q %, SAAR	-9.2	1.6	2.1	8.0	2.2	7.9	2.2	-0.2				
Y/y %	-0.2	0.5	1.3	0.4	3.2	5.1	5.2	3.3	0.5	4.2	1.1	3.5
Government final consumption	95.9	96.8	97.4	98.7	98.0	98.5	98.5	99.0	97.1	98.5	96.9	98.4
Q/q %, SAAR	-8.5	3.7	2.6	5.6	-3.0	2.3	0.0	2.0				
Y/y %	-0.2	0.7	0.7	0.8	2.3	1.9	1.0	0.3	0.5	1.4	0.9	1.5
Fixed investment	21.1	20.6	20.6	21.7	22.9	24.8	25.4	24.8	21.0	24.6	21.1	23.7
Q/q %, SAAR	-12.0	-8.7	1.4	23.0	23.8	35.9	9.9	-8.6				
Y/y %	0.1	-0.1	4.6	-0.5	9.0	20.9	23.4	13.6	1.1	17.1	2.6	12.8
Change in inventories	0.0	0.1	-0.0	-0.2	0.0	-0.0	0.0	0.1	-0.0	0.0	0.0	-0.0
Net exports of goods and services	-8.9	-10.5	-10.9	-10.9	-10.8	-14.9	-17.9	-19.8	-10.3	-15.9	-9.4	-13.6
Exports of goods and services	71.3	68.4	67.8	74.1	78.0	78.4	79.6	83.9	70.4	80.0	69.8	77.6
Q/q %, SAAR	-2.2	-15.7	-3.4	43.1	22.3	2.5	6.2	23.0				
Y/y %	5.7	-7.6	-4.2	3.8	9.0	14.6	17.8	13.3	-0.7	13.6	-2.1	11.2
Imports of goods and services	80.2	78.9	78.6	85.0	88.7	93.3	97.5	103.6	80.8	95.9	79.2	91.2
Q/q %, SAAR	7.0	-6.6	-1.2	36.8	18.6	22.4	19.3	27.3				
Y/y %	7.2	1.2	1.5	8.2	10.3	17.9	24.5	22.1	4.5	18.7	4.7	15.2

Source: Compiled by DIR.
Notes: 1)Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

3.2 Nominal Gross Domestic Expenditure (Y tril)

	2014	2015						2016	FY		CY	
	4-6	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2014 (E)	2015 (E)	2014 (E)	2015 (E)
Gross domestic expenditure	487.2	493.4	497.3	500.5	502.9	506.2	508.0	512.7	494.6	507.7	491.7	504.6
Q/q %, SAAR	-0.4	5.2	3.2	2.6	1.9	2.6	1.5	3.7				
Y/y %	1.9	3.1	3.5	2.4	3.3	2.6	2.2	2.5	2.7	2.6	2.9	2.6
Domestic demand	500.5	507.0	510.8	513.8	516.5	521.0	518.4	521.3	508.2	519.4	506.6	517.5
Q/q %, SAAR	-5.4	5.3	3.1	2.4	2.2	3.5	-1.9	2.2				
Y/y %	2.4	2.7	2.4	1.2	3.2	2.9	1.4	1.5	2.2	2.2	3.0	2.1
Private demand	375.3	380.2	384.3	388.0	391.2	395.6	392.6	395.4	382.1	393.8	381.0	391.8
Q/q %, SAAR	-8.3	5.3	4.3	4.0	3.3	4.6	-3.0	2.9				
Y/y %	2.1	2.6	2.6	1.2	4.1	4.0	2.1	2.1	2.1	3.1	3.1	2.8
Final consumption	291.9	296.3	299.1	301.1	302.8	307.8	304.1	306.9	297.2	305.5	297.4	304.0
Q/q %, SAAR	-12.3	6.2	3.8	2.7	2.2	6.8	-4.7	3.7				
Y/y %	0.0	1.1	1.2	-0.2	3.7	3.9	1.7	2.0	0.5	2.8	1.6	2.2
Residential investment	15.3	15.0	15.2	15.8	16.1	16.3	14.9	14.2	15.3	15.4	15.5	15.8
Q/q %, SAAR	-28.2	-8.2	6.2	16.7	8.4	5.7	-31.3	-15.8				
Y/y %	2.8	-4.1	-6.2	-5.1	5.4	9.1	-2.1	-9.7	-3.4	0.5	1.4	1.6
Non-residential investment	69.9	70.7	71.7	72.9	74.1	75.7	76.1	76.8	71.4	75.8	70.9	74.6
Q/q %, SAAR	-7.0	4.5	5.9	6.7	7.2	8.8	1.8	3.9				
Y/y %	8.4	8.7	8.5	2.2	6.0	7.1	6.1	5.4	6.6	6.1	9.6	5.2
Change in inventories	-1.8	-1.8	-1.8	-1.8	-1.9	-4.3	-2.5	-2.5	-1.8	-2.8	-2.8	-2.6
Public demand	125.1	126.7	126.5	125.8	125.4	125.4	125.8	125.9	126.1	125.6	125.6	125.7
Q/q %, SAAR	4.1	5.3	-0.6	-2.5	-1.2	0.1	1.4	0.1				
Y/y %	3.3	2.8	2.1	1.5	0.5	-1.0	-0.7	-0.3	2.4	-0.4	2.9	0.0
Government final consumption	100.0	100.4	100.8	101.2	101.6	102.1	102.9	103.3	100.7	102.5	100.1	102.0
Q/q %, SAAR	4.1	1.5	1.6	1.7	1.7	1.7	3.3	1.7				
Y/y %	2.3	1.9	2.4	2.2	1.5	1.7	2.0	2.1	2.2	1.8	1.8	1.9
Fixed investment	25.1	26.3	25.7	24.5	23.7	23.3	22.9	22.5	25.4	23.1	25.5	23.7
Q/q %, SAAR	4.5	21.5	-8.8	-17.4	-12.4	-6.6	-6.7	-6.8				
Y/y %	9.2	6.1	1.2	-0.9	-5.3	-11.3	-10.8	-8.2	3.1	-9.1	7.2	-7.0
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	-13.3	-13.5	-13.5	-13.3	-13.6	-14.8	-10.4	-8.6	-13.4	-11.9	-15.1	-13.0
Exports of goods and services	83.3	83.8	84.9	86.2	87.8	89.6	91.7	94.1	84.5	90.8	83.9	88.8
Q/q %, SAAR	-2.5	2.4	5.4	6.3	7.4	8.5	9.8	10.6				
Y/y %	6.4	6.9	6.5	2.8	5.6	6.9	8.1	9.1	5.6	7.4	8.2	5.8
Imports of goods and services	96.6	97.4	98.4	99.5	101.4	104.4	102.1	102.7	97.9	102.7	99.0	101.8
Q/q %, SAAR	-24.5	3.2	4.5	4.5	7.8	12.4	-8.5	2.2				
Y/y %	8.5	4.5	0.7	-4.1	5.2	7.1	3.8	3.2	2.1	4.8	8.6	2.9

Source: Compiled by DIR.
Notes: 1)Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

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

	2012	2013						2014	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	2012	2013	2012	2013
Gross domestic expenditure	91.4	91.2	91.5	91.3	90.8	90.8	91.1	91.1	91.3	91.0	91.6	91.0
Q/q %, SAAR	-0.8	-0.2	0.3	-0.2	-0.5	-0.1	0.3	0.1				
Y/y %	-1.1	-0.8	-0.7	-1.0	-0.6	-0.4	-0.4	-0.1	-0.9	-0.4	-0.9	-0.6
Private final consumption	93.8	93.1	93.4	93.3	93.1	93.4	93.8	93.7	93.4	93.5	93.6	93.4
Q/q %, SAAR	-0.5	-0.7	0.2	-0.1	-0.2	0.3	0.4	-0.0				
Y/y %	-0.8	-1.1	-0.7	-1.0	-0.7	0.2	0.4	0.6	-0.9	0.1	-0.8	-0.3
Private residential investment	102.9	102.3	103.1	104.2	105.0	105.4	106.6	107.2	103.1	106.1	103.0	105.4
Q/q %, SAAR	-0.7	-0.5	0.7	1.1	0.8	0.4	1.1	0.6				
Y/y %	-0.9	-1.4	-0.5	0.5	2.1	3.1	3.4	2.9	-0.6	2.9	-0.8	2.3
Private non-residential investment	94.5	94.1	94.3	94.7	94.9	95.2	95.4	95.3	94.4	95.2	94.4	95.0
Q/q %, SAAR	-0.1	-0.4	0.2	0.4	0.2	0.3	0.2	-0.1				
Y/y %	-0.0	-0.6	-0.2	0.1	0.4	1.1	1.2	0.7	-0.2	0.9	-0.3	0.7
Government final consumption	96.2	96.7	96.7	97.1	95.9	96.3	96.1	96.7	96.6	96.2	96.7	96.3
Q/q %, SAAR	-1.6	0.5	-0.0	0.4	-1.2	0.4	-0.2	0.6				
Y/y %	-1.4	-0.7	-1.3	-0.6	-0.2	-0.3	-0.8	-0.4	-1.0	-0.4	-0.8	-0.5
Public fixed investment	103.0	103.0	103.5	104.1	103.9	104.7	105.7	106.0	103.5	105.2	103.4	104.7
Q/q %, SAAR	-0.8	-0.0	0.5	0.6	-0.3	0.8	1.0	0.3				
Y/y %	-0.2	-1.0	-0.3	0.3	0.9	1.7	2.1	1.8	-0.3	1.7	-0.3	1.3
Exports of goods and services	84.7	84.5	86.5	90.8	92.7	93.9	95.0	94.0	86.7	94.0	85.1	93.2
Q/q %, SAAR	-0.1	-0.1	2.4	4.9	2.1	1.3	1.2	-1.1				
Y/y %	-3.2	-2.9	1.0	7.4	9.1	11.1	10.2	3.5	0.6	8.4	-2.0	9.4
Imports of goods and services	108.7	107.7	109.5	117.0	119.4	123.4	124.3	124.1	110.8	122.9	108.7	121.1
Q/q %, SAAR	-0.1	-0.9	1.7	6.9	2.0	3.3	0.8	-0.1				
Y/y %	-1.7	-3.5	0.6	7.9	9.5	14.2	14.0	6.2	0.8	10.9	-0.5	11.4

Source: Compiled by DIR.
Notes: 1) Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

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

	2014	2015						2016	FY		CY	
	4-6	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2014 (E)	2015 (E)	2014 (E)	2015 (E)
Gross domestic expenditure	92.7	92.8	92.9	93.0	93.2	93.2	94.4	94.6	92.8	93.9	92.4	93.5
Q/q %, SAAR	1.7	0.2	0.1	0.1	0.2	0.1	1.3	0.2				
Y/y %	2.0	2.2	2.0	2.0	0.5	0.5	1.7	1.8	2.1	1.1	1.5	1.2
Private final consumption	95.6	95.7	95.8	96.0	96.2	96.5	98.0	98.2	95.7	97.2	95.2	96.7
Q/q %, SAAR	1.9	0.1	0.1	0.2	0.2	0.3	1.6	0.2				
Y/y %	2.6	2.5	2.2	2.3	0.7	0.8	2.3	2.4	2.4	1.6	1.9	1.6
Private residential investment	110.0	110.5	110.8	111.2	111.5	111.9	112.7	113.0	110.6	112.3	109.5	111.8
Q/q %, SAAR	2.6	0.4	0.3	0.3	0.3	0.3	0.7	0.3				
Y/y %	4.8	4.8	4.0	3.7	1.4	1.3	1.7	1.6	4.3	1.5	4.0	2.1
Private non-residential investment	96.1	96.2	96.5	96.7	97.0	97.3	97.7	98.0	96.4	97.6	96.0	97.2
Q/q %, SAAR	0.7	0.2	0.2	0.3	0.3	0.3	0.3	0.4				
Y/y %	1.3	1.1	1.1	1.5	1.0	1.1	1.3	1.3	1.3	1.2	1.0	1.2
Government final consumption	97.3	97.4	97.5	97.6	97.7	97.8	98.3	98.4	97.5	98.0	97.3	97.9
Q/q %, SAAR	0.6	0.1	0.1	0.1	0.1	0.1	0.5	0.1				
Y/y %	1.7	1.1	1.6	1.0	0.3	0.4	0.8	0.8	1.3	0.6	1.0	0.6
Public fixed investment	107.8	108.2	108.6	109.1	109.5	110.0	111.0	111.5	108.5	110.6	107.6	109.9
Q/q %, SAAR	1.6	0.4	0.4	0.4	0.4	0.4	0.8	0.5				
Y/y %	3.8	3.3	2.8	2.9	1.6	1.7	2.1	2.2	3.1	2.0	2.8	2.1
Exports of goods and services	93.8	93.9	94.0	94.2	94.3	94.6	94.8	95.1	93.9	94.7	93.8	94.4
Q/q %, SAAR	-0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2				
Y/y %	0.8	-0.0	-1.2	0.2	0.8	0.7	0.9	1.0	-0.1	0.8	0.7	0.6
Imports of goods and services	122.5	122.8	123.1	123.4	123.6	123.8	123.9	124.0	122.9	123.9	123.1	123.7
Q/q %, SAAR	-1.3	0.2	0.3	0.2	0.2	0.2	0.1	0.0				
Y/y %	2.4	-0.3	-1.1	-0.6	1.0	0.8	0.8	0.5	-0.0	0.8	1.7	0.4

Source: Compiled by DIR.
Notes: 1) Y/y growth rates and FY and CY figures unadjusted; other seasonally adjusted.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

5.1 Contribution to Real GDP Growth by Component

	2012			2013				2014	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	2012	2013	2012	2013
1) Q/q %												
GDP growth rate	-0.5	-0.7	-0.1	1.3	0.9	0.4	-0.0	1.5	0.7	2.3	1.5	1.5
Domestic demand	-0.2	-0.2	0.1	0.9	0.8	0.8	0.5	1.7	1.4	2.7	2.3	1.8
Private demand	0.1	-0.2	-0.1	0.5	0.4	0.4	0.4	1.9	1.1	1.7	1.9	1.0
Private consumption	0.3	-0.3	0.3	0.6	0.5	0.1	0.2	1.3	0.9	1.5	1.2	1.2
Residential investment	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.3
Private fixed investment	0.1	-0.2	-0.1	-0.3	0.2	0.1	0.2	1.1	0.1	0.4	0.5	-0.2
Change in private inventories	-0.4	0.2	-0.3	0.1	-0.3	0.0	-0.1	-0.5	-0.1	-0.5	0.1	-0.3
Public demand	-0.2	0.0	0.1	0.4	0.4	0.4	0.1	-0.2	0.4	1.0	0.5	0.9
Government final consumption	-0.1	0.1	0.1	0.2	0.1	0.0	0.0	-0.0	0.3	0.4	0.4	0.4
Public fixed investment	-0.1	-0.1	-0.0	0.2	0.3	0.3	0.1	-0.1	0.1	0.7	0.1	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	-0.4	-0.5	-0.1	0.4	0.1	-0.4	-0.6	-0.2	-0.8	-0.5	-0.9	-0.3
Exports of goods and services	-0.1	-0.6	-0.5	0.6	0.4	-0.1	0.0	1.1	-0.2	0.7	-0.0	0.2
Imports of goods and services	-0.3	0.1	0.3	-0.2	-0.4	-0.3	-0.6	-1.3	-0.6	-1.2	-0.8	-0.6
2) Y/y %												
GDP growth rate	3.2	-0.2	-0.3	0.1	1.2	2.3	2.5	3.0	0.7	2.3	1.5	1.5
Domestic demand	3.3	1.4	0.6	0.6	1.4	2.4	3.0	4.1	1.4	2.7	2.3	1.8
Private demand	3.1	1.1	0.0	0.4	0.6	1.2	1.6	3.3	1.1	1.7	1.9	1.0
Private consumption	1.9	0.5	0.4	0.9	1.1	1.5	1.4	2.1	0.9	1.5	1.2	1.2
Residential investment	0.1	0.0	0.2	0.3	0.2	0.3	0.3	0.4	0.2	0.3	0.1	0.3
Private fixed investment	1.0	0.5	-0.5	-0.5	-0.4	-0.1	0.2	1.8	0.1	0.4	0.5	-0.2
Change in private inventories	0.0	-0.0	-0.0	-0.3	-0.4	-0.4	-0.2	-0.8	-0.1	-0.5	0.1	-0.3
Public demand	0.3	0.3	0.6	0.2	0.8	1.2	1.4	0.8	0.4	1.0	0.5	0.9
Government final consumption	0.3	0.3	0.4	0.3	0.5	0.4	0.4	0.1	0.3	0.4	0.4	0.4
Public fixed investment	0.0	0.0	0.2	-0.0	0.3	0.8	1.0	0.6	0.1	0.7	0.1	0.5
Change in public inventories	-0.0	-0.0	-0.0	-0.0	0.0	-0.0	0.0	0.1	-0.0	0.0	-0.0	-0.0
Net exports of goods and services	-0.1	-1.6	-0.9	-0.5	-0.1	-0.1	-0.5	-1.3	-0.8	-0.5	-0.9	-0.3
Exports of goods and services	1.3	-0.8	-0.7	-0.5	-0.0	0.5	1.0	1.5	-0.2	0.7	-0.0	0.2
Imports of goods and services	-1.4	-0.8	-0.1	-0.0	-0.1	-0.6	-1.5	-2.8	-0.6	-1.2	-0.8	-0.6

Source: Compiled by DIR.
Notes: 1) Q/q growth rates seasonally adjusted; y/y growth rates and FY and CY figures unadjusted.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

5.2 Contribution to Real GDP Growth by Component

	2014			2015				2016	FY		CY	
	4-6	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2014 (E)	2015 (E)	2014 (E)	2015 (E)
1) Q/q %												
GDP growth rate	-1.7	1.1	0.4	0.5	0.3	0.6	-0.9	0.7	0.7	1.5	1.3	1.4
Domestic demand	-2.8	1.1	0.6	0.4	0.3	0.7	-1.7	0.4	0.0	1.0	1.4	1.0
Private demand	-2.9	0.9	0.7	0.6	0.4	0.7	-1.6	0.4	-0.1	1.2	1.0	1.2
Private consumption	-3.1	0.8	0.5	0.3	0.2	0.8	-1.6	0.4	-1.1	0.7	-0.2	0.4
Residential investment	-0.3	-0.1	0.0	0.1	0.0	0.0	-0.3	-0.1	-0.2	-0.0	-0.1	-0.0
Private fixed investment	-0.4	0.1	0.2	0.2	0.2	0.3	0.0	0.1	0.7	0.7	1.1	0.6
Change in private inventories	1.0	0.0	0.0	0.0	-0.0	-0.4	0.3	0.0	0.5	-0.2	0.1	0.1
Public demand	0.0	0.3	-0.1	-0.2	-0.1	-0.0	-0.0	-0.0	0.2	-0.2	0.4	-0.2
Government final consumption	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.3
Public fixed investment	-0.0	0.2	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	-0.5	0.2	-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	1.1	-0.0	0.1	0.1	0.0	-0.1	0.7	0.3	0.6	0.5	-0.1	0.4
Exports of goods and services	-0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.9	1.1	1.2	0.9
Imports of goods and services	1.2	-0.1	-0.1	-0.1	-0.3	-0.4	0.4	-0.1	-0.3	-0.6	-1.3	-0.5
2) Y/y %												
GDP growth rate	-0.1	0.9	1.5	0.4	2.7	2.1	0.5	0.8	0.7	1.5	1.3	1.4
Domestic demand	-0.0	0.5	0.5	-0.7	2.5	2.1	-0.4	-0.2	0.0	1.0	1.4	1.0
Private demand	-0.3	0.2	0.4	-0.8	2.5	2.4	0.0	0.0	-0.1	1.2	1.0	1.2
Private consumption	-1.5	-0.8	-0.6	-1.5	1.8	1.8	-0.4	-0.2	-1.1	0.7	-0.2	0.4
Residential investment	-0.1	-0.2	-0.3	-0.2	0.1	0.2	-0.1	-0.3	-0.2	-0.0	-0.1	-0.0
Private fixed investment	0.9	1.0	0.9	0.1	0.6	0.8	0.6	0.6	0.7	0.7	1.1	0.6
Change in private inventories	0.4	0.3	0.4	0.8	-0.0	-0.4	-0.1	-0.1	0.5	-0.2	0.1	0.1
Public demand	0.3	0.3	0.1	0.1	0.0	-0.3	-0.4	-0.3	0.2	-0.2	0.4	-0.2
Government final consumption	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.3
Public fixed investment	0.2	0.1	-0.1	-0.2	-0.2	-0.5	-0.6	-0.5	0.0	-0.5	0.2	-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	-0.2	0.4	1.0	1.0	0.2	0.1	0.7	1.0	0.6	0.5	-0.1	0.4
Exports of goods and services	0.9	1.1	1.2	0.4	0.8	1.0	1.2	1.4	0.9	1.1	1.2	0.9
Imports of goods and services	-1.1	-0.7	-0.3	0.5	-0.6	-1.0	-0.5	-0.4	-0.3	-0.6	-1.3	-0.5

Source: Compiled by DIR.
Notes: 1) Q/q growth rates seasonally adjusted; y/y growth rates and FY and CY figures unadjusted.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

6.1 Major Assumptions

	2012			2013				2014	FY		CY	
	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	2012	2013	2012	2013
1) World economy												
Economic growth of major trading partners												
Y/y %	2.8	2.8	3.6	2.6	3.0	3.2	3.5	3.2	3.1	3.2	3.2	3.1
Crude oil price (WTI futures; $/bbl)	93.4	92.2	88.2	94.4	94.2	105.8	97.6	98.6	92.0	99.1	94.1	98.0
Y/y %	-8.8	3.0	-6.2	-8.4	0.9	14.8	10.6	4.5	-5.4	7.6	-1.0	4.1
2) US economy												
Real GDP (chained [2009]; $ bil; SAAR)	15,337	15,431	15,434	15,538	15,607	15,780	15,916	15,832	15,435	15,784	15,369	15,710
Q/q %, SAAR	1.6	2.5	0.1	2.7	1.8	4.5	3.5	-2.1				
Y/y %	2.3	2.7	1.6	1.7	1.8	2.3	3.1	1.9	2.1	2.3	2.3	2.2
Consumer Price Index												
(1982-84 avg=100)	229.0	229.9	231.3	232.0	232.2	233.5	234.1	235.2	230.6	233.8	229.6	233.0
Q/q %, SAAR	1.4	1.7	2.4	1.2	0.4	2.2	1.1	1.9				
Y/y %	1.9	1.7	1.9	1.7	1.4	1.6	1.2	1.4	1.8	1.4	2.1	1.5
Producer Price Index												
(Finished goods; 1982=100)	192.8	194.7	195.9	196.3	195.8	196.9	197.5	199.3	194.9	197.4	194.2	196.6
Q/q %, SAAR	-1.4	3.9	2.5	0.9	-1.0	2.3	1.1	3.8				
Y/y %	1.1	1.5	1.7	1.5	1.5	1.2	0.8	1.5	1.4	1.3	1.9	1.2
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; %)	1.82	1.64	1.71	1.95	2.00	2.71	2.75	2.76	1.78	2.55	1.80	2.35
3) Japanese economy												
Nominal government final consumption												
Y tril; SAAR	95.9	96.8	97.4	98.7	98.0	98.5	98.5	99.0	97.1	98.5	96.9	98.4
Q/q %, SAAR	-8.5	3.7	2.6	5.6	-3.0	2.3	0.0	2.0				
Y/y %	-0.2	0.7	0.7	0.8	2.3	1.9	1.0	0.3	0.5	1.4	0.9	1.5
Nominal public fixed investment												
Y tril; SAAR	21.1	20.6	20.6	21.7	22.9	24.8	25.4	24.8	21.0	24.6	21.1	23.7
Q/q %, SAAR	-12.0	-8.7	1.4	23.0	23.8	35.9	9.9	-8.6				
Y/y %	0.1	-0.1	4.6	-0.5	9.0	20.9	23.4	13.6	1.1	17.1	2.6	12.8
Exchange rate (Y/$)	80.1	78.6	81.2	92.3	98.8	98.9	100.4	102.8	83.1	100.2	79.8	97.6
(Y/€)	101.2	98.2	108.2	122.0	129.6	130.7	139.9	140.3	107.4	135.1	103.5	130.6
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.
Notes: 1) Japanese consumption tax hike expected in October 2015.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.

6.2 Major Assumptions

	2014			2015				2016	FY		CY	
	4-6	7-9 (E)	10-12 (E)	1-3 (E)	4-6 (E)	7-9 (E)	10-12 (E)	1-3 (E)	2014 (E)	2015 (E)	2014 (E)	2015 (E)
1) World economy												
Economic growth of major trading partners												
Y/y %	3.4	3.3	3.2	3.9	3.8	3.9	3.9	3.9	3.4	3.8	3.3	3.9
Crude oil price (WTI futures; $/bbl)	103.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.7	100.0	100.4	100.0
Y/y %	9.4	-5.5	2.4	1.4	-2.9	0.0	0.0	0.0	1.7	-0.7	2.4	-0.4
2) US economy												
Real GDP (chained [2009]; $ bil; SAAR)	15,832	15,925	16,037	16,158	16,268	16,384	16,489	16,592	15,988	16,433	15,906	16,324
Q/q %, SAAR	0.0	2.4	2.8	3.1	2.8	2.9	2.6	2.5				
Y/y %	1.4	0.9	0.8	2.1	2.8	2.9	2.8	2.7	1.3	2.8	1.2	2.6
Consumer Price Index												
(1982-84 avg=100)	237.0	238.1	239.2	240.3	241.6	242.9	244.3	245.5	238.7	243.5	237.4	242.3
Q/q %, SAAR	3.0	1.9	1.8	1.9	2.1	2.2	2.3	2.0				
Y/y %	2.1	2.0	2.2	2.2	1.9	2.0	2.1	2.1	2.1	2.1	1.9	2.1
Producer Price Index												
(Finished goods; 1982=100)	201.2	202.6	203.1	204.4	205.5	206.8	208.2	209.3	202.8	207.5	201.5	206.2
Q/q %, SAAR	3.9	2.8	1.0	2.5	2.3	2.6	2.7	2.0				
Y/y %	2.8	2.9	2.9	2.5	2.1	2.1	2.5	2.4	2.8	2.3	2.5	2.3
FF rate (%)	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.75	0.25	0.75	0.25	0.50
(Target rate for the forecast period, end-period)												
Government bond yield (10 year; %)	2.62	2.65	2.83	2.89	3.11	3.26	3.43	3.64	2.75	3.36	2.72	3.17
3) Japanese economy												
Nominal government final consumption												
Y tril; SAAR	100.0	100.4	100.8	101.2	101.6	102.1	102.9	103.3	100.7	102.5	100.1	102.0
Q/q %, SAAR	4.1	1.5	1.6	1.7	1.7	1.7	3.3	1.7				
Y/y %	2.3	1.9	2.4	2.2	1.5	1.7	2.0	2.1	2.2	1.8	1.8	1.9
Nominal public fixed investment												
Y tril; SAAR	25.1	26.3	25.7	24.5	23.7	23.3	22.9	22.5	25.4	23.1	25.5	23.7
Q/q %, SAAR	4.5	21.5	-8.8	-17.4	-12.4	-6.6	-6.7	-6.8				
Y/y %	9.2	6.1	1.2	-0.9	-5.3	-11.3	-10.8	-8.2	3.1	-9.1	7.2	-7.0
Exchange rate (Y/$)	102.1	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.2	102.0
(Y/€)	139.5	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.4	138.0	138.9	138.0
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.
Notes: 1) Japanese consumption tax hike expected in October 2015.
2) Due to rounding, figures may differ from those released by the government.
E: DIR estimate.