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Japan's Economic Outlook No. 183

In this report we examine the direction of Japan's economy in light of Abe's postponement of the additional consumption tax hike: An assessment of Abenomics – the pros and cons

Japan to see real GDP growth of -0.5% in FY14 and +1.8% in FY15, with nominal GDP growth of +1.5% in FY14 and +2.5% in FY15.

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Main Points

- **PM Abe announces postponement of additional consumption tax hike:** On November 18, 2014 Japan's prime minister Shinzo Abe announced the postponement of the additional consumption tax hike, as well as plans to dissolve the lower house of the Diet and hold a general election. In light of these developments, as well as the first preliminary Jul-Sep GDP release (Cabinet Office), we have revised our economic growth outlook. We now forecast real GDP growth of -0.5% in comparison with the previous year for FY14 (+0.7% in the previous forecast) and +1.8% in comparison with the previous year for FY15 (+1.5% in the previous forecast). The postponement of the additional consumption tax hike is expected to push the FY2015 GDP growth rate up an additional +0.53%pt. However, for the time being extreme care will have to be taken regarding risks associated with the postponement of the consumption tax hike. We call these the *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market.

- **Main economic scenario for Japan:** Japan's economy is now seen as having entered a period of decline since having peaked in January 2014. However, there is a good possibility that this will have been short-term. We expect Japan's economy to gradually recover due to the following factors: (1) Continuation of the virtuous circle brought on by Abenomics, and (2) The gradual firming up of exports centering on the US.

- **The pros and cons of Abenomics:** In this report we provide a multifaceted analysis of the pros and cons of Abenomics. There is no mistaking that Abenomics has had a positive

influence on Japan's macroeconomic situation. However, while we believe that the basic direction of Abenomics is a correct one, there are several issues which remain unresolved.

- **Medium-to-long-term issues: Maintaining fiscal discipline and strengthening growth strategy (*The Third Arrow*):** The Medium-to-long-term issues facing Abenomics are (1) Maintaining fiscal discipline by making sweeping reforms to the social welfare system, and (2) Strengthening growth strategy (*The Third Arrow*) by easing bedrock regulations in the areas of agriculture, medical and nursing care, and labor. We believe the source of wage stagnation is in insufficient strength of the *Three Arrows* growth strategy, not in the income redistribution policy.

- **Short-term issues: Handling of benefits to lower income people and dealing with regional revitalization are key:** There are pros and cons to Abenomics. Abenomics has brought great benefits to export oriented companies in the manufacturing industry, as well as to large corporations and affluent populations of major metropolitan areas. However, rewards have been few for non-manufacturing industries oriented toward domestic demand, small businesses, and the lower income populations residing in rural areas and small towns. In recognition of the current state of affairs, DIR believes the most important short-term issue is the necessity of providing more to small business and the lower income population of Japan's small towns and rural areas in the form of increasing benefits for low income people and accelerating efforts toward regional revitalization.

- **BOJ's monetary policy:** Our current outlook is that the BOJ will be unable to reach its target growth rate in consumer price of 2% by the original deadline. We expect additional monetary easing measures by the BOJ to take place in the 2015 Oct-Dec period.

- **Five risk factors facing Japan's economy:** Risks factors for the Japanese economy are: (1) The *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market stemming from the postponement of the additional consumption tax hike, (2) stagnant personal consumption due to the decline in real income, (3) China's shadow banking problem, (4) tumult in the economies of emerging nations in response to the US exit strategy, and (5) a worldwide decline in stock values due to geopolitical risk.

Our assumptions

- Public works spending will grow by +4.4% in FY14, then decline by -7.2% in FY15. The additional consumption tax hike originally planned for October 2015 will not take place.

- Average exchange rate of Y109.5/$ in FY14 and Y118.0/$ in FY15.

- US real GDP growth of +2.3% in CY14 and +2.9% 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	1.5	2.5	0.9	1.9	2.2
Real GDP (chained [2005]; y/y %)	2.2	-0.5	1.8	1.5	0.4	1.2
Domestic demand (contribution, % pt)	2.7	-1.1	1.5	1.8	0.5	0.8
Foreign demand (contribution, % pt)	-0.5	0.6	0.3	-0.3	-0.1	0.3
GDP deflator (y/y %)	-0.4	2.0	0.6	-0.6	1.5	1.0
Index of All-industry Activity (y/y %)*	1.9	-1.4	2.6	0.8	-0.1	1.4
Index of Industrial Production (y/y %)	3.2	-0.8	4.5	-0.8	2.1	2.1
Index of Tertiary Industry Activity (y/y %)	1.3	-1.9	2.1	0.7	-0.8	1.0
Corporate Goods Price Index (y/y %)	1.8	3.6	1.9	1.3	3.2	2.3
Consumer Price Index (excl. fresh food; y/y %)	0.8	3.2	1.3	0.4	2.7	1.7
Unemployment rate (%)	3.9	3.6	3.5	4.0	3.6	3.5
Government bond yield (10 year; %)	0.69	0.55	0.69	0.70	0.55	0.65
Money stock; M2 (end-period; y/y %)	3.9	3.4	4.1	3.6	3.5	4.0
Balance of payments						
Trade balance (Y tril)	-11.0	-9.1	-8.2	-8.8	-10.8	-8.5
Current balance ($100 mil)	83	417	671	331	140	625
Current balance (Y tril)	0.8	4.7	7.9	3.2	1.6	7.4
(% of nominal GDP)	0.2	1.0	1.6	0.7	0.3	1.5
Real GDP components (Chained [2005]; y/y %; figures in parentheses: contribution, % pt)						
Private final consumption	2.5 (1.5)	-2.5 (-1.5)	1.8 (1.0)	2.0 (1.2)	-0.9 (-0.5)	0.7 (0.4)
Private housing investment	9.5 (0.3)	-10.8 (-0.3)	2.8 (0.1)	8.8 (0.3)	-4.5 (-0.1)	-2.3 (-0.1)
Private fixed investment	2.6 (0.4)	1.7 (0.2)	5.0 (0.7)	-1.5 (-0.2)	5.6 (0.8)	2.8 (0.4)
Government final consumption	1.8 (0.4)	0.4 (0.1)	1.2 (0.2)	2.0 (0.4)	0.3 (0.1)	1.1 (0.2)
Public fixed investment	15.0 (0.7)	1.3 (0.1)	-8.3 (-0.4)	11.3 (0.5)	4.5 (0.2)	-5.1 (-0.3)
Exports of goods and services	4.8 (0.7)	6.0 (1.0)	4.7 (0.8)	1.6 (0.2)	7.7 (1.2)	4.1 (0.7)
Imports of goods and services	7.0 (-1.2)	2.4 (-0.3)	3.6 (-0.5)	3.4 (-0.6)	6.9 (-1.3)	1.8 (-0.4)
Major assumptions:						
1. World economy						
Economic growth of major trading partners	3.2	3.4	3.7	3.1	3.3	3.7
Crude oil price (WTI futures; $/bbl)	99.1	90.1	80.0	98.0	94.7	80.0
2. US economy						
US real GDP (chained [2009]; y/y %)	2.3	2.6	2.7	2.2	2.3	2.9
US Consumer Price Index (y/y %)	1.4	1.8	1.6	1.5	1.7	1.6
3. Japanese economy						
Nominal public fixed investment (y/y %)	17.1	4.4	-7.2	12.8	7.6	-3.7
Exchange rate (Y/$)	100.2	109.5	118.0	97.6	105.7	118.0
(Y/€)	135.1	142.3	148.0	130.6	140.4	148.0
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 183)		Previous outlook (Outlook 182 Update)		Difference between previous and current outlooks	
	FY14	FY15	FY14	FY15	FY14	FY15
Main economic indicators						
Nominal GDP (y/y %)	1.5	2.5	2.8	2.8	-1.3	-0.3
Real GDP (chained [2005]; y/y %)	-0.5	1.8	0.7	1.5	-1.2	0.3
Domestic demand (contribution, % pt)	-1.1	1.5	-0.0	1.0	-1.1	0.5
Foreign demand (contribution, % pt)	0.6	0.3	0.6	0.5	0.0	-0.3
GDP deflator (y/y %)	2.0	0.6	2.1	1.2	-0.1	-0.6
Index of All-industry Activity (y/y %)*	-1.4	2.6	-0.6	2.0	-0.8	0.5
Index of Industrial Production (y/y %)	-0.8	4.5	1.2	6.0	-2.0	-1.4
Index of Tertiary Industry Activity (y/y %)	-1.9	2.1	-1.3	1.1	-0.5	1.0
Corporate Goods Price Index (y/y %)	3.6	1.9	4.0	1.9	-0.3	-0.0
Consumer Price Index (excl. fresh food; y/y %)	3.2	1.3	3.3	1.9	-0.1	-0.6
Unemployment rate (%)	3.6	3.5	3.6	3.4	0.0	0.1
Government bond yield (10 year; %)	0.55	0.69	0.61	0.77	-0.06	-0.08
Money stock; M2 (end-period; y/y %)	3.4	4.1	3.5	4.0	-0.1	0.1
Balance of payments						
Trade balance (Y tril)	-9.1	-8.2	-9.3	-7.9	0.3	-0.3
Current balance ($100 mil)	417	671	295	595	121	76
Current balance (Y tril)	4.7	7.9	3.1	6.3	1.6	1.7
(% of nominal GDP)	1.0	1.6	0.6	1.2	0.3	0.4
Real GDP components (chained [2005]; y/y %)						
Private final consumption	-2.5	1.8	-1.8	1.3	-0.7	0.5
Private housing investment	-10.8	2.8	-7.3	-0.9	-3.5	3.7
Private fixed investment	1.7	5.0	2.9	5.0	-1.3	-0.0
Government final consumption	0.4	1.2	0.5	1.3	-0.2	-0.0
Public fixed investment	1.3	-8.3	-0.0	-10.9	1.3	2.6
Exports of goods and services	6.0	4.7	5.7	6.7	0.3	-2.0
Imports of goods and services	2.4	3.6	2.1	4.0	0.3	-0.5
Major assumptions:						
1. World economy						
Economic growth of major trading partners	3.4	3.7	3.3	3.9	0.0	-0.2
Crude oil price (WTI futures; $/bbl)	90.1	80.0	100.7	100.0	-10.7	-20.0
2. US economy						
US real GDP (chained [2009]; y/y %)	2.6	2.7	2.4	2.8	0.3	-0.1
US Consumer Price Index (y/y %)	1.8	1.6	2.1	2.1	-0.3	-0.4
3. Japanese economy						
Nominal public fixed investment (y/y %)	4.4	-7.2	3.1	-9.2	1.3	2.0
Exchange rate (Y/$)	109.5	118.0	103.8	105.0	5.7	13.0
(Y/€)	142.3	148.0	136.7	135.0	5.7	13.0
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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PM Abe announces postponement of additional consumption tax hike

On November 18, 2014 Japan's prime minister Shinzo Abe announced the postponement of the additional consumption tax hike, as well as plans to dissolve the lower house of the Diet and hold a general election. In light of these developments, as well as the first preliminary Jul-Sep GDP release (Cabinet Office), we have revised our economic growth outlook. We now forecast real GDP growth of -0.5% in comparison with the previous year for FY14 (+0.7% in the previous forecast) and +1.8% in comparison with the previous year for FY15 (+1.5% in the previous forecast). The postponement of the additional consumption tax hike is expected to push the FY2015 GDP growth rate up an additional +0.53%pt. However, for the time being extreme care will have to be taken regarding risks associated with the postponement of the consumption tax hike. We call these the *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market.

Main economic scenario for Japan

Japan's economy is now seen as having entered a period of decline since peaking in January 2014. However, there is a good possibility that this will have been short-term. We expect Japan's economy to gradually recover due to the following factors: (1) Continuation of the virtuous circle brought on by Abenomics, and (2) The gradual firming up of exports centering on the US.

Real GDP growth rate for the 2014 Jul-Sep period experiences negative growth for the second consecutive quarter at -1.6% q/q annualized (-0.4% q/q)

The real GDP growth rate for Jul-Sep 2014 (1st preliminary est) declined by -1.6% q/q annualized (-0.4% q/q), recording negative growth for the second consecutive period. Not only did performance fall below market consensus (+2.2% q/q annualized and +0.5% q/q), it fell below the lower level of the forecast, recording minus growth completely outside expectations. Factors behind the major decline in real GDP include anemic growth in personal consumption and a decline in capex despite previous expectations of growth. Private sector inventories also contributed to the major decline.

Trends by demand component: comeback in personal consumption weak, capex falls below expectations

Performance by demand component shows personal consumption up +0.4% q/q, the first time it has recorded growth in two quarters. Considering the major drop experienced during the Apr-Jun period due to reactionary decline, growth in the Jul-Sep period was slight, a sign that recovery is lagging. A comeback was seen in some areas, including semi-durables (+3.5% q/q) and non-durables (+2.0% q/q), but improvements were slight considering the steep declines both of these areas suffered in the previous period. Meanwhile, in addition to the lagging recovery in the area of services (-0.0% q/q), durables continued their downward spiral (-4.5%) after having experienced major declines last period, thereby helping to push overall figures downward.

Housing investment declined for the second consecutive quarter at -6.7% q/q, while personal consumption showed some signs of a comeback, however slight, after the reactionary decline experienced in the previous quarter. Housing investment continued its downward spiral after the reactionary decline experienced in the previous period. New housing starts showed signs of bottoming out early on in the Jul-Sep period, but housing investment still reported a continued decline on a GDP basis, which is reported on an accrual basis.

Capex fell by -0.2% in comparison with the previous quarter representing its second consecutive period of declines. The coincident index for capex, shipments of capital goods, showed signs of a comeback early on in the Jul-Sep period, hence opinions were that a shift into a growth period was

coming up in the future. Instead, there was minus growth completely outside expectations. Until now production has continued to stagnate, and declining operating rates, along with the deteriorating earnings environment, have put the brakes on capex.

Public investment was up by +2.2% q/q, the second consecutive quarter of growth. As the effects of past budgetary measures fall away, public investment begins to slow down as it did during last term. However, front-loading the FY2013 supplementary budget and the FY2014 budget has brought public investment back up to past levels.

Exports grew for the first time in two quarters at +1.3% q/q. While exports to the US and EU have been slow, Asia has been growing, thereby pushing overall figures up. Imports also moved into a growth trend due to the comeback in domestic demand, winning +0.8% q/q. The extent of contribution from overseas demand (net exports) grew only slightly at +0.1%pt q/q.

The GDP deflator declined for the first time in two quarters at -0.3% q/q. The domestic demand deflator grew for the fifth consecutive quarter at +0.1% q/q, but the GDP deflator was pushed down somewhat by the import deflator (a deduction item), which experienced major growth at +3.5% q/q. The GDP deflator declined for the second consecutive quarter at +2.1% y/y, though its growth rate was higher than last period. Meanwhile, nominal GDP declined for the second quarter in a row at -3.0% q/q annualized (-0.8% q/q).

Japan's economy to achieve a gradual comeback in the future

Results for the period showed minus growth outside previous expectations and confirmed that the Japanese economy is experiencing stagnation. However, moderate growth is expected to continue during the Oct-Dec period and beyond.

As can be seen in the improvements in real employee compensation during the Jul-Sep period (+0.7% q/q), conditions influencing households, including employment and income, reflect a steady undertone. Although recovery in personal consumption has been lagging since the reactionary decline earlier this fiscal year, a comeback is seen in the near future. As for the Oct-Dec period, chances are good that growth in private consumption will be achieved for the second consecutive quarter due to upward pressure from monthly carryover (carryover as seen in the aggregate index for consumption will give a push of +0.5%). Meanwhile, housing investment, which has continued to suffer from the effects of the reactionary decline, is expected to move steadily toward recovery now that housing starts, a leading indicator, appear to be making a comeback. As for capex, a recovery is expected which will bring activity back to a growth trend. In addition to continued improvement in machinery orders, another leading indicator, the BOJ Tankan indicates that capex activities are reflecting a steady undertone. Operating rates remain at a low level in the manufacturing industries and hence there is still some hesitance regarding increases in capacity, but underlying strength is expected to continue centering on replacement investment. As for exports, moderate growth is seen as overseas economies gradually recover. However, there has been an increasing sense recently that overseas economies are slowing down, so there is increasing risk that recovery may experience a slowdown. This situation will require close monitoring. Slowdowns are already being seen in both the EU economy and in the emerging economies of Asia centering on China. Possibilities are high that exports to these regions will continue to be sluggish for some time. However, the US continues to experience a steady recovery, and overall, exports are not expected to lose momentum.

The pros and cons of Abenomics

In this report we provide a multifaceted analysis of the pros and cons of Abenomics. There is no mistaking that Abenomics has had a positive influence on Japan's macroeconomic situation. However,

while we believe that the basic direction of Abenomics is a correct one, there are several issues which remain unresolved.

Medium-to-long-term issues: Maintaining fiscal discipline and strengthening growth strategy (*The Third Arrow*)

The Medium-to-long-term issues facing Abenomics are (1) Maintaining fiscal discipline by making sweeping reforms to the social welfare system, and (2) Strengthening growth strategy (*The Third Arrow*) by easing bedrock regulations in the areas of agriculture, medical and nursing care, and labor. We believe the source of wage stagnation is in insufficient strength of the *Three Arrows* growth strategy, not in the income redistribution policy.

Short-term issues: Handling of benefits to lower income people and dealing with regional revitalization are key

There are pros and cons to Abenomics. Abenomics has brought great benefits to export oriented companies in the manufacturing industry, as well as to large corporations and affluent populations of major metropolitan areas. However, rewards have been limited for non-manufacturing industries oriented toward domestic demand, small businesses, and the lower income populations residing in rural areas and small towns. In recognition of the current state of affairs, DIR believes the most important short-term issue is the necessity of providing more to small business and the lower income population of Japan's small towns and rural areas in the form of increasing benefits for low income people and accelerating efforts toward regional revitalization.

BOJ's monetary policy

Our current outlook is that the BOJ will be unable to reach its target growth rate in consumer price of 2% by the original deadline. We expect additional monetary easing measures by the BOJ to take place in the 2015 Oct-Dec period.

Five risk factors facing Japan's economy

Risks factors for the Japanese economy are: (1) The *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market stemming from the postponement of the additional consumption tax hike, (2) stagnant personal consumption due to the decline in real income, (3) China's shadow banking problem, (4) tumult in the economies of emerging nations in response to the US exit strategy, and (5) a worldwide decline in stock values due to geopolitical risk.

1. Abe announces postponement of additional consumption tax hike

PM Abe announces postponement of additional consumption tax hike and plans to dissolve lower house of the Diet

On November 18, 2014 Japan's Prime minister Shinzo Abe announced the postponement of the additional consumption tax hike, as well as plans to dissolve the lower house of the Diet and hold a general election.

In a recognition of the slow pace of recovery in personal consumption to date as well as the failure of Japan's economy to get back on a growth track, Prime minister Shinzo Abe postponed the increase of the consumption tax to 10% originally planned for October 2015 as designated by law for a period of eighteen months, delaying implementation until April 2017. At the same time he vowed that, in order to maintain fiscal confidence at the international level and to keep Japan's social welfare rock solid, he would eliminate the economic conditions clause in April 2017 and implement the consumption tax hike without fail. In addition, the Prime Minister declared that he would dissolve the lower house of the Diet on November 21, 2014 and hold a general election and put it to the people to decide on whether this policy decision was right or wrong.

Postponement of consumption tax hike will push FY2015 GDP growth rate up +0.53%pt

In light of the postponement of the additional consumption tax hike, as well as the first preliminary Jul-Sep GDP release (Cabinet Office), we have revised our economic growth outlook. We now forecast real GDP growth of -0.5% in comparison with the previous year for FY14 (+0.7% in the previous forecast) and +1.8% in comparison with the previous year for FY15 (+1.5% in the previous forecast).

The postponement of the additional consumption tax hike is expected to push the FY2015 GDP growth rate up an additional +0.53%pt. However, for the time being extreme care will have to be taken regarding risks associated with the postponement of the consumption tax hike. We call these the *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market.

Influence of consumption tax hike postponement on the economy

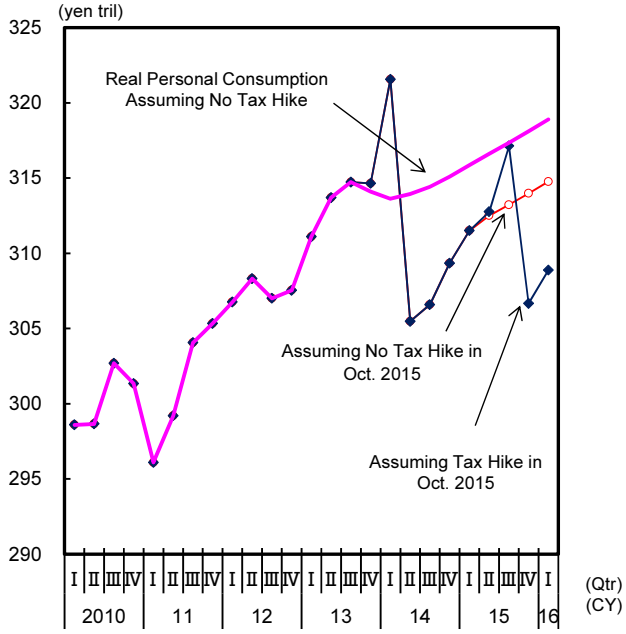
When the consumption tax is increased this tends to trigger the occurrence of last minute demand, meaning that a spike in personal consumption and housing investment tends to occur just before implementation of the tax hike. On the other hand, a reactionary decline in demand also tends to occur after a tax hike, while at the same time the rise in prices erodes real income, thereby bringing downward pressure on demand. The decline in real income is permanent, so when an increase in the consumption tax is carried out, real personal consumption and real GDP continue their downward swing in comparison to what they would be if an increase in the consumption tax had not occurred.

Chart 1 illustrates the effects of an increase in consumption tax on the economy. Estimates were obtained with the use of a macro model produced by DIR. According to our estimates, by postponing the consumption tax hike which was to have been implemented in October 2015 (an increase from 8% to 10%) till April 2017, the FY 2015 real GDP was increased by around 2.8 tril yen, an increase in real GDP growth rate by 0.53%pt. If the October 2015 consumption tax hike had actually been implemented, first there would be last minute demand followed by a reactionary decline in demand, and since these would occur within the same fiscal year, the influence on GDP on a fiscal year basis would be minor. As recovery in personal consumption after the April 2014 increase in consumption tax has been slow, the downswing in personal consumption in FY 2015 (by about 2.3 tril yen), caused mainly by the decrease in real income, has brought downward pressure on real GDP.

When the effects of the increase in consumption tax implemented in April 2014 are calculated using the same method, results show that Fiscal 2013 personal consumption was given a boost by last minute demand prior to the implementation of the tax hike to the tune of around 2.1 tril yen, bringing overall real GDP to a high of 2.6 tril yen. When the consumption tax was raised in 1997, personal consumption due to last minute demand is said to have been valued at around 2 tril yen, meaning that the more recent tax hike topped 1997 last minute demand only slightly. Real personal consumption in Fiscal 2014 was pushed down by 5.4 tril yen, while personal consumption was decreased by 6.6 tril yen. The Fiscal 2014 real GDP growth rate is expected to be down by about 1.5%pt in comparison to what it would have been if there had not been an increase in the consumption tax[1].

Effects on the Economy of the April 2014 Consumption Tax Increase and Postponing the October 2015 Consumption Tax Increase — Chart 1

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 and in October 2015, 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 Postponing Oct. 2015 Consumption Tax Hike (8%→10%)

Amount (yen tril)			
	FY2013	FY2014	FY2015
Real GDP	—	—	2.8
Private Sector Final Consumption Expenditure	—	—	2.3
Effect on Real GDP Growth Rate (%pt)			
	FY2013	FY2014	FY2015
Real GDP	—	—	0.53
Private Sector Final Consumption Expenditure	—	—	0.43

Effects of Raising Consumption Tax in Apr. 2014 (5%→8%)

Amount (yen tril)			
	FY2013	FY2014	FY2015
Real GDP	2.6	-5.4	-2.8
Private Sector Final Consumption Expenditure	2.1	-6.6	-4.1
Effect on Real GDP Growth Rate (%pt)			
	FY2013	FY2014	FY2015
Real GDP	0.50	-1.51	0.49
Private Sector Final Consumption Expenditure	0.41	-1.65	0.48

Source: Cabinet Office; Compiled by DIR.

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

[1] The reason real GDP declines by a smaller amount than personal consumption is because stagnant domestic demand causes imports, which are deducted from the GDP calculation, to decline.

2. Main Economic Scenario for Japan

Main economic scenario for Japan

In this report we examine Japan's future economic scenario in light of recent economic trends. We expect Japan's economy to gradually recover due to the following factors: (1) Continuation of the virtuous circle brought on by Abenomics, and (2) The gradual firming up of exports centering on the US.

Is the short-term economic downturn finished?

Japan's economy is now seen as having entered a period of decline since peaking in January 2014. However, there is a good possibility that this will have been short-term.

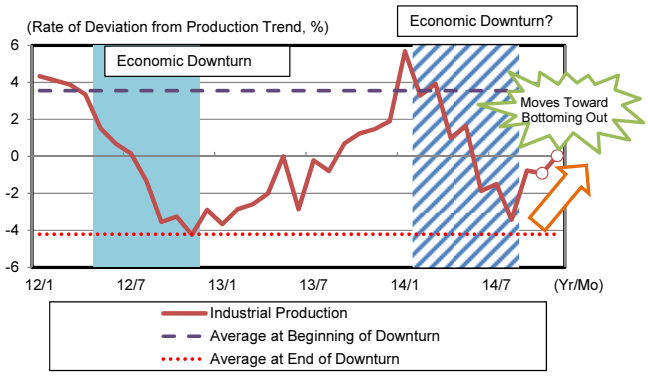
Chart 2 illustrates fluctuations in the deviation rate in comparison to trends in the industrial production index. When we examine the past relationship between the industrial production index and economic downturns we see that when the deviation rate in the industrial production index reaches +4%, the economy enters a downturn, and when it drops to -4% it breaks out of the downturn. When we take into consideration the fact that the rate of deviation from the industrial production index which was in a downturn since its peak in January 2014 was at a considerable high at that time, we can deduce that January 2014 was most likely the peak of the business cycle. However, the industrial production index rebounded in September, and according to METI's production forecast survey, production plans are moving toward a gradual comeback. Though care must be taken regarding the fact that there was a strong tendency for production plans to be revised downwards recently, production overall is expected to gradually expand in the future. It is already possible as of this point to come to the conclusion that the economic downturn has ended.

Build-up in inventories need not be viewed pessimistically

Next we consider the effects of inventory investment on production in consideration of the build-up in inventories as shown in the Apr-Jun 2014 period GDP statistics. Chart 3 illustrates the relationship between the inventory rate and production. Demand was especially weak for durables after the increase in the consumption tax rate. The inventory rate for transport equipment rose dramatically during this time (see the horizontal axis in Chart 3) and was in danger of causing major downward pressure on production. However, the negative correlation between the inventory rate for transport equipment and production is not an especially large one (see the vertical axis in Chart 3). For this reason, the downward pressure of inventory increase on production need not be viewed with excessive pessimism.

Rate of Deviation from Industrial Production Trend

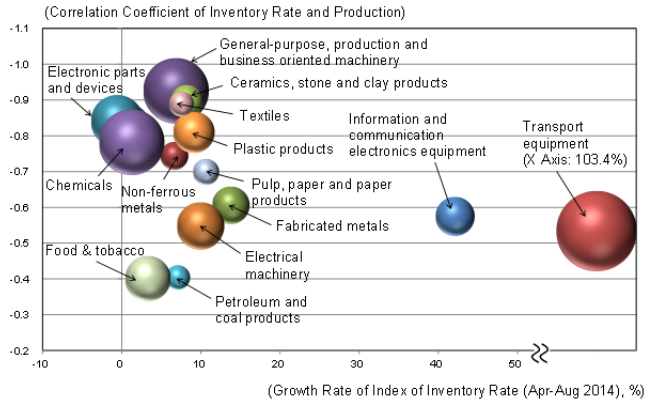
Chart 2



Source: Ministry of Economy, Trade and Industry; compiled by DIR.
Notes: 1) Trends calculated using HP filter.
2) Blank (uncolored) areas represent outlook according to METI's production forecast survey.
3) Averages at beginning and end of downturns taken from samples since 1980.

Correlation Between Inventory Rate and Production

Chart 3



Source: Ministry of Economy, Trade and Industry; compiled by DIR.
Notes: 1) Correlation coefficient calculated after removing trend found using HP filter. Period is from 2008 on.
2) Size of circles illustrates production weight.

Employment and income environments improving

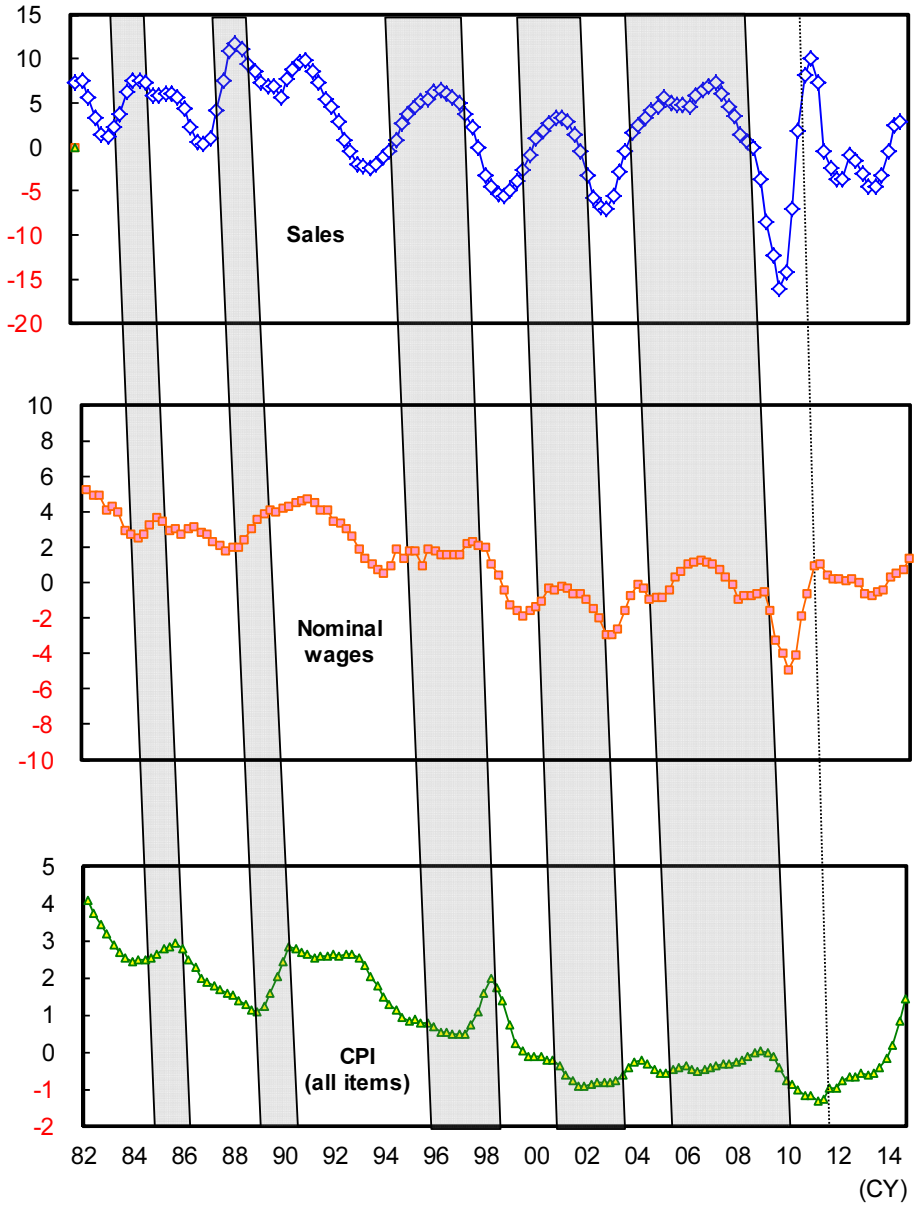
Japan's economy is expected to be supported by the virtuous circle brought on by Abenomics.

Criticisms have been voiced by the opposition parties and the mass media claiming that employee compensation has failed to increase despite the progress of inflation, and that Abenomics will only cause the people more pain. However, as is shown in Chart 4, historical data reveals that there is a recurring economic cycle in Japan moving from sales growth to wage growth and then to price increases. In other words, wage hikes in Japan tend to occur six months to a year after growth in sales, and then another six months later the consumer price index tends to rise.

With this in mind we can see that the BOJ's monetary easing policy and the government's pro-business policy have been designed to encourage growth in sales. In this sense, the basic thinking behind Abenomics is right on target in understanding that the starting point for shaking off deflation is to induce sales growth.

In actual fact, the corporate sector has been favorable recently, and as the employment and income environment improves, the personal sector is gradually improving also. The wage increase rate after the 2014 annual spring labor offensive was 2.1%, the highest it has been for the past fifteen years. Hence, looking at the big picture, we can see that the first buds of the virtuous circle as envisioned by Abenomics (production → income → consumption) have already sprouted.

Sales, Wages, and Prices (y/y %) **Chart 4**



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.

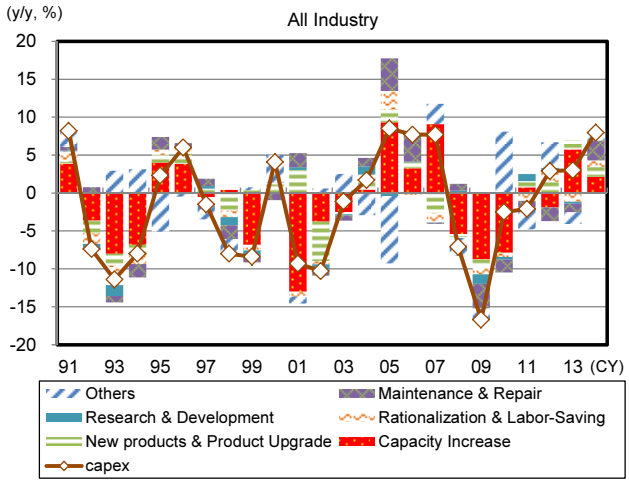
Investment in capacity increase determines trend in capex

Finally, we end this chapter with an examination of the trend in capex.

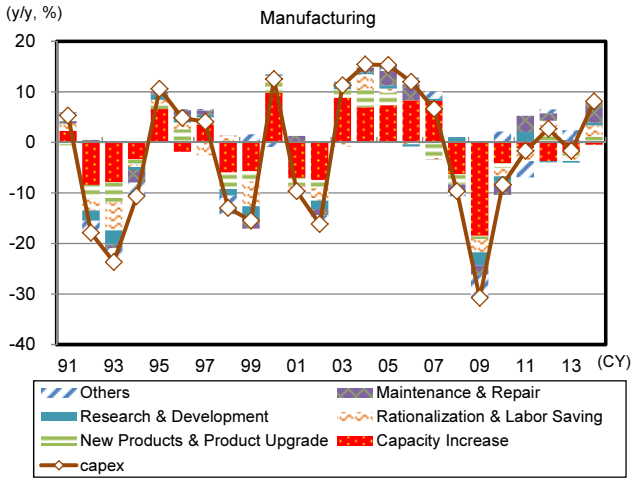
Chart 5 shows the trend in capex by motive of investment. Capex has great influence on the business cycle and the data exhibited in this chart indicates that, of the various motives for investment, it is investment in capacity increase that determines the trend in capex. Both FY2013 performance and the FY2014 outlook show that growth in investment in capacity increase was the major factor in pushing up overall capex figures. Whether or not investment in capacity increase continues to grow in the future is a major question that will determine whether capex will continue its growth trend.
As for performance by industry, FY2013 and FY2014 saw growth in investment in capacity increase in the non-manufacturing industries, while decline in investment in capacity continued in the manufacturing industries. Investment in capacity increase has been in a downward trend for the

manufacturing industries ever since the US financial crisis and has been causing a drag on capex spending overall. The key to the future of capex is therefore in the capacity increase trend in the manufacturing industry.

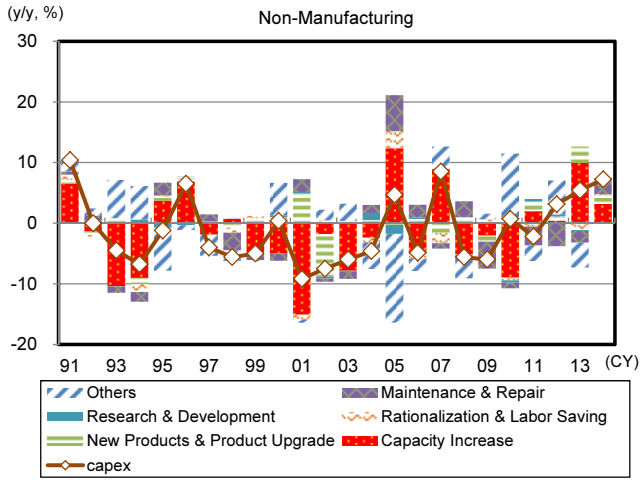
Capex Breakdown by Industry and Motive of Investment **Chart 5**



Source: Development Bank of Japan; compiled by DIR.



Source: Development Bank of Japan; compiled by DIR.



Source: Development Bank of Japan; compiled by DIR.

Sense of overcapacity gradually dissipating; modest growth seen for investment in capacity increase

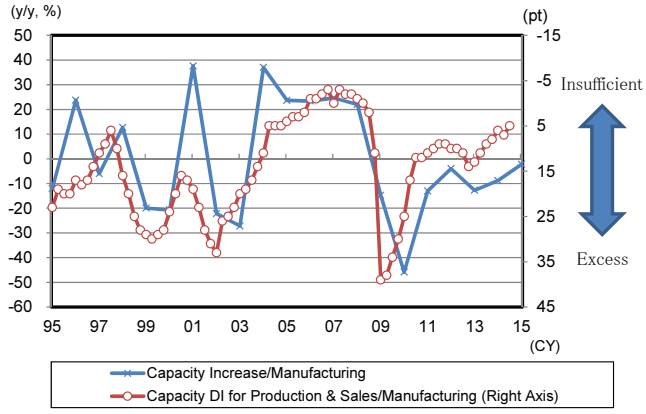
Chart 6 shows capacity DI for production and sales according to the BOJ Tankan, as well as the trend in investment in capacity increase. Capacity DI and investment in capacity are basically linked in both the manufacturing and non-manufacturing industries, and data confirms that there is now a trend toward a stronger sense that capex is deficient, and this should encourage more investment in capacity increase.

As for the manufacturing industry, there is still a lingering sense of excess capex, but this is gradually moving toward resolution. Capex is seen as being at a temporary standstill due to sluggish operating rates in response to the recent downturn in the economy. However, chances are good that capacity increase investment will move into a growth phase in the future supported by the dissipating sense of excess capex. The weak domestic demand which occurred after the raising of the consumption tax in April has pushed down business performance in the non-manufacturing industries this year, so there is still a possibility that this area may be bit on the passive side, but even in the non-manufacturing industries the sense of deficient capex is gaining strength, and this is expected to provide support for investment in capacity increase.

In conclusion, the outlook is for both the manufacturing and non-manufacturing industries to move toward a growth trend in capex in the future, supported by growth in investment in capacity increase.

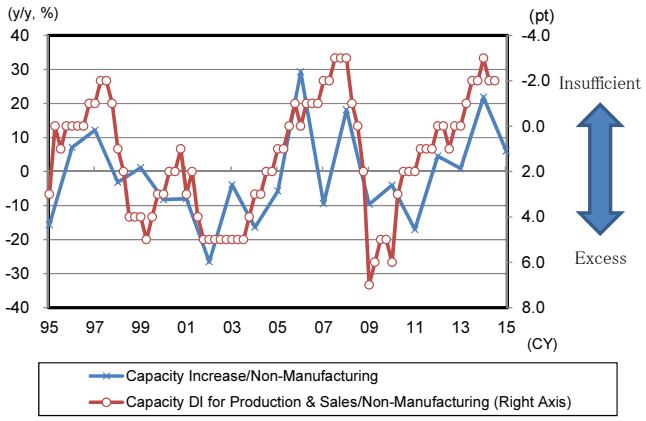
Investment in Capacity Increase and Capacity DI **Chart 6**

Manufacturing



Source: Development Bank of Japan, BOJ; compiled by DIR.

Non-Manufacturing



Source: Development Bank of Japan, BOJ; compiled by DIR.

3. The Pros and Cons of Abenomics

The fruits of Abenomics and lingering issues

In this chapter we provide a multifaceted analysis of the pros and cons of Abenomics. There is no mistaking that Abenomics has had a positive influence on Japan's macroeconomic situation. However, while we believe that the basic direction of Abenomics is a correct one, there are a number of major issues which remain unresolved. We examine these issues below, looking at two overarching categories, that of Medium-to-long-term issues and short-term issues.

Medium-to-long-term issues: Maintaining fiscal discipline and strengthening growth strategy (The Third Arrow)

The Medium-to-long-term issues facing Abenomics are (1) Maintaining fiscal discipline by making sweeping reforms to the social welfare system, and (2) Strengthening growth strategy (*The Third Arrow*) by easing bedrock regulations in the areas of agriculture, medical and nursing care, and labor. We believe the source of wage stagnation is in insufficient strength of the *Three Arrows* growth strategy, not in the income redistribution policy.

Short-term issues: Handling of benefits to lower income people and dealing with regional revitalization are key

There are pros and cons to Abenomics. Abenomics has brought great benefits to export oriented companies in the manufacturing industry, as well as to large corporations and affluent populations of major metropolitan areas. However, rewards have been limited for non-manufacturing industries oriented toward domestic demand, small businesses, and the lower income populations residing in rural areas and small towns. In recognition of the current state of affairs, DIR believes that an important short-term issue is the necessity of providing more to small business and the lower income population of Japan's small towns and rural areas in the form of increasing benefits for low income people and accelerating efforts toward regional revitalization.

3.1 Medium-to-long-term issues: Maintaining fiscal discipline and strengthening growth strategy (*The Third Arrow*)

3.1.1 Issue (1): Maintaining fiscal discipline

Fears of monetization growing due to postponement of additional consumption tax hike

In the medium-to-long-term view, the first issue Abenomics faces is maintaining fiscal discipline through the initiation of fundamental reforms in the social welfare system.

A major fear held by the average citizen in regard to Abenomics is that the government might fail to maintain fiscal discipline, thereby inviting the simultaneous risks of a weak bond market, weak yen, and weak stock market (what is often referred to as the *Triple Weaknesses*).

Seen in this context, there is a possibility that the postponement of the additional consumption tax hike could actually have planted the seeds of future troubles. At a glance, delaying the additional consumption tax hike appears to be good for the economy. But in actual fact, the postponement of the consumption tax hike conceals the danger of robbing Abenomics of one the most important components of his *Three Arrows* financial policy.

To begin with, maintaining monetary discipline is a prerequisite to the ability of the BOJ to continue its monetary easing measures. Japan is currently covering its deficit by issuing more government bonds, most of which are bought up by the BOJ in hopes of stabilizing the bond market. But the BOJ's qualitative and quantitative monetary easing measures are seen as merely monetization by other countries, thereby subtracting from the hoped-for effect. Bank of Japan Governor Haruhiko Kuroda has on many occasions realistically stated that in order for financial policy to remain effective the government should go ahead with plans to raise the consumption tax. This is something that we should really take more seriously.

In recent years the Liberal Democratic Party has intimated that, for "National Resilience," it does not plan on cutting back on public spending. Much of Japan's infrastructure, including bridges, roads, and ports, is nearing the once every fifty years requirement for maintenance and repair. Major infrastructure built in the 1960s and 70's is up for major rebuilding or refitting between now and 2020.

Protecting the lives and assets of the country's citizens is of course important, but hidden under the pretext of "Safety and Security" there lies the wonton waste of public investment which merely reduces economic efficiency while increasing the government deficit.

If the goal is to protect the lives and assets of citizens then the important thing to do would be to draw a sharp distinction between public projects that are truly needed and those which are not. The former of course must be done even if as an investment which is somewhat on the inefficient side, while the others should be performed only if they can pass a rigid test of efficiency in which costs and benefits are compared.

Implementing monetary easing measures while at the same time forfeiting fiscal discipline is indeed an action tinged with monetization. If the bond market were to suddenly drop (which means a major increase in the long-term interest rate), there would be danger of a situation occurring where a malignantly weak yen and rising import prices would go unchecked, and which would in turn run into stagflation.

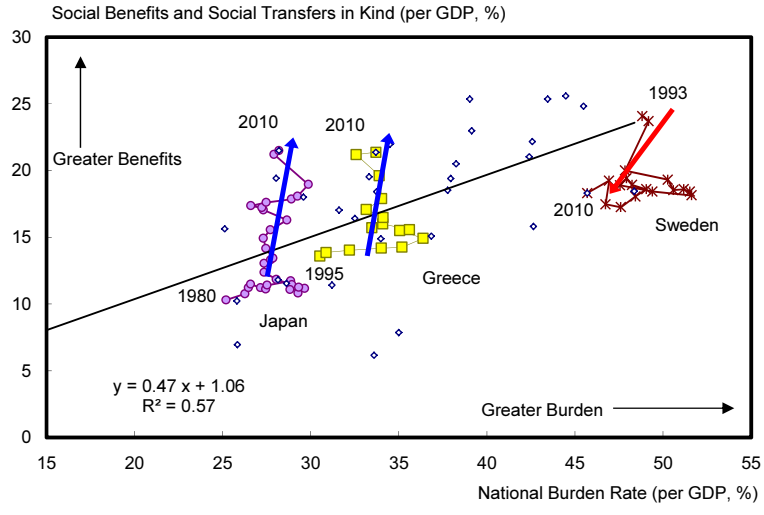
Limits to Japan's fiscal framework of mid-range benefits with low financial burden

As far as budgetary expenditure is concerned, social welfare costs are increasing and have now reached the point of becoming an even more serious problem. Japan is quickly reaching the limits of its fiscal framework consisting of mid-range benefits with low financial burden.

Chart 7 takes a look at social welfare expenditures and who carries the burden of cost. The vertical axis shows Social Benefits and Social Transfers in Kind in relation to GDP (the percentage of GDP taken up by the government's general social welfare expenditures), while the horizontal axis shows the National Burden Rate. This latter figure is the total of tax burden ratio (percentage of nominal GDP taken up by tax burden or the total of local and national taxes) and the ratio of social security burden (percentage of nominal GDP taken up by social security burden, which is made up of social security and national health insurance payments).

Looking at recent trends in Japan we see that like Greece it would be towards the upper end of the graph. This means that the national burden rate located on the horizontal axis has not increased much, while the percentage of GDP taken up by social benefits and social transfers in kind in relation to GDP moving along the vertical axis is trending more and more upwards. In other words, in Japan, much like Greece, the level of social welfare services available from the government continues to rise without requiring the people to take on more of the cost burden. In comparison, Sweden, which can be said to have succeeded in fiscal reconstruction, is located at the bottom left of the graph. Moving to the lower left position on the graph means that both the cost burden of the citizenry and the percentage of GDP taken up by the government's general social welfare expenditures are on the decline. In other words, Sweden has managed to lighten the financial burden of citizens while at the same time providing benefits that are appropriate based on social contributions.
To sum things up, Japanese citizens are not taking on a cost burden appropriate to the benefits they receive. In order for Japan to accomplish fiscal reconstruction the social welfare system must first be reformed, and this means bringing the costs and benefits of citizens into a more appropriate relationship. To delay doing anything about the ballooning social welfare costs, which contribute to the continued rise in the government deficit, merely means that the problem will be left for our children and grandchildren to deal with. It is not an exaggeration to say that the children of the future will be born already carrying a heavy burden. And on top of that, since they are not even born yet, they don't have the right to vote. They're not able to say "No" to their parents' and grandparents' selfishness. There couldn't be anything more outrageous.

National Burden Rates and Social Contributions of OECD Member Countries **Chart 7**



Source: OECD; compiled by DIR.
Note: Period covered: Japan (1980-2010), Greece (1995-2010), Sweden (1993-2010).

Reducing the cost of social welfare is key

The implications of the successes of other countries in implementing fiscal reconstruction are that merely raising the consumption tax is not enough if Japan is to accomplish its own fiscal reconstruction. Reducing the cost of social welfare is essential.

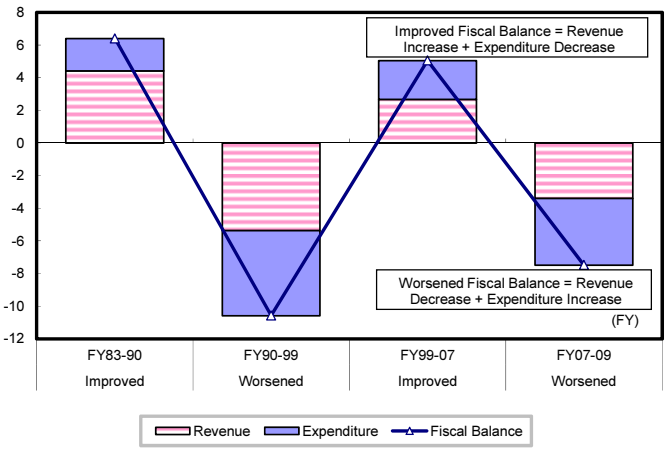
Chart 8 shows a factor analysis of fluctuations in Japan's fiscal balance. First, Section (1) of Chart 8 breaks down fluctuation factors in fiscal balance (revenue - expenditure) into annual revenue and annual expenditure. To begin with, there are basically only two ways to improve the fiscal balance – either increase revenue, or decrease expenditure. As shown in the graph, the further up one goes the more increase there is in revenue, or to put it differently the more expenditure decreases. This of course represents an improvement in fiscal balance. Conversely, the further down one goes on the graph the more revenue decreases and expenditure increases, meaning a worsening of the fiscal balance. During the periods spanning 1983 to 1990, and then 1999 to 2007, Japan's fiscal balance showed improvement. Then during the periods spanning 1990 to 1999 and 2007 to 2009 the fiscal balance worsened. During the periods of improved fiscal balance, Japan tended to depend more on large contributions to revenue as oppose to cutting back on expenditure. This is where Japan differs from other countries which have been able to improve their fiscal balance. One can deduce that during economic boom periods, rising corporate earnings contributed to increases in tax revenue. This is of course what happened during Japan's economic bubble lasting from then end of the 1980s to the beginning of the 1990s. And then the US IT bubble of 1999-2000 and the housing bubble of 2003-2006 correspond roughly with the 1999-2007 period of positive fiscal balance mentioned above. In other words, Japan's fiscal condition was improved by short-term boom times which brought with them temporary increases in tax revenue. But Japan failed to cut back on expenditures (mostly social welfare costs) during these times. This means that each time these booms went bust, Japan went through periods in which its fiscal condition rapidly worsened.

Next we take a look at Section (2) of Chart 8 which examines the make-up of revenue more closely. The further up on the graph we go the more increase is seen in revenue and hence improvement in the fiscal balance. Conversely, the further down we go the more revenue decreases, leading to the worsening of the fiscal balance. Japan's current rate of consumption tax is 8%. This rate is considerably lower than that seen in the EU where it is 20%. Moreover, Japan's tax revenue from direct taxation such as income taxes and corporate tax has been thrown out of whack by the wild fluctuations of the business cycle over the years. This is exactly what happened during the periods of 1990 to 1999 and 2007 to 2009. The fiscal balance during these periods worsened because of the economic downturn which seriously reduced tax revenues from direct taxation such as income taxes and corporate tax, leading ultimately to the expansion of the fiscal deficit. It should be noted here that during these times, revenues from indirect taxation, in other words consumption tax, remained stable.

Finally, we look at Section (3) of Chart 8, in which we examine the make-up of expenditure more closely. Here we see that the further up we go on the graph, the more expenditure decreases, thereby improving the fiscal balance. Then, the further down we go on the graph the more expenditure increases, causing the fiscal balance to worsen. Important to note here is that this graph also shows us that since the year 1990, expenditures going toward covering the rising costs of social welfare have expanded considerably, meaning that social welfare costs are a major factor in the deterioration of the fiscal balance. Fiscal balance improved during the period spanning 1999 to 2007. This was during the Koizumi administration, whose structural reform policy cut back on public investment, thereby greatly reducing expenditures, but the effect was only temporary.

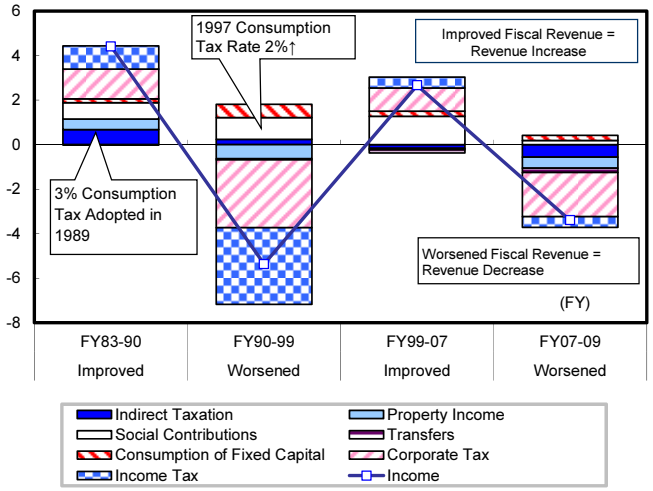
Factor Analysis of Fluctuations in Japan's Fiscal Balance — Chart 8

(1) Factor Analysis of Fluctuations in Fiscal Balance (per Nominal GDP, %)



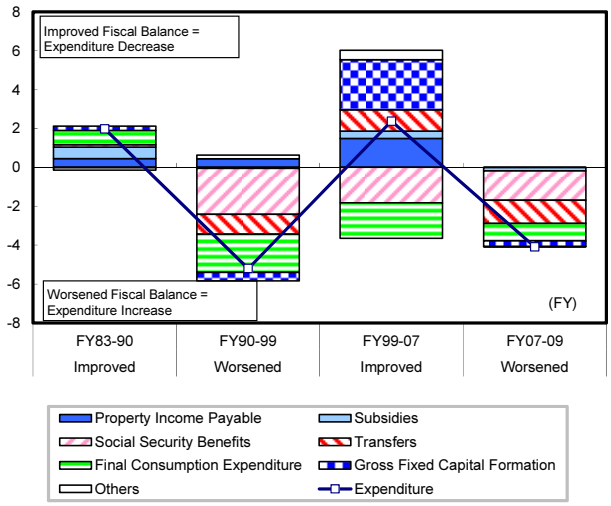
Source: Cabinet office; compiled by DIR.
Note: The terms "Improved" and "Worsened" indicate the fiscal balance trend. General Government Basis.

(2) Factor Analysis of Fluctuations in Fiscal Revenue (per Nominal GDP, %)



Source: Cabinet office; compiled by DIR.
Note: The terms "Improved" and "Worsened" indicate the fiscal balance trend. General Government Basis.

(3) Factor Analysis of Fluctuations in Fiscal Expenditure (per Nominal GDP, %)



Source: Cabinet office; compiled by DIR.
Notes: 1) Social Security Benefits are payments of benefits other than social transfers in kind (social security benefits paid in cash, unfunded employee social benefits, social assistance payments).
2) Social transfers in kind are included in final consumption expenditure. Social transfers in kind (social security payments in the form of reimbursements and other social transfers in kind), including medical expenditures.
3) Interest payment is included in property income payable.
4) Subsidies are regular subsidies paid to corporations.
5) The terms "Improved" and "Worsened" indicate the fiscal balance trend. General Government Basis.

Fiscal reconstruction requires (1) Economic growth, (2) Tax increase, and (3) Radical streamlining of social welfare

The word on the street these days seems to be that fiscal reconstruction ought to be doable with economic growth alone, and without raising taxes. But this assumption is open to question. There are limits to how much a revenue increase from economic growth can improve the fiscal balance. It is unrealistic to assume that fiscal health can be attained through economic growth alone. According to the Cabinet Office's "Economic and Fiscal Projections for Medium to Long Term Analysis" (July 25, 2014), even if the nominal growth rate continues at around 3% as proposed in this paper's economic revitalization case, the Fiscal 2020 primary balance of central and local governments would still be running a deficit of around 11 tril yen. In order for Japan to achieve fiscal reconstruction, what has come to be known as the "Holy Trinity" of economic growth, the increase of taxes, and the radical streamlining of social welfare must be implemented.

3.1.2 Issue (2): Strengthening growth strategy (The Third Arrow)

Strengthening The Third Arrow by easing bedrock regulations

The second medium-to long-term issue facing Abenomics is strengthening growth strategy (*The Third Arrow*) by easing bedrock regulations in the areas of agriculture, medical and nursing care, and labor.

At this point in time Abenomics appears to be focused mostly on monetary policy and public investment. However, in order to realize continuous growth, more efforts must be made toward structural reform such as the fundamental easing of regulations – or to put it more simply, the third arrow of Abe's strategy must be strengthened. The effective corporate tax needs to be lowered while at the same time expanding the taxation base. In addition, an environment must be provided which promotes the setting up of new businesses while simultaneous raising the corporate metabolism. Japan's fundamental business constitution must be improved through these structural reforms or there is danger that the recent stock price highs will prove to be a mere transient occurrence.

Assessing the new growth strategy

The Abe administration made a cabinet council decision on its new growth strategy on June 24, 2014. The new growth strategy boasted a laundry list of items including boldly tackling issues which had until now been considered taboo in Japan.

First of all there is the issue of agricultural co-ops. The co-op system has not had any kind of change or reform in sixty years. Secondly, there is the medical field where mixed treatments (treatments partially covered by insurance) have become an issue. Thirdly, there is the effort to strengthen corporate governance by initiating reforms in how public pension funds are invested. Finally, the fourth issue is the problem of the declining population. The Abe administration is the first ever to tackle this issue head on. At the core of his strategy in dealing with the declining population he has promoted the empowerment of women. Abe's is the first administration ever to commit to the improvement of women's status in Japan.

A formidable collection of goals and strategies, it seems that this alone should be enough to arouse the expectations of foreign investors, major players in the Tokyo stock market, with the promise of real change coming to Japan under the leadership of the Abe administration. However, there is still much to argue when it comes to the core of the Abe reforms. It is extremely important to make sure that the reforms have teeth – as the old saying goes, "the devil is in the details."

The most important thing to do is to clarify where the bottom line is for each of these strategy goals with the understanding that to fall below that line would mean for the planned reform to lose its teeth, thereby losing its effectiveness as a reform measure.

For instance, the main point of organizational reform for agricultural co-ops is to change the make-up of the JA-Zenchu (Central Union of Agricultural Co-operatives), and then to decide whether or not the new organization should continue to have authority over regional co-ops as well as their auditing function. If the new organization continues to have authority over regional co-ops and to act as auditor, then this will have been a change in name only. Similarly, whether or not reform of the mixed treatment issue can progress depends on implementing both a completely new design of the system as well as its management and operation.

Insufficient strength of the Third Arrow (growth strategy) is cause of wage stagnation

There are many who say that, rather than a third arrow, what the country needs is an income redistribution policy. In other words that it is more important to increase the peoples' income. However, we believe that the main reason wages have been stagnating in Japan is not because of the

need of an income redistribution policy but because the *Third Arrow* growth strategy has not been nearly strong enough.

Stagnant labor productivity and decline in corporate competitiveness is cause of stagnant real hourly wages

In this section we examine the factors behind stagnant wages in Japan. In order to do so we make an international comparison of wages. Chart 9 is a factor analysis of fluctuation in real hourly wages in major countries. The chart looks at three factors – (1) Labor productivity, (2) GDP deflator/CPI, and (3) labor's relative share.

In a comparison of growth rates in real wages between Japan, the US, and Germany during the years 2000 to 2009, only Japan experienced a decline in real wages. In contrast with the US and Germany, two factors behind stagnant real wages in Japan can be pointed out. These are (1) low growth rate in labor productivity and (2) considerable rate of decline in GDP deflator/CPI. In comparison, the extent to which factor (3) labor's relative share contributed to downward pressure on real wages is similar in all three countries. Therefore, it is difficult to come to the conclusion that labor's relative share is a factor in Japan's stagnant real wages.

Next we analyze the labor productivity factor more closely looking at two factors – real GDP and total hours worked. There is not much difference between the three countries in terms of total hours worked, but what stands out in Japan's case is that real GDP is dangerously low. Looking at the real GDP breakdown, we see that in comparison to other countries, the percentage of Japan's real GDP attributed to fixed capital formation and TFP is low.

Now we perform a factor analysis of GDP deflator/CPI, looking at two factors, terms of trade and the domestic demand deflator. Here we find that these two factors have a negative contribution to real GDP. Even in a phase where import prices were rising, Japanese corporations did not carry out a price pass-through on exports. This was in order to maintain export competitiveness. But then this resulted in a deterioration of terms of trade and contributed to pushing down the GDP deflator.

Factor Analysis of Real hourly wages — Chart 9

Annual growth (CY00-09 avg; %)	Japan	US	Germany
Real hourly wages	-0.5	1.3	0.2
Labor productivity	0.7	2.0	1.2
GDP deflator / CPI	-1.0	-0.3	-0.7
Labor's share	-0.3	-0.4	-0.3

Real hourly wages, labor productivity, and labor's share defined as follows:
Real hourly wages = nominal employee compensation / (no. of employees x hours worked) / CPI.
Labor productivity = real GDP / (no. of employees x hours worked).
Labor's share = nominal employee compensation / nominal GDP.

Thus, real hourly wages are expressed as:
Real hourly wages = labor productivity x GDP deflator / CPI x labor's share.

Then, % change (△ln) is expressed as:
△ln (real hourly wages) = △ln (labor productivity) + △ln (GDP deflator / CPI) + △ln (labor's share)
△ln (labor productivity) = △ln (real GDP) - △ln (no. of employees) - △ln (hours worked)
△ln (labor's share) = △ln (nominal employee compensation) - △ln (nominal GDP)

Annual growth (CY00-09 avg)		Japan	US	Germany
Labor productivity (%)		0.7	2.0	1.2
Real GDP (%)		0.5	1.8	0.9
Contribution of hours worked (% pt)		-0.4	-0.2	-0.3
Contribution of labour composition change (% pt)		0.3	0.3	0.1
Contribution of capital investment		0.5	1.1	0.8
Contribution of ICT capital investment (% pt)		0.3	-	0.3
Contribution of non-ICT capital investment (% pt)		0.3	-	0.5
Contribution of TFP (% pt)		0.1	0.3	0.3
Total hours worked (%)	Plus-minus reversed	0.2	0.2	0.3
No. of employees (%)	Plus-minus reversed	-0.3	-0.1	-0.3
Hours worked (%)	Plus-minus reversed	0.5	0.3	0.7

Annual change (CY00-09 avg)		Japan	US	Germany
GDP deflator / CPI (%)		-1.0	-0.3	-0.7
GDP deflator (%)		-1.2	2.2	0.9
Contribution of terms of trade (% pt)		-0.3	-0.0	0.0
Contribution of domestic demand deflator (% pt)		-0.8	2.3	1.0
Contribution of import deflator (% pt)		-0.0	-0.1	0.0
Contribution of other items (% pt)		-0.0	-0.0	-0.0
CPI (%)	Plus-minus reversed	0.3	-2.5	-1.6

Annual change (CY00-09 avg)		Japan	US	Germany
Labor's share (%)		-0.3	-0.4	-0.3
Nominal employee compensation (%)		-1.0	3.6	1.4
Nominal GDP (%)	Plus-minus reversed	0.7	-4.0	-1.7

Source: Cabinet Office, US Bureau of Economic Analysis, Bundesbank, EU KLEMS; compiled by DIR.
Note: TFP=total factor productivity.

Labor's share in Japan is not particularly low

Labor's share in Japan (employee compensation/national income) rose considerably since 1970. This is not a particularly low level in terms of recent international numbers. The general understanding is that wages have downward rigidity, so labor's relative share declines during favorable economic conditions and increases during economic downturns. Looking at patterns in labor's relative share in Japan since 1990, we see that there was a considerable increase when the economic bubble of the 1980s burst, and again during the rapid worsening of the economy when the US financial crisis of occurred. Then it fell again when the economy recovered. So it is not possible to conclude that the decline in labor's relative share now is a trend. In other words, stagnant employee compensation is not a problem of labor's relative share. Rather, its source may be seen in the fact that the economic pie itself has not expanded.

The road to sustained growth in wages is the strengthening of the Third Arrow (growth strategy)

In conclusion, the key to sustained growth in wages in Japan is the strengthening of the *Third Arrow*, which includes improvements in labor productivity and corporate competitiveness. The most pressing issues in efforts to strengthening the *Third Arrow* are easing bedrock regulations in areas with vested interests such as agriculture, medical and nursing care, and labor, and decreasing the effective corporate tax rate while expanding the taxable base.

3.2 Short-term issues: Handling of benefits to lower income people and dealing with regional revitalization are key

The pros and cons of Abenomics

There are pros and cons to Abenomics. Abenomics has brought great benefits to export oriented companies in the manufacturing industry, as well as to large corporations and affluent populations of major metropolitan areas. However, rewards have been limited for non-manufacturing industries oriented toward domestic demand, small businesses, and the lower income populations residing in rural areas and small towns. In recognition of the current state of affairs, DIR believes an important short-term issue is the necessity of providing more to small business and the lower income population of Japan's small towns and rural areas in the form of increasing benefits for low income people and accelerating efforts toward regional revitalization.

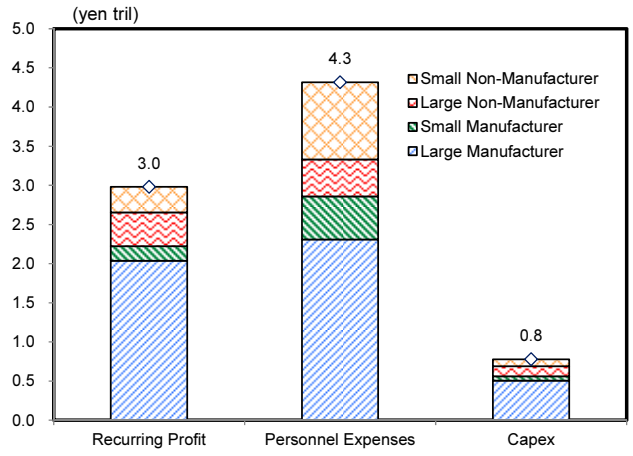
Weak yen brought on by Abenomics has pushed recurring profits in the macro sense up to 3 tril yen, but this has not benefited everyone

First we examine the effects of Abenomics on the corporate sector. It appears that the continual weakening of the yen since the Abe administration was formed has had a considerably positive effect on the corporate sector. Chart 10 shows a calculation of the effects of the weak yen on the corporate sector since December 2012 when the Abe administration was formed. During the year and a half between the Jan-Mar 2013 period and the Apr-Jun 2014 period, corporate recurring profits are calculated as having been pushed up to around 3.0 trillion yen. Meanwhile, personnel expenses went up to 4.3 tril yen and capex spending grew to 0.8 trillion yen.

Worthy of note here is the major difference in the benefits of the weak yen depending on the industry and the scale of the corporation. Since the greatest effect of the weak yen has been growth in exports, the major benefits have been gained by major corporations in the manufacturing industry which boast a large percentage of exports. In contrast, as the yen has gotten progressively weak, import prices have risen as well as corporate costs. Hence the non-manufacturing industries, which tend to invest a lot in imported raw materials such as fuel, have found the weak yen to be a factor bringing major downward pressure on earnings. At the same time, expansion of earnings as a direct effect of the weak yen mainly amongst major corporations in the manufacturing industry may also have a positive effect on the non-manufacturing industry and small businesses further up the road as a result of the ripple effect which occurs when corporations in various industries do business with each other. (More on this subject in the following section.) Though it is difficult to believe that all corporations will gain positive effects from the weak yen, it appears that there have been more positive effects on earnings than not, keeping in mind the business frameworks of manufacturing, non-manufacturing, major corporations and small businesses.

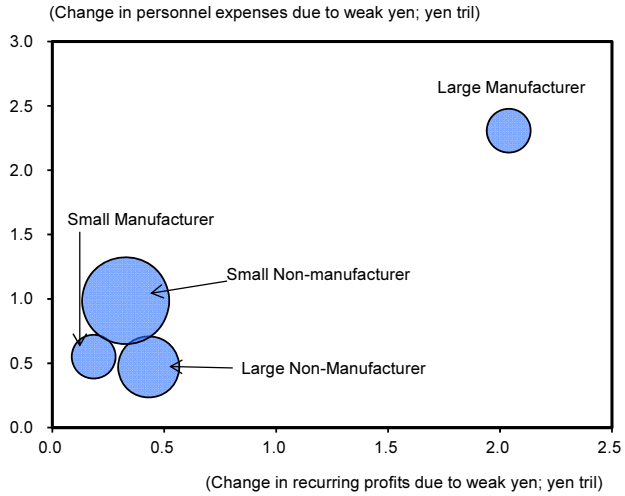
It goes without saying that the benefits of the weak yen are felt mainly by large corporations in the manufacturing industry where the effects of increased exports are considerable. Increases in personnel expenses are also notable in these same corporations (see Chart 11). On the other hand, in the various local regions of Japan, labor tends to be concentrated in the non-manufacturing industry and small businesses where the benefits of the weak yen are relatively small. It is necessary therefore to pay heed to the widening gap created due to differences in type of industry and scale of business including in the area of personnel expenses per employee.

Effects of Weak Yen Brought on by Abenomics on Corporate Sector
Chart 10



Source: Ministry of Finance, BOJ, METI, Ministry of Internal Affairs and Communications, and Cabinet Office; compiled by DIR.
Note: Cumulative value of effects between Jan-Mar, 2013 and Apr-Jun, 2014.

Effects of Weak Yen Brought on by Abenomics and Number of Employees by Scale of Business
Chart 11



Source: Ministry of Finance, BOJ, METI, Ministry of Internal Affairs and Communications, and Cabinet Office; compiled by DIR.
Note: Cumulative value of effects between Jan-Mar, 2013 and Apr-Jun, 2014. Size of circles represents size of sector as of Apr-Jun, 2014 period.

Weak yen benefits most businesses considering ripple effect between corporations

Chart 12 provides a more detailed view of the effects of the weak yen on corporate earnings since December 2012 when the Abe administration was formed. First we look at the direct effects of the weak yen in the form of increased exports as reflected in sales growth, as well as the effects of rising import prices on corporate earnings. According to calculations as shown here in the chart, recurring profits of large manufacturers for whom a large portion of sales are attributed to exports were pushed up by 1 trillion yen. In contrast, the weak yen had downward pressure on the earnings of small manufacturers and members of the non-manufacturing industries due to rising import prices. Direct benefits associated with growth in exports were extremely small for these businesses. Therefore the results of an all-industry calculation find that recurring profits were pushed down by 635 billion yen overall.

Next we look at the ripple effect. Here it appears that earnings were pushed up regardless of the industry or scale of business. On an all-industry all-business size basis, recurring profits were pushed up by 3.6 trillion yen. The ripple effect referred to here is where increased exports had a volume effect or price pass-through effect which increased corporate transactions. It also includes the rise in corporate earnings due to growing final demand due to income redistribution. Despite the progressively weaker yen, growth in export volume was moderate, so it is possible that the ripple effect of growth in volume was not very large. On the other hand, looking at the prices DI as measured in local regions and by the BOJ, we see that both the input price DI and the output price DI have been in a growth trend while terms of trade (output price DI – input price DI) have been improving even for the non-manufacturing industries, meaning that price pass-through has been progressing, and may have been a factor in pushing up corporate earnings. The positive influence of the ripple effect exceeded the negative influence of the direct effect so that ultimately, even in the case of the non-manufacturing industries where the negative influence of the direct effect was especially large, the weak yen was a factor in pushing up corporate earnings.

A DIR macro model was used in producing this estimate, and it is built on the assumption that the ripple effect is about the same as past averages. The calculation is a simple one and therefore should be taken with a grain of salt. It would be incorrect to assume that one could get a clear idea of the effects of the weak yen with only a simple increase in exports and imports. The foreign exchange market was

fairly stable during the first half of 2014, then, in August, the yen gradually became progressively weaker. The decline in the yen then accelerated after October 31 when the BOJ implemented additional monetary easing measures. With the situation as it was, many expressed the fear that import prices would rise too much, but it appears that the weaker yen has basically had a positive effect on corporate earnings.

Calculation of Effects of Weak Yen Brought on by Abenomics on Corporate Sector **Chart 12**

		All Business Sizes / All Industries								
			Manufacturing			Non-Manufacturing			Large Corporations	Small Businesses
				Large Corporations	Small Businesses		Large Corporations	Small Businesses		
Recurring Profits	Amount Change (Yen Bil)	2,980	2,223	2,039	184	757	430	327	2,469	511
	Share of Recurring Profits (%)	3.2	6.8	7.5	3.5	1.3	1.1	1.6	3.7	2.0
Direct Effects	Amount Change (Yen Bil)	-635	1,034	1,075	-41	-1,669	-1,323	-346	-248	-387
	Share of Recurring Profits (%)	-0.7	3.2	3.9	-0.8	-2.8	-3.4	-1.7	-0.4	-1.5
Ripple Effect	Amount Change (Yen Bil)	3,615	1,189	964	226	2,426	1,753	673	2,716	899
	Share of Recurring Profits (%)	3.9	3.7	3.5	4.3	4.1	4.5	3.3	4.1	3.5
Personnel Expenses	Amount Change (Yen Bil)	4,316	2,859	2,308	551	1,457	471	986	2,779	1,537
	Share of Personnel Expenses (%)	1.7	3.6	4.7	1.9	0.9	0.7	1.0	2.3	1.2
capex	Amount Change (Yen Bil)	777	561	505	56	216	129	87	633	144
	Share of capex (%)	1.5	3.1	3.6	1.4	0.6	0.5	0.8	1.6	1.0

Source: Ministry of Finance, BOJ, METI, Ministry of Internal Affairs and Communications, and Cabinet Office; compiled by DIR.
Notes: 1) Calculated values found using a macro model. Cumulative value of effects between Jan-Mar, 2013 and Apr-Jun, 2014.
2) Direct effect is the total of increase in exports and increase in import price due to weak yen. Ripple effect is the effect of increase in transactions between corporations including increase in final demand associated with weak yen and price pass-through.
3) Influence of personnel expenses and capex use constant and hypothetical calculated values for labor's relative share and capex/cash flow ratio.

Effects of Abenomics on Households

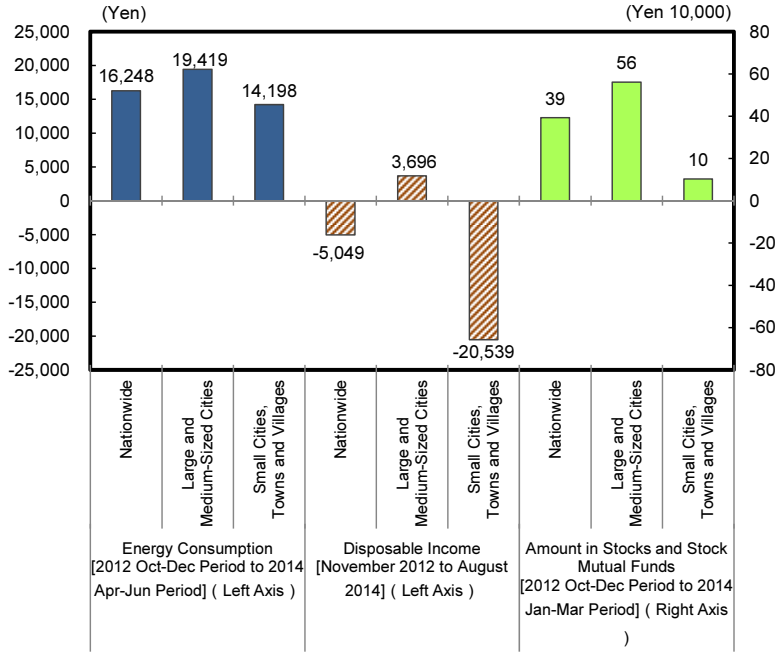
Next we examine the effects that Abenomics has had on households. In this section we ascertain changes by city size in energy consumption, disposable income, amount in stocks and stock mutual funds, and sort out the characteristics of each category.

First, energy consumption of households has increased regardless of the size of the city. On a national average, energy consumption grew by 16,000 yen annualized between the 2012 Oct-Dec period and the 2014 Apr-Jun period (see Chart 13 (1)). The major reasons for the increase are the halting of nuclear power plant operations leading to rising electricity and gas prices due to the weak yen. In addition, the increase in consumption tax in April of 2014 has also had an effect. Unless income increases an amount that can offset the increase in energy costs, these costs will bring downward pressure on household consumption. Looking at amount of increase in energy consumption by city size, we see that the larger amount is in large and medium-size cities. This merely reflects differing levels of income and consumption levels in comparison to non-urban areas. When evaluated along with disposable income as will be done in more detail later on in this section, the burden of increase in energy costs is felt to be more of a strain in small cities, towns and villages. The weakening yen has been a factor in continuously pushing the cost of energy higher, and though the recent decline in the price of oil has offset that somewhat, future changes in both foreign exchange rates and the price of oil are factors which will require constant monitoring.

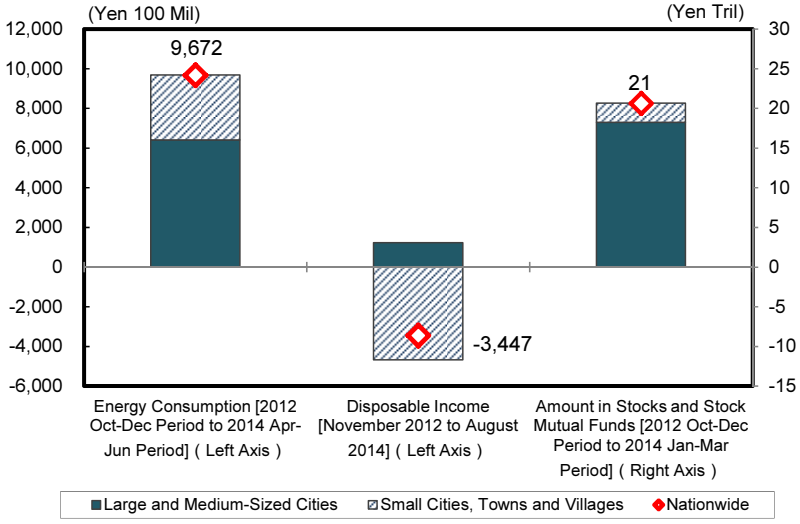
Next we take a look at disposable income and amount in stocks and stock mutual funds. Data shown on the chart suggests that in this area the gap between large and medium-size cities, and small cities, towns and villages may be growing larger. Disposable income shows a modest rise in large and medium-size cities, but has declined in small cities, towns and villages. However, looking more closely at the data for large and medium-sized cities we see that large cities are already beginning to shift into a decline in this area, hence an unquestioning optimism is not possible. Stocks and stock investment funds are increasing in cities of all sizes, but the increase in large and medium-sized cities exceeds that of small cities, towns and villages. In the case of the latter, benefits from Abenomics' effect on growth in stock prices has been fairly limited.

Abenomics' Effect on Households by City Size — Chart 13

(1) Change per Household



(2) Macro Change (Household Survey Basis)



Source: Ministry of Internal Affairs and Communications; compiled by DIR.

Notes: 1) Energy covers households of two or more persons on an annual quarterly moving average basis. Disposable income covers work households of two or more persons on a seasonally adjusted 3-month moving average basis. Stocks and amount in Stock and Stock Mutual Funds covers households of two or more persons on an annual quarterly moving average basis. The number of households is multiplied by amount per household by city size, and the nationwide figure is the total of the amounts by city size.

2) Large cities include 12 major metropolitan areas designated by the government. Medium-sized cities are cities with populations of 150,000 or more with the exception of major metropolitan areas. Small cities Group A are those with a population between 50,000 and 150,000 and small cities group B, towns and villages are those with a population of under 50,000. All cities are combined based on number of households in survey. Household composition is 60% for large and medium-sized cities and 40% for small cities, towns and villages.

Lastly, we take a look at macro change considering number of households in the survey by city size (Chart 13 (2)). Large and medium-size cities, and small cities, towns and villages have all contributed to the increase in energy consumption with contribution from the former group especially large. Meanwhile, small cities, towns and villages made a major negative contribution to disposable income, with their contribution to amount in stocks and stock mutual funds fairly limited. The analysis shows that benefits from Abenomics are relatively larger in large to medium-sized cities while they are smaller in the small cities, towns and villages.

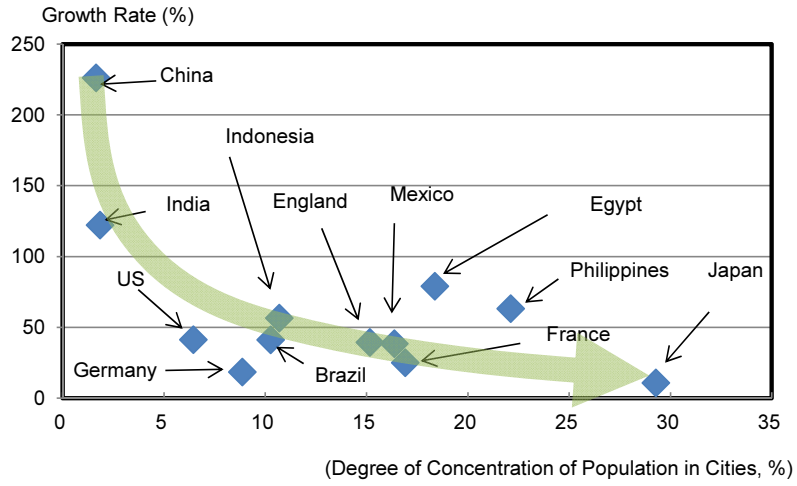
High concentration of population in cities inhibits growth

We again stress that regional revitalization is one of the most pressing issues for Abenomics. The disparity between large cities and regional areas is one of the biggest problems facing Japan.

Chart 14 illustrates the relationship between the degree of concentration of population in cities and economic growth rate in various countries. As is made clear in this chart, the general understanding is that the higher a country's concentration of population in cities the lower its growth rate tends to be. Emerging nations such as China and India have an especially low concentration of population in cities, and their growth rates are high. Meanwhile, amongst the advanced countries, such as the US, UK and Germany, none have as high a concentration of population in the cities as does Japan. Japan's concentration of population in cities is particularly high and its growth rate is low. In conclusion, we believe that the high concentration of population in the big cities of Japan in contrast to other advanced nations cannot be ignored as a factor in limiting growth.

In response to this situation, the Abe administration has made regional revitalization a major part of its policy. We feel that it is indeed a most appropriate issue to work on. It is of paramount importance to reduce the economic disparity between the Tokyo metropolitan district and regional areas through regional revitalization. We believe that reducing the concentration of population in the cities will help to stimulate Japan's economy.

Concentration of Population in Cities and Growth Rate **Chart 14**



Source: Demographia, IMF; compiled by DIR.
Note: Concentration in Cities = Population in major cities/total population of each country. Growth rate is the percentage of change between the 1990s average and the average since 2000.

Key to reducing disparity between major metropolitan areas and regional areas lies not in redistribution but in growth

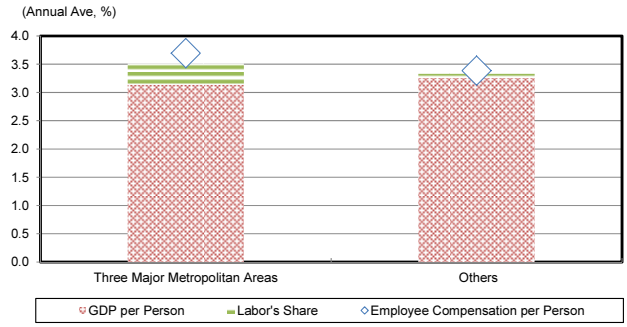
In this section we consider the question of disparity between local regions and major metropolitan areas from the viewpoint of employee compensation. Chart 15 is a factor analysis of employee compensation per person by decade. The chart on the left indicates changes in employee compensation per person between the 1980s and the 1990s. When we compare Japan's three major metropolitan areas with other districts, we see that the point they have in common is that the major factor pushing up employee compensation per person is the GDP growth rate per person. The extent of growth in labor's share in the three major metropolitan areas is larger than others with the Tokyo Metropolitan District somewhat higher in terms of growth rate in employee compensation per person, but the difference between the three major metropolitan areas and regional localities is not especially large. On the level of growth rate in income, there was not such great disparity between the three major metropolitan areas and regional localities during the 1990s.

The chart on the right illustrates changes in employee compensation per person between the 1990s and 2000s. The decline in labor's share during this time is especially notable amongst the three major metropolitan areas, but the increase in GDP growth rate per person is also large. On the other hand, looking at other regions, we see that the decline in labor's share was limited, while the GDP growth rate per person was sluggish. This seems to be a big difference between the regional areas and the three major metropolitan areas.

In consideration of the above analysis, there is no mistaking that the key to regional revitalization lies not in a redistribution policy but in the strengthening of regional growth strategy. In working towards regional revitalization, the needs of the various regions must be carefully studied and current examples of successes taken under consideration. These examples should then be developed with precision in other regions with similar needs. This is an effort which is essential to revitalization.

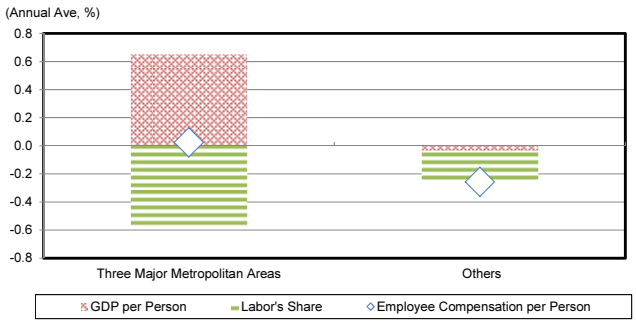
Factor Analysis of Employee Compensation per Person (1980s to 1990s)

Chart 15



Source: Cabinet office; compiled by DIR.
Notes: 1) Growth rate calculated using average values from the 1980s to the 1990s.
2) The three major metropolitan areas are Tokyo, Aichi, and Osaka.

Factor Analysis of Employee Compensation per Person (1990s to 2000s)



Source: Cabinet office; compiled by DIR.
Notes: 1) Growth rate calculated using average values from the 1990s to the 2000s.
2) The three major metropolitan areas are Tokyo, Aichi, and Osaka.

4. Can The BOJ Reach Its Price Target?

Our main scenario expects it to be difficult for the BOJ to reach its price target

In this section we examine the arguments as to whether or not the BOJ can reach its price target.

On October 31, the BOJ implemented additional monetary easing measures. The bold new stimulus package took the financial markets by surprise, increasing the pace of growth in monetary base from the previous 60-70 trillion yen per year to 80 trillion yen. The financial markets reacted positively, with stock prices rising considerably, while the yen weakened further. In taking this action, Bank of Japan Governor Haruhiko Kuroda indicated his commitment to doing everything he could to achieve the target for raising prices by 2%.

However, our current outlook is that it will be difficult for the BOJ to reach its target growth rate in consumer price of 2% by the original deadline. We expect additional monetary easing measures by the BOJ to take place in the 2015 Oct-Dec period.

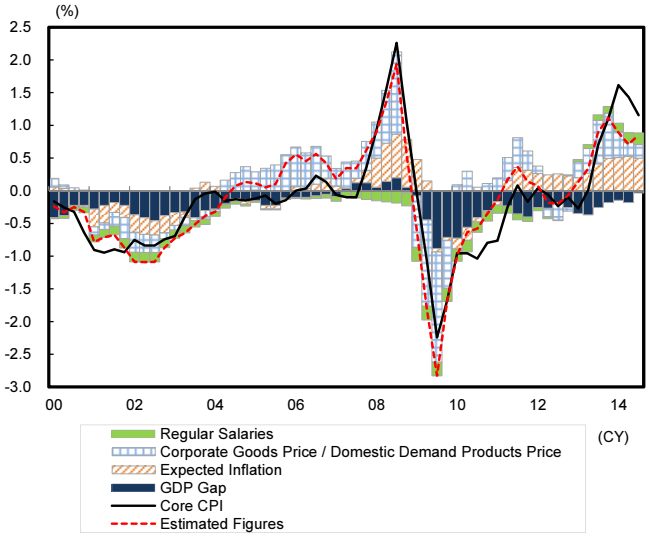
Increase in consumer price appears to be taking a break

Consumer prices in Japan moved into a moderate growth phase as a result of Abenomics, but recently growth seems to be taking a break. In this section we examine core CPI more closely, breaking this phenomenon down as follows: (1) the GDP gap, (2) expected inflation, (3) corporate goods price index/domestic demand products price index, and (4) regular salaries. See Chart 16 for the breakdown.

The consumer price showed signs of bottoming out soon after the beginning of 2013. Prices shifted upwards by the last half of the year, which points to the fact that all factors influencing prices were working in the positive direction. The corporate goods price index/domestic demand products price index were major factors contributing to the rise in core CPI. This was due to the rise in import prices following the weakening of the yen since autumn of 2012 (see Chart 17). Since then, the expected inflation factor came into play, pushing up prices further. This was made possible by the easing up of the deflationary mindset of households which ensued after the BOJ implemented qualitative and quantitative monetary easing measures. Additionally, with the domestic economy and corporate earnings improving, the GDP gap factor narrowed somewhat, shedding some of its negative numbers, and regular salaries began to work more in the positive direction. As of that point the diagnosis was that the economy had begun to shed some of its deflationary tendencies and that the gears had begun to turn.

However, as the economy entered a new year in 2014, the yen took a break from its earlier weakening tendency, causing the upward influence of the corporate goods price index and domestic demand products price index, which had previously reacted to the increase in import prices, to lose some of its teeth. The high level of expected inflation held by households maintained its level while the GDP gap and regular salaries continued improving, but these positive factors were overcome by the negative influence of the corporate goods price index/domestic demand products price index having lost some of their clout in pushing up prices. Meanwhile, the increase in core CPI gradually became more restricted. By the autumn of 2014, the International Energy Agency (IEA) had revised its outlook for oil prices downwards while the International Monetary Fund (IMF) lowered its outlook for the world economy. Meanwhile, the US Federal Reserve Board (FRB) ended its quantitative easing program, and as if in harmony with this series of events, the price of oil fell dramatically. This factor is expected to contribute to a further drop in prices in Japan in the future. However, the BOJ then announced additional monetary easing measures at the Monetary Policy Meeting on October 31. Close monitoring of the effectiveness of this new policy will now likely ensue.

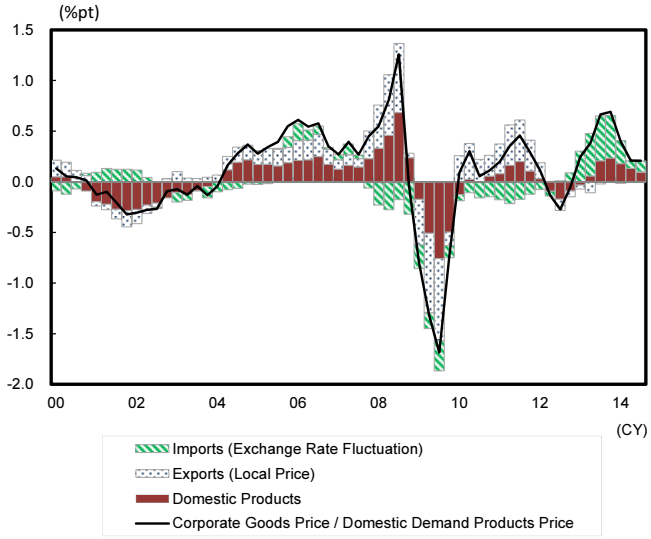
Core CPI Function **Chart 16**



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

Notes: 1) : Estimation formula for y/y change in core CPI is as follows:
Core CPI y/y change (t) = GDP Gap (t-2) + Expected Inflation Rate (t-1) + Corporate Goods Price / Domestic Demand Products Price (t) + Trend in Regular Salaries (t)
All coefficients are significant at 1%. Newey-West HAC standard deviation is used for significant test.
2) Core CPI is all items less fresh food and energy. Trend in regular salaries is calculated using HP filter.
3) Adjusted figure used for effects of April 2014 increase in consumption tax.

Breakdown of Corporate Goods Price / Domestic Demand Products Price **Chart 17**



Source: BOJ; compiled by DIR.

Note: Due to margin of error in calculation, total used in breakdown may differ from Corporate Goods Price / Domestic Demand Products Price factor.

There are difficult hurdles to overcome in order to achieve a price increase rate of 2%

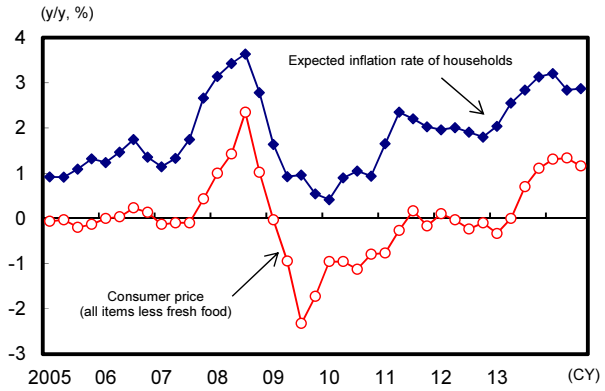
With little room left for further interest rate cuts associated with monetary easing, increasing the monetary base any further is considered to have limited effect on the real economy. We believe that the intent of the additional monetary easing measure is to attempt to stimulate a rise in prices by virtue of promoting expectations.

In order for prices to attain stable growth on of the most important factors is an increase in expected inflation rate. However, on the one hand, the expected inflation rate of households tends to be swayed by fluctuation in actual prices. In other words, prices and expected inflation rate simultaneously influence each other. When we look at changes in the consumer price index and the expected inflation rate as shown in Chart 18, we see that although the expected inflation rate exceeds the actual inflation rate, the two are generally linked.

Chart 19 presents the results of calculations to figure the effect of wages and exchange rate fluctuations on consumer price, factoring in the combined effect of the expected inflation rate and actual prices. In order to achieve the BOJ's targeted growth rate of 2% in prices by the end of 2015, assuming the yen exchange rate remains at the same level as it has been up to now, scheduled wages would have to be at a high of +2.0%pt. Meanwhile, in order to achieve a 2% growth rate in prices by virtue of a further weakening of the yen, the yen rate would have to fall to around 135 yen to the dollar by the end of 2015. But as the inflation rate has peaked just recently due mostly to the weak yen effect having lost its potency, it is evident that the increase in prices due to the weak yen was only temporary. It therefore must be stated that there are some difficult hurdles to overcome in order to achieve a stable growth rate in prices of 2%.

Consumer Price and Expected Inflation Rate of Households

Chart 18



Source: Cabinet office, ministry of internal affairs and communications.

Note: The expected inflation rate is the weighted average of the outlook for prices one year from now in the cabinet office's consumer behavior survey.

Rate of Increase in Consumer Price if Exchange Rate and Wages Change

Chart 19

Scheduled wage up from baseline	Dollar-yen exchange rate as of end FY15				
	95	105	115	125	135
0%pt	0.9	1.2	1.4	1.7	2.0
+0.5%pt	1.1	1.3	1.6	1.9	2.1
+1.0%pt	1.2	1.5	1.7	2.0	2.3
+1.5%pt	1.4	1.7	1.9	2.2	2.5
+2.0%pt	1.6	1.8	2.1	2.4	2.7
+2.5%pt	1.7	2.0	2.3	2.5	2.8

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

Notes: 1) Values used in the table represent rate of change in each scenario and core CPI as of Jan-Mar period of FY2016.
2) Exchange rate assumptions (horizontal axis) - as of CY2016 Jan-Mar period.

5. Five Risk Factors Facing Japan's Economy

Five risk factors facing Japan's economy

In this section we examine the five risk factors facing Japan's economy.

Risks factors for the Japanese economy are: (1) The *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market stemming from the postponement of the additional consumption tax hike, (2) stagnant personal consumption due to the decline in real income, (3) China's shadow banking problem, (4) tumult in the economies of emerging nations in response to the US exit strategy, and (5) a worldwide decline in stock values due to geopolitical risk.

5.1 Risk Factor (1): The *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market stemming from the postponement of the additional consumption tax hike

Postponement of the additional consumption tax hike triggers a host of new problems

The first risk we examine here is the *Triple Weaknesses* – a weak bond market, weak yen, and weak stock market stemming from the postponement of the additional consumption tax hike.

Implementing monetary easing measures while at the same time forfeiting fiscal discipline is indeed an action tinged with monetization. If the bond market were to suddenly drop (which means a major increase in the long-term interest rate), there would be danger of a situation occurring where a malignantly weak yen and rising import prices would go unchecked, and which would in turn run into stagflation.

Five structural changes in Japan's economy

The Japanese government must steadily work toward fiscal reconstruction, keeping in mind the dramatic changes in the environment Japan will find itself in further up the road. As shown in Chart 20, the economic environment influencing Japan will likely see the following five structural changes: (1) an expanding fiscal deficit, (2) a dwindling current account surplus, (3) the shift from a strong yen to a weak yen, (4) the move from deflation to inflation, or stagflation, and (5) a change in the declining long-term interest rate to rising interest rates. The danger is that these five factors could suddenly occur all at once, upsetting Japan's entire economy. These structural changes would cause a huge shock to the system.

Japan's population is now aging faster than any other country in the world and this brings greater risk of a major increase in the fiscal deficit.

Then the increase in fiscal deficit would bring with it a decline in current account surplus as the public sector's condition worsens, causing the investment-savings balance to crumble, meaning the public sector would lose the capital surplus it needs. (In macro-economics the desirable equation to achieve is current account balance (excess savings in international trade) = fiscal balance (excess savings in the public sector) + excess savings in the private sector.

Meanwhile, the yen would continue to weaken on the foreign exchange markets if the following were to occur: (1) the timing of the BOJ's shift to monetary restraint is seen as being too far behind similar actions of central banks in other countries and (2) Japan's current account surplus shrinks.

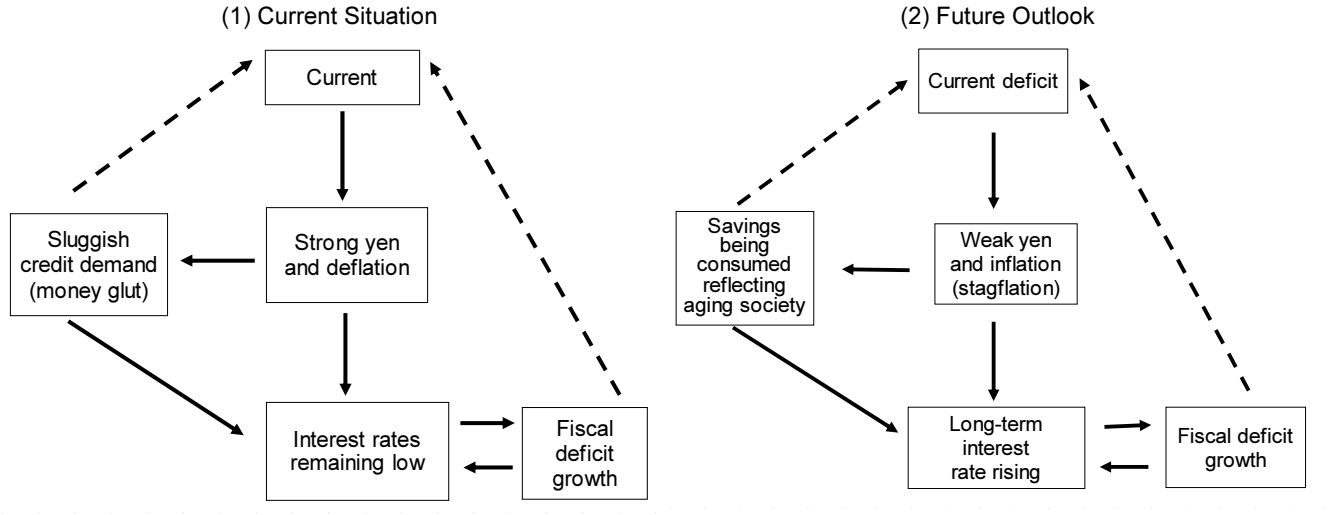
As a result of the BOJ's qualitative and quantitative monetary easing measures, Japan is now moving quickly to the point where it will experience a shift from deflation to inflation. The danger here is that

if fiscal discipline is lost, the yen rate could diverge from Japan's economic fundamentals and fall considerably against other currencies, aggravating imported inflation pressure and putting the squeeze on Japanese pocketbooks.

Additionally, the situation in the Middle East has become increasingly tense due to religious wars. Over 80% of Japan's oil imports travel through the Strait of Hormuz. If oil prices were to rise due to geopolitical risk causing a supply crisis, positive inflation in Japan would quickly turn into a more negative stagflation.

Finally, there would be an increasing risk of Japan's government bond bubble bursting if the above issues all came to a head at once. In this environment, the collapse of the government bond market is always there, hovering nearby.

Changes in Japan's Economic Environment **Chart 20**



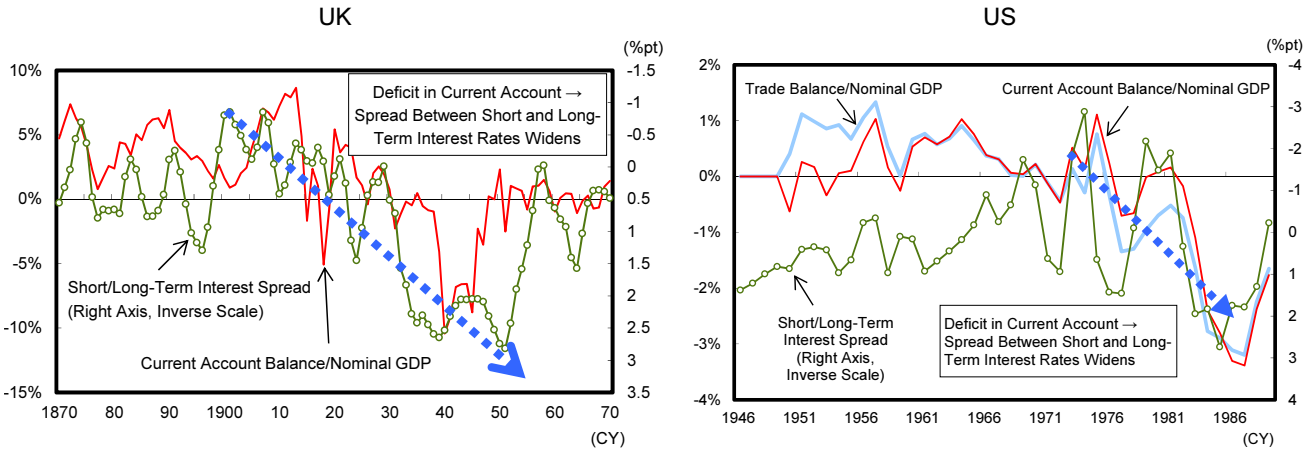
Source: Compiled by DIR

Spread between short and long-term interest rates widens when current account balance worsens

Historical data tells us that when the current account balance worsens, the spread between short and long-term interest rates tends to widen.

Chart 21 shows changes in the spread between short and long-term interest rates during periods when there were deficits in current account in the UK and the US (UK: 1920-1940, US: 1970-1980). In both cases, the spread between short and long-term interest rates rapidly widened. Considering the cumulative increases Japan has already experienced in its fiscal deficit, we should remain on the lookout religiously for the possibility of a rapid increase in the spread between short and long-term interest rates as soon as signs develop of a deficit in current account in the future.

Current Account Balance and Spread Between Short and Long-Term Interest Rates (UK & US)
Chart 21



Source: International Historic Statistics, by Brian R. Mitchell (Palgrave Macmillan), A History of Interest Rates; compiled by DIR.
Note: Long-term interest rate expressed in terms of 3-qtr moving average.

Source: Historical Statistics of the United States; compiled by DIR.

Be on guard for rapid increase in long-term interest rate during exit from bold monetary easing

The long-term interest rate has currently stabilized at a low level due to the effects of the BOJ's aggressive purchase of government bonds. However, we need to be on guard for a rapid increase in the long-term interest rate once exit begins from the BOJ's qualitative and quantitative monetary easing measures.

Chart 22 is a simulation of movement in the long-term interest rate once BOJ comes out with its exit strategy.

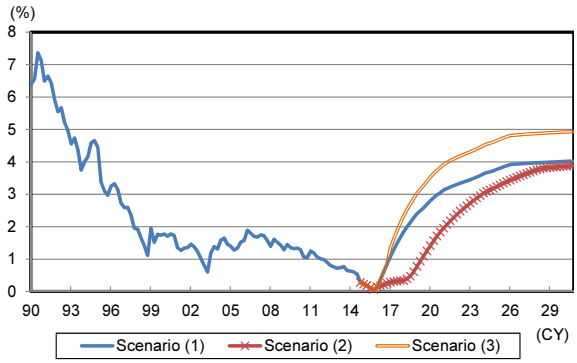
Scenario (1) approximates the BOJ's own assumptions, while Scenario (2) is closer to what the market would presume. Meanwhile, Scenario (3) is a simulation of what would happen if prices were to rise above the BOJ's inflation target. While qualitative and quantitative monetary easing measures are still ongoing, downward pressure remains on the long-term interest rate since the BOJ's purchase of large volumes of government bonds keeps supply and demand tight. The one point all of these simulations have in common is that they all conclude that the long-term interest rate will increase rapidly as of the point the BOJ stops purchasing long-term government bonds.

During the recent additional monetary easing measures announced on October 31, not only was the amount in long-term government bonds purchased increased, but the average duration was also lengthened. The assumption here is that the intent was, from a supply and demand point of view, to force interest rates in the long-term zone further downwards. However, this type of policy can also foster the malfunctioning of the bond market, causing it to lose its function of demanding an appropriate risk premium. And when the bond market recovers its normal functioning as of the point when an exit strategy is implemented and the market suddenly becomes aware of the necessity of coming up with an appropriate risk premium, with the additional factor of a relaxation of supply and demand, it could end up overshooting the appropriate level for the long-term interest rate. Hence when the BOJ begins moving toward exit from its qualitative and quantitative monetary easing measures, credibility of the budgetary policy will be extremely important.

On November 18, 2014 Japan's Prime minister Shinzo Abe announced the postponement of the additional consumption tax hike. While this decision may prevent the risk of the economy from moving into a downward swing, it may also bring about pessimism regarding Japan's ability to maintain its fiscal integrity on into the future, and this could cause tumult in the bond market. The

other risk is that this decision may be assessed as having been a major turning point in Japan's handling of its fiscal situation.

Simulation of Long-Term Interest Rate **Chart 22**



Source: Bloomberg; Compiled by DIR.

Shared Assumptions

○Forecasting Formula

・ Long-Term Interest Rate = 0.89 + 0.47* Call Rate + 0.2* Core core CPI - 3.57* (BOJ Long-Term Bond Holdings/Nominal GDP) + 0.24* US Long-Term Interest Rate

・ Call Rate = 0.89* Call Rate (t-1) + 0.11* ((Potential Growth Rate + 2) + 0.8* GDP Gap + 1.53* (Core CPI-2))

○Macro Assumptions

・ Real GDP uses annual rate + 2.0%, Nominal GDP uses annual rate + 3.0%, Potential Growth Rate uses annual rate + 0.64%, Assumed GDP Gap will not increase more than 1.5%.

・ While Core core CPI is 2% or less, Call Rate assumed to be 0.1%.

・ Bank of Japan long-term bond purchase and duration based on October 31, 2014 announcement.

Scenario Assumptions

○Scenario (1)

・ Purchase of long-term government bonds stops after March 2016.

・ Core core CPI growth rate reaches 2% during the 2016 Jan-Mar Period, and maintains 2% level after that point.

○Scenario (2)

・ Tapering begins in March 2018, and long-term government bond purchases stop after March 2019.

・ Core core CPI growth rate reaches 2% during the 2016 Jan-Mar Period, and maintains 2% level after that point.

○Scenario (3)

・ Purchase of long-term government bonds stops after March 2016.

・ Core core CPI growth rate reaches 3% during the 2016 Jan-Mar Period, and maintains 3% level after that point.

Note: Core core CPI = All items, less food (less alcoholic beverages) and energy

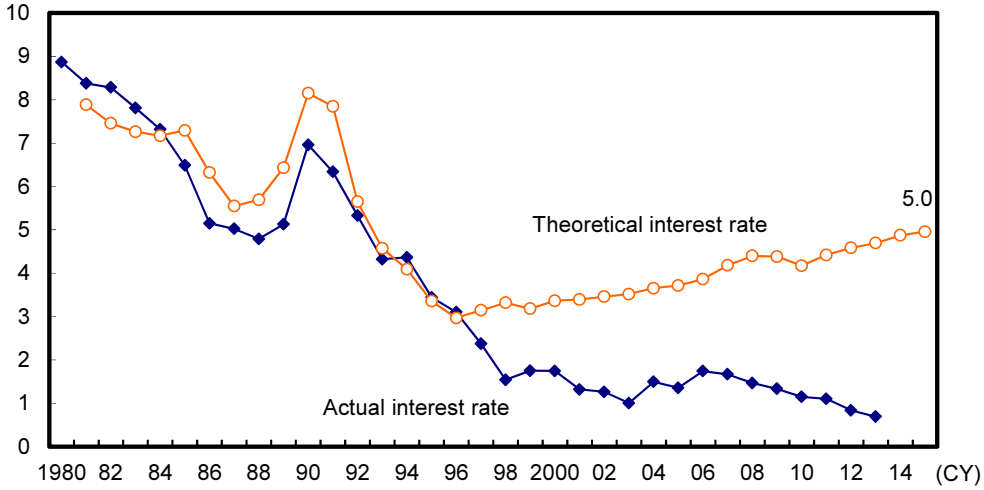
Risk of long-term interest rate rising to 5% in future

Chart 23 shows estimated values for Japan's long-term interest rate obtained through extrapolation in comparison to a long-term interest coefficient estimated using OECD data (21 member countries excluding Japan). In other words, a variable is used which explains long-term interest and the relationship to the long-term interest which is explained by that variable and then the level Japan's long-term interest estimated assuming that the OECD countries exhibit that same relationship. The estimate makes use of three variables – short-term interest, ratio of outstanding general government deficits to nominal GDP, and the GDP deflator. The estimated interest rates begin to deviate from actual figures after around 1997, and then the rate of deviation grows thereafter. The estimated value for long-term interest rate rises gradually and then hits 5.0% as of the year 2015. In comparison, the actual value of the long-term interest rate has maintained a low level at around 1% since the last half of the 1990s.

In conclusion, it should be kept in mind that if the long-term interest rate were determined in the same way as the OECD countries, considering the huge amount of government debt, Japan's long-term interest rate could possibly rise to as much as 5% in the future. Of course, using just one variable which has the ability to explain a certain amount about the OECD countries (short-term interest, ratio of outstanding general government deficits to nominal GDP, and the GDP deflator) does not help in explaining why Japan's interest has been so low up to now. Hence these estimates should be taken with a certain grain of salt.

Japan's Theoretical Long-term Interest Rate Implied by Other Nations' Interest Rates (%)

Chart 23



Source: OECD; compiled by DIR.
Note: Estimating equation for theoretical interest rate:
Long-term interest rate = 1.07 + 0.76 x short-term interest rate + 0.02 x outstanding balance of general government debt (% of nominal GDP) + 0.06 x GDP deflator (y/y).
Estimation period 1981-2013; Significance of coefficients: 5%; Adjusted R2: 0.87; Coefficients derived from estimation results of long-term interest rates of OECD 21 nations (excl. Japan).

5.2 Risk Factor (2): 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 second 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.

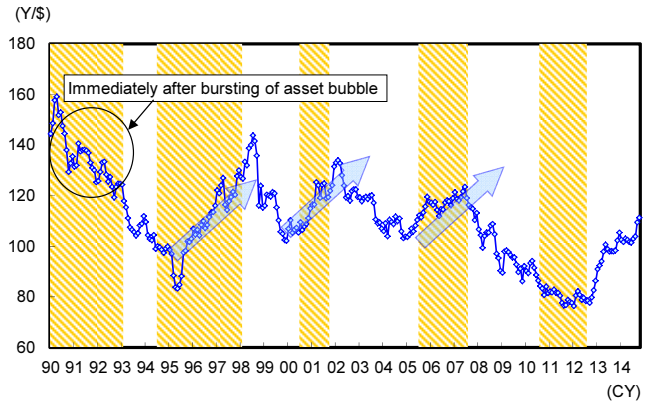
In our main scenario, we forecast two important developments in the Japanese economy. These are (1) a virtuous circle will develop in the economy made up of the following elements: production → personal income → consumption, and (2) the rise in prices associated with the increase in the consumption tax in April this year will eventually pass, and FY2015 real employee compensation will grow by +1.2% in comparison with the previous year.

Charts 24 and 25 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 24, the yen weakens against the dollar. Secondly, as shown in Chart 25, 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.

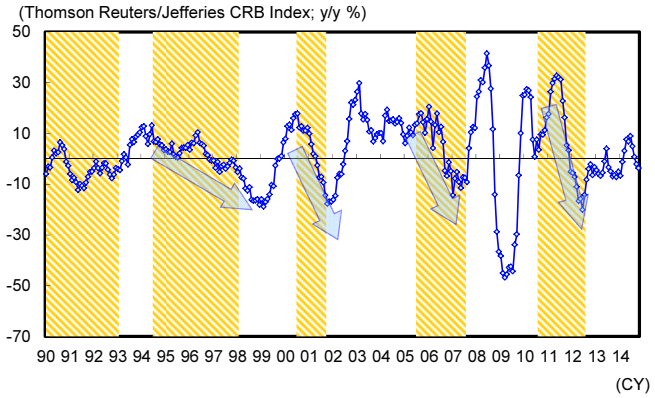
To summarize, the yen has become progressively weaker due to the BOJ's monetary easing policy. Theoretically, this should produce an environment where it is easier for real wages to increase. However, there is also the problem of the shutdown of nuclear power plants causing a sharp rise in imports of 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 24**



Source: Bank 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 25**



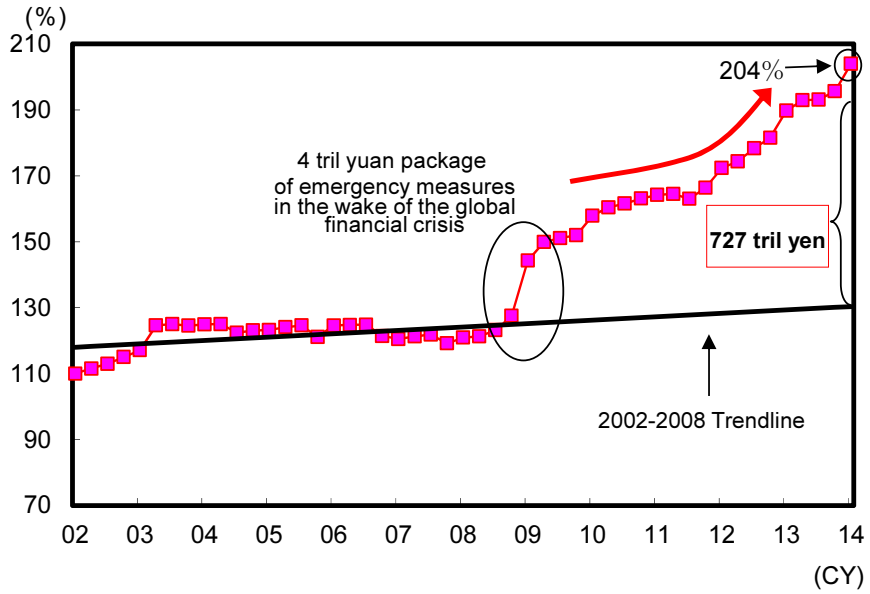
Source: Ministry of Internal Affairs and Communications, Haver Analytics; compiled by DIR
Note: Shaded areas indicate periods when growth rate in nominal wages exceeded that of the consumer price index.

5.3 Risk (3): China's shadow banking problem

The third 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 26 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 26**



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.

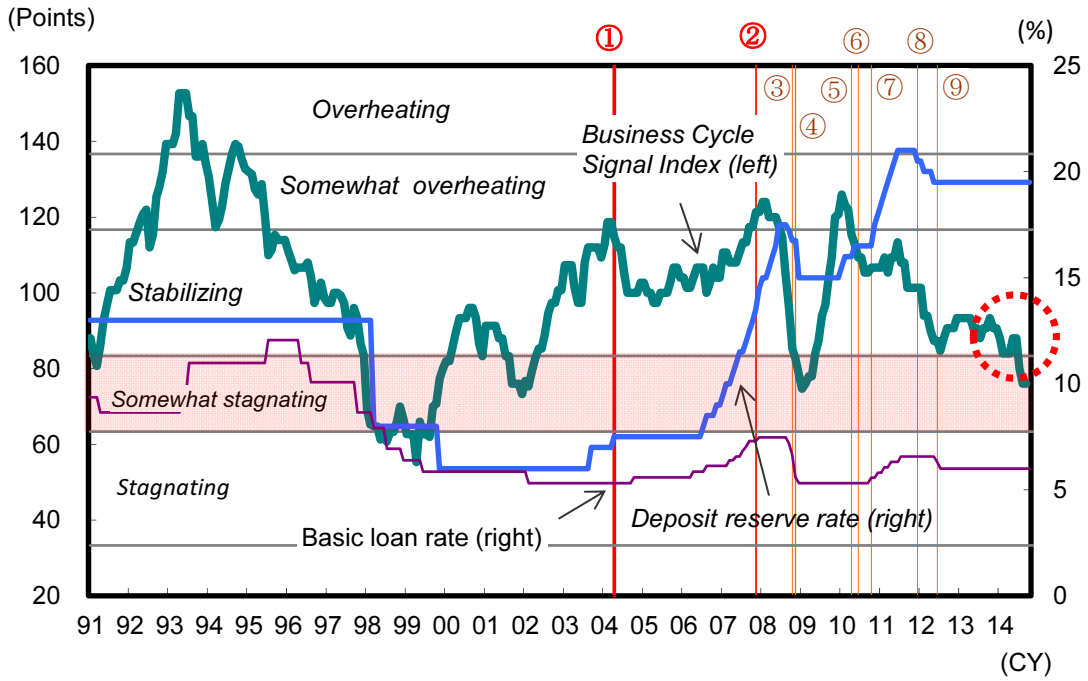
How will the world economy be affected by the collapse of China's debt bubble?

We believe that the impact on the world economy of the collapse of China's debt bubble should not be excessively overstated. Chart 27 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 27**



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

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

5.4 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 28 shows changes in the US long-term interest rate and TOPIX. Movements of these two indices have fairly close linkage.

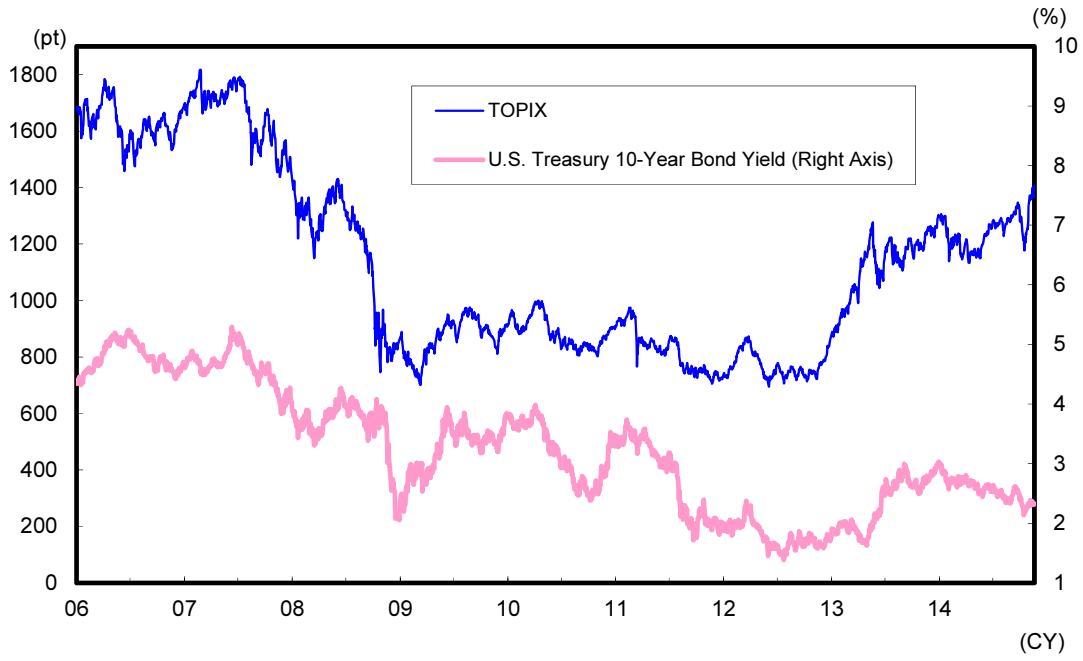
The question is why are the US long-term interest rate and Japanese stocks so closely linked?

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 28**



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 29, 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 29**

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

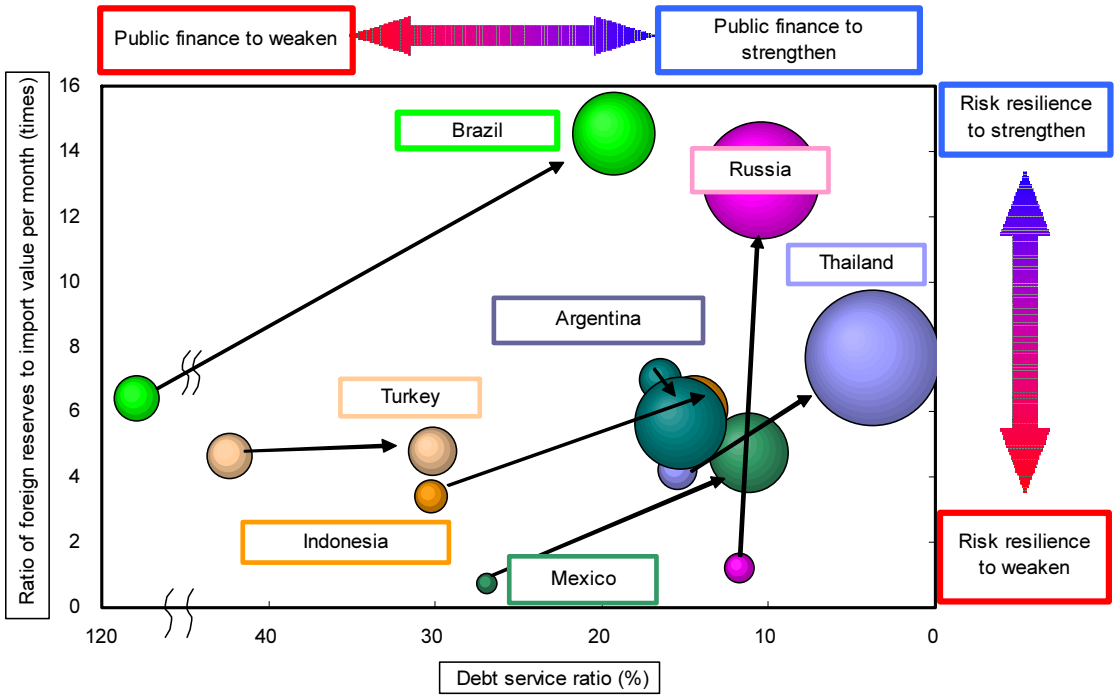
Source: Compiled by DIR.
Note: Growth rate of US domestic demand since 2014 and estimated fluctuations in term premium. The more rapidly the exit strategy progresses, the more steep the term premium's rise. Here influence of increases in term premium of the US Treasury bond on real interest of advanced 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 30 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 30**



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.

5.5 Risk (5): A surge in crude oil prices stemming from geopolitical risk

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

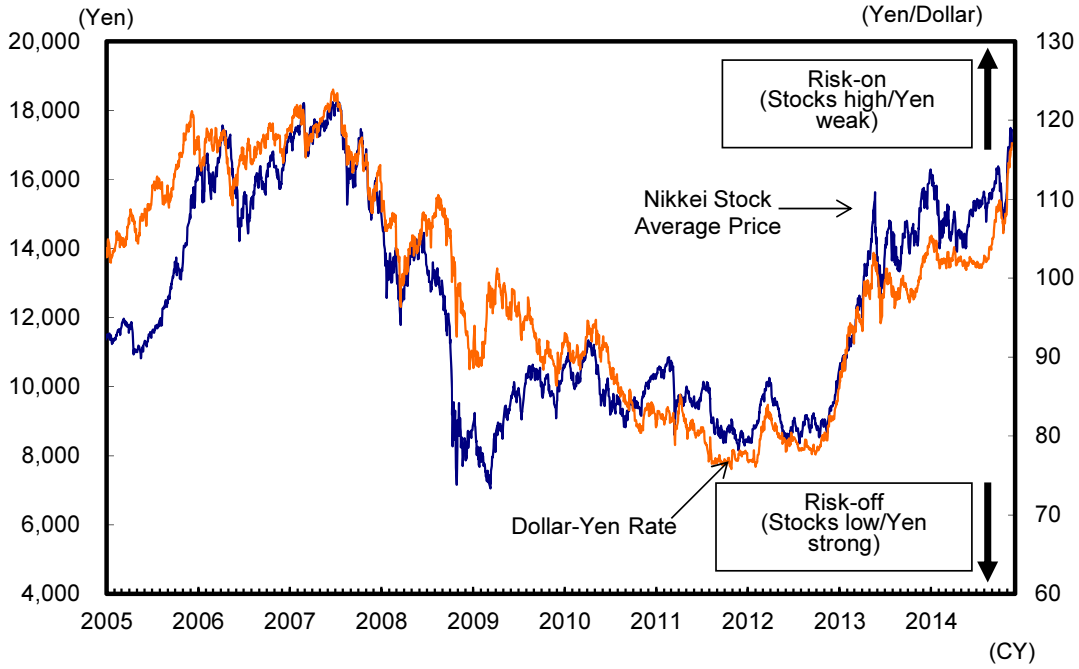
The fifth risk factor which the Japanese economy faces is geopolitical.

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 31 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 bold 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 6 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 31**



Source: Bloomberg, Nikkei; 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 32).

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.

Lastly, we would like to emphasize the close-knit nature of China's economic relationship with Russia and Iraq. If geopolitical risk rises to the surface in Russia or Iraq in the future, the sense of uncertainty as regards China's economy could deepen further. This is another area which requires close monitoring on into the future.

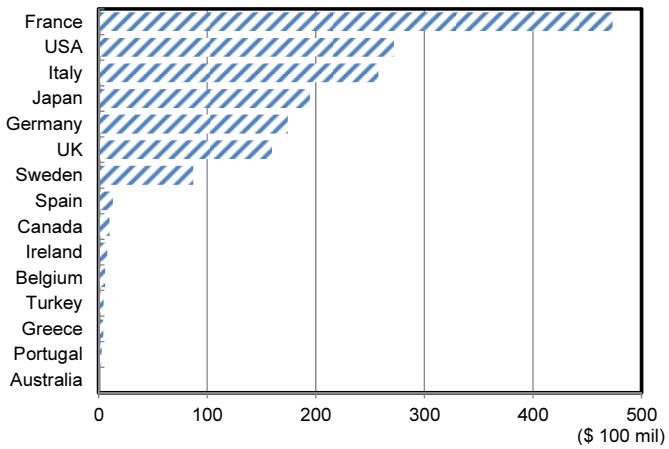
Trade Relations with Russia and Iraq **Chart 32**

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.

Claims Held Against Russia (2014, Q1)



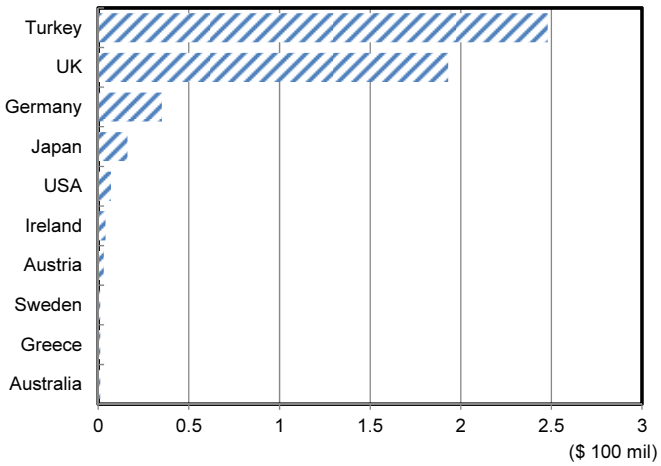
Source: Statistics from BIS; compiled by DIR.

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 Iraq (2014, Q1)



Source: Statistics from BIS; compiled by DIR.

6. Supplement: Alternative scenarios

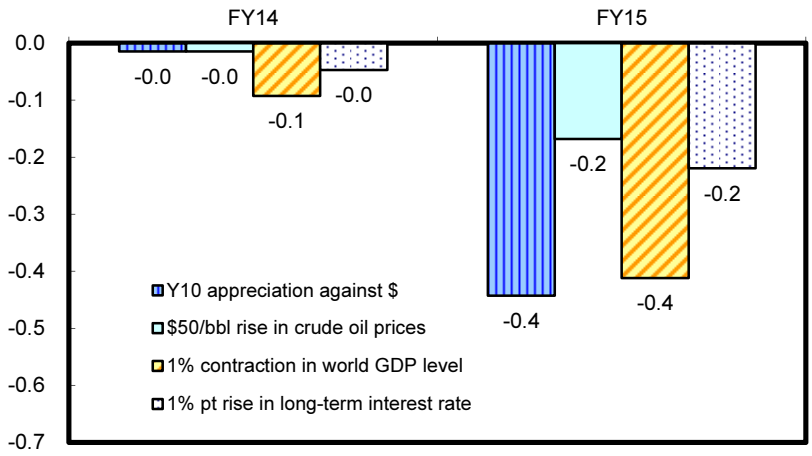
Here, we estimate likely economic effects from changes in our assumptions. The assumptions and effects of alternative scenarios are shown in the two charts below. We assumed alternative scenarios might emerge from Oct-Dec 2014.

Standard and Alternate Scenario Assumptions

	Standard scenario		Alternate scenario (in each quarter in both years)
Case 1: Forex rate	Y109.0/$ in FY14 and Y118.0/$ in FY15	→	Y10 appreciation against $
Case 2: Crude oil prices (WTI futures)	$90.1/bbl in FY14 and 80.0/bbl in FY15		$50/bbl rise
Case 3: World GDP	+3.3% y/y in CY14 and +3.7% y/y in CY15		1% contraction in world GDP level
Case 4: Long-term interest rate	0.55% in FY14 and 0.69% in FY15		1% pt rise

Source: Compiled by DIR.

Effects on Real GDP (% change from standard scenario) **Chart 33**



Source: Compiled by DIR.

6.1 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 0.0% and 0.4% in FY14 and FY15, respectively, compared to our standard scenario.

6.2 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.

6.3 Contraction of world GDP

If world demand (GDP) contracts by 1% from our standard scenario, Japan's real GDP level would shrink 0.1% 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.

6.4 Higher interest rates

If long-term interest rates rise 1 point above our standard scenario, real GDP level would contract 0.0% 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 34

	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 %)	1.5	2.5	1.4	(-0.1)	1.8	(-0.8)	1.4	(-0.1)	2.3	(-0.3)
Real GDP (Chained [2005]; y/y %)	**-0.5**	**1.8**	**-0.6**	**(-0.0)**	**1.4**	**(-0.4)**	**-0.6**	**(-0.0)**	**1.7**	**(-0.2)**
GDP deflator (Y/y %)	2.0	0.6	1.9	(-0.1)	0.4	(-0.4)	2.0	(-0.1)	0.6	(-0.1)
All-industry Activity Index (Y/y %)	-1.4	2.6	-1.5	(-0.1)	2.0	(-0.6)	-1.4	(0.0)	2.6	(0.0)
Industrial Production Index (Y/y %)	-0.8	4.5	-1.2	(-0.4)	2.9	(-2.0)	-0.8	(-0.0)	4.3	(-0.2)
Tertiary Industry Activity Index (Y/y %)	-1.9	2.1	-1.9	(-0.1)	1.7	(-0.4)	-1.8	(0.0)	2.1	(0.1)
Corporate Goods Price Index (Y/y %)	3.6	1.9	3.3	(-0.3)	0.9	(-1.3)	3.9	(0.3)	2.5	(0.9)
Consumer Price Index (Y/y %)	3.2	1.3	3.1	(-0.1)	1.1	(-0.2)	3.2	(0.0)	1.4	(0.2)
Unemployment rate (%)	3.6	3.5	3.6	(-0.0)	3.5	(0.0)	3.6	(-0.0)	3.5	(0.0)
Trade balance (Y tril)	-9.1	-8.2	-8.6	(0.5)	-7.7	(0.5)	-10.7	(-1.6)	-9.9	(-1.7)
Current balance (US$100 mil)	417	671	608	(192)	720	(49)	356	(-61)	669	(-2)
Current balance (Y tril)	4.7	7.9	6.3	(1.6)	7.9	(-0.0)	4.0	(-0.6)	7.9	(-0.0)
Real GDP components (Chained [2005]; y/y %)										
Private consumption	-2.5	1.8	-2.5	(0.0)	1.6	(-0.1)	-2.6	(-0.0)	1.7	(-0.0)
Private housing investment	-10.8	2.8	-10.9	(-0.0)	2.5	(-0.3)	-10.8	(0.0)	2.5	(-0.3)
Private non-housing investment	1.7	5.0	1.6	(-0.1)	3.5	(-1.5)	1.7	(0.1)	4.2	(-0.7)
Government final consumption	0.4	1.2	0.4	(0.0)	1.3	(0.1)	0.4	(-0.0)	1.2	(-0.0)
Public fixed investment	1.3	-8.3	1.5	(0.2)	-7.9	(0.6)	1.2	(-0.1)	-8.6	(-0.4)
Exports of goods and services	6.0	4.7	5.9	(-0.1)	4.0	(-0.7)	6.0	(-0.0)	4.4	(-0.3)
Imports of goods and services	2.4	3.6	2.3	(-0.1)	3.6	(-0.1)	2.3	(-0.1)	3.0	(-0.6)

	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 %)	1.4	(-0.1)	2.1	(-0.4)	1.4	(-0.0)	2.3	(-0.2)	1.5	(-0.0)	2.6	(0.1)
Real GDP (Chained [2005]; y/y %)	**-0.6**	**(-0.1)**	**1.5**	**(-0.4)**	**-0.6**	**(-0.0)**	**1.7**	**(-0.2)**	**-0.6**	**(-0.0)**	**1.9**	**(0.1)**
GDP deflator (Y/y %)	2.0	(-0.0)	0.6	(-0.0)	2.0	(0.0)	0.6	(0.0)	2.0	(-0.0)	0.7	(0.0)
All-industry Activity Index (Y/y %)	-1.5	(-0.1)	2.3	(-0.3)	-1.4	(-0.0)	2.4	(-0.1)	-1.3	(0.1)	2.8	(0.3)
Industrial Production Index (Y/y %)	-1.1	(-0.3)	3.7	(-1.1)	-0.9	(-0.1)	4.2	(-0.4)	-0.6	(0.2)	5.1	(0.7)
Tertiary Industry Activity Index (Y/y %)	-1.9	(-0.0)	2.0	(-0.1)	-1.9	(-0.0)	2.0	(-0.1)	-1.8	(0.1)	2.3	(0.3)
Corporate Goods Price Index (Y/y %)	3.6	(-0.0)	1.8	(-0.1)	3.6	(0.0)	1.9	(-0.0)	4.1	(0.4)	3.0	(1.6)
Consumer Price Index (Y/y %)	3.2	(-0.0)	1.3	(-0.0)	3.2	(0.0)	1.3	(-0.0)	3.3	(0.1)	1.5	(0.3)
Unemployment rate (%)	3.6	(-0.0)	3.5	(0.0)	3.6	(0.0)	3.5	(0.0)	3.6	(-0.0)	3.5	(0.0)
Trade balance (Y tril)	-9.5	(-0.4)	-8.5	(-0.3)	-8.9	(0.2)	-7.6	(0.6)	-10.9	(-1.8)	-10.1	(-1.9)
Current balance (US$100 mil)	452	(35)	731	(60)	523	(107)	535	(-136)	260	(-156)	645	(-27)
Current balance (Y tril)	5.0	(0.4)	8.6	(0.6)	5.7	(1.1)	6.4	(-1.6)	3.2	(-1.4)	7.9	(0.0)
Real GDP components (Chained [2005]; y/y %)												
Private consumption	-2.5	(-0.0)	1.7	(-0.1)	-2.5	(-0.0)	1.7	(-0.0)	-2.6	(-0.0)	1.8	(0.0)
Private housing investment	-10.8	(-0.0)	2.6	(-0.2)	-11.0	(-0.1)	2.1	(-0.8)	-10.8	(0.0)	2.7	(-0.1)
Private non-housing investment	1.7	(0.0)	4.6	(-0.4)	1.4	(-0.3)	3.7	(-1.5)	1.7	(0.1)	5.0	(0.0)
Government final consumption	0.4	(0.0)	1.2	(0.0)	0.4	(0.0)	1.2	(0.0)	0.4	(-0.0)	1.1	(-0.1)
Public fixed investment	1.3	(0.0)	-8.3	(0.0)	1.3	(-0.0)	-8.3	(0.0)	1.1	(-0.2)	-8.8	(-0.8)
Exports of goods and services	5.4	(-0.6)	3.3	(-1.8)	6.0	(-0.0)	4.6	(-0.0)	6.1	(0.0)	4.7	(0.1)
Imports of goods and services	2.3	(-0.1)	3.3	(-0.3)	2.3	(-0.1)	3.0	(-0.6)	2.4	(-0.0)	3.0	(-0.5)

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.

7. 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)	474.3	470.3	470.5	475.8	477.4	479.3	479.9	487.4	472.6	481.4	473.8	478.1
Q/q %	-1.3	-0.8	0.1	1.1	0.3	0.4	0.1	1.5				
Q/q %, SAAR	-5.2	-3.3	0.2	4.6	1.4	1.6	0.5	6.3				
Y/y %	2.1	-0.9	-1.0	-1.0	0.6	1.9	2.0	2.9	-0.2	1.9	0.5	0.9
Real GDP (chained [2005]; SAAR; Y tril)	518.7	515.7	514.2	521.3	525.4	528.5	526.5	535.0	517.6	529.2	517.5	525.4
Q/q %	-0.6	-0.6	-0.3	1.4	0.8	0.6	-0.4	1.6				
Q/q %, SAAR	-2.4	-2.2	-1.2	5.6	3.2	2.4	-1.6	6.7				
Y/y %	3.2	-0.2	-0.3	0.1	1.2	2.3	2.5	2.9	0.7	2.2	1.5	1.5
Contribution to GDP growth (% pt)												
Domestic demand	-0.2	-0.1	-0.2	1.0	0.7	1.0	0.2	1.8	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	102.9	100.5	102.4	100.6	101.9
Y/y %	-1.0	-1.9	-1.0	-0.3	0.6	2.2	2.5	2.0	-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	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)	486.9	483.2	490.1	494.0	496.6	499.0	501.6	504.4	488.6	500.7	487.2	498.0
Q/q %	-0.1	-0.8	1.4	0.8	0.5	0.5	0.5	0.6				
Q/q %, SAAR	-0.4	-3.0	5.9	3.2	2.1	2.0	2.1	2.2				
Y/y %	1.9	0.8	2.1	1.1	2.1	3.3	2.4	2.2	1.5	2.5	1.9	2.2
Real GDP (chained [2005]; SAAR; Y tril)	525.0	522.8	527.4	530.9	533.0	534.9	536.8	538.7	526.3	535.9	527.5	533.9
Q/q %	-1.9	-0.4	0.9	0.7	0.4	0.4	0.3	0.4				
Q/q %, SAAR	-7.3	-1.6	3.6	2.6	1.6	1.4	1.4	1.4				
Y/y %	-0.2	-1.2	0.1	-0.9	1.6	2.4	1.8	1.5	-0.5	1.8	0.4	1.2
Contribution to GDP growth (% pt)												
Domestic demand	-2.9	-0.5	0.8	0.6	0.3	0.3	0.3	0.3	-1.1	1.5	0.5	0.8
Foreign demand	1.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.6	0.3	-0.1	0.3
GDP deflator (y/y %)	2.0	2.1	2.0	2.1	0.5	0.9	0.6	0.7	2.0	0.6	1.5	1.0
Index of All-Industry Activity (2005=100)	96.1	96.0	96.9	97.6	98.2	98.8	99.4	100.1	96.7	99.1	97.2	98.5
Q/q %; y/y %	-3.4	-0.1	0.9	0.7	0.6	0.6	0.6	0.7	-1.4	2.6	-0.1	1.4
Index of Industrial Production (2010=100)	98.6	96.7	98.2	99.2	100.3	101.7	103.4	105.2	98.1	102.6	99.0	101.1
Q/q %; y/y %	-3.8	-1.9	1.5	1.0	1.2	1.4	1.6	1.7	-0.8	4.5	2.1	2.1
Index of Tertiary Industry Activity (2005=100)	97.9	98.2	99.0	99.5	100.1	100.5	100.9	101.3	98.6	100.7	99.2	100.2
Q/q %; y/y %	-3.8	0.3	0.8	0.6	0.5	0.4	0.4	0.4	-1.9	2.1	-0.8	1.0
Corporate Goods Price Index components (2010=100)												
Domestic Company Goods Price Index	106.0	106.5	105.2	106.7	107.3	107.8	108.3	108.8	106.1	108.1	105.1	107.5
Y/y %	4.3	4.0	2.5	3.7	1.3	1.3	3.0	2.0	3.6	1.9	3.2	2.3
CPI (excl. fresh food; 2010=100)	103.3	103.5	103.8	103.8	104.6	104.8	105.2	105.2	103.6	104.9	102.8	104.6
Y/y %	3.3	3.2	3.1	3.2	1.2	1.2	1.3	1.4	3.2	1.3	2.7	1.7
Unemployment rate (%)	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.6	3.5	3.6	3.5
Call rate (end-period; %)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Government bond yield (10 year; %)	0.59	0.52	0.50	0.60	0.64	0.67	0.70	0.75	0.55	0.69	0.55	0.65
Money stock; M2 (y/y %)	3.3	3.0	3.7	3.8	3.9	4.1	4.2	4.3	3.4	4.1	3.5	4.0
Trade balance (SAAR; Y tril)	-8.8	-10.2	-8.6	-8.7	-8.6	-8.4	-8.1	-7.7	-9.1	-8.2	-10.8	-8.5
Current balance (SAAR; $100 mil)	269	248	580	570	594	638	697	756	417	671	140	625
Current balance (SAAR; Y tril)	2.8	2.6	6.6	6.7	7.0	7.5	8.2	8.9	4.7	7.9	1.6	7.4
(% of nominal GDP)	0.6	0.5	1.3	1.4	1.4	1.5	1.6	1.8	1.0	1.6	0.3	1.5
Exchange rate (Y/$)	102.1	103.9	114.0	118.0	118.0	118.0	118.0	118.0	109.5	118.0	105.7	118.0
(Y/Euro)	139.5	137.8	144.0	148.0	148.0	148.0	148.0	148.0	142.3	148.0	140.4	148.0

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	518.7	515.7	514.2	521.3	525.4	528.5	526.5	535.0	517.6	529.2	517.5	525.4
Q/q %, SAAR	-2.4	-2.2	-1.2	5.6	3.2	2.4	-1.6	6.7				
Y/y %	3.2	-0.2	-0.3	0.1	1.2	2.3	2.5	2.9	0.7	2.2	1.5	1.5
Domestic demand	509.1	508.6	507.9	512.6	516.2	521.0	522.0	531.5	509.6	523.2	508.9	517.9
Q/q %, SAAR	-0.7	-0.4	-0.6	3.8	2.9	3.8	0.7	7.5				
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	388.9	388.6	387.3	390.2	391.8	395.3	395.6	405.8	388.7	397.4	388.3	393.1
Q/q %, SAAR	0.1	-0.3	-1.3	3.1	1.6	3.6	0.3	10.7				
Y/y %	4.0	1.4	-0.0	0.4	0.8	1.6	2.1	4.5	1.4	2.2	2.4	1.2
Final consumption	308.3	307.0	307.5	311.1	313.7	314.7	314.6	321.6	308.5	316.2	307.3	313.5
Q/q %, SAAR	2.0	-1.7	0.7	4.7	3.4	1.3	-0.1	9.1				
Y/y %	3.0	0.9	0.7	1.5	1.8	2.4	2.4	3.5	1.5	2.5	2.0	2.0
Residential investment	13.3	13.6	13.7	13.9	14.2	14.8	15.1	15.5	13.6	14.9	13.3	14.5
Q/q %, SAAR	18.3	10.4	3.8	4.1	10.0	18.1	9.1	9.7				
Y/y %	4.8	1.7	5.9	9.4	6.8	8.5	10.4	12.0	5.4	9.5	2.9	8.8
Non-residential investment	70.0	69.0	68.3	66.9	68.1	68.6	69.1	74.3	68.5	70.3	69.2	68.1
Q/q %, SAAR	3.3	-5.4	-4.2	-7.8	7.4	2.7	3.1	33.8				
Y/y %	8.3	3.9	-4.2	-3.4	-2.7	-0.9	1.1	11.4	0.7	2.6	3.7	-1.5
Change in inventories	-2.7	-1.0	-2.3	-1.7	-4.3	-2.8	-3.3	-5.6	-1.9	-4.0	-1.5	-3.0
Public demand	120.2	120.0	120.6	122.4	124.5	125.8	126.4	125.7	120.9	125.7	120.6	124.8
Q/q %, SAAR	-3.2	-0.7	1.9	6.0	7.0	4.2	2.1	-2.2				
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	101.6	102.2	102.3	102.5	102.3	100.6	102.4	100.2	102.2
Q/q %, SAAR	-2.0	1.5	2.6	3.3	2.6	0.4	0.7	-0.9				
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	20.5	19.9	19.9	20.9	22.2	23.5	23.9	23.4	20.3	23.4	20.4	22.7
Q/q %, SAAR	-8.6	-11.3	-0.3	22.9	26.7	25.0	6.9	-7.7				
Y/y %	0.3	0.9	4.8	-0.8	8.1	18.9	20.7	11.3	1.3	15.0	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	5.8	8.4	7.2	9.1	8.0
Exports of goods and services	84.2	80.9	78.3	81.6	84.1	83.6	83.8	89.2	81.3	85.2	82.0	83.3
Q/q %, SAAR	-2.0	-14.9	-12.1	17.9	12.8	-2.5	1.0	28.2				
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	72.6	74.3	75.7	78.5	83.3	72.9	78.0	72.8	75.3
Q/q %, SAAR	7.3	-2.8	-7.7	4.5	9.8	7.4	15.6	27.3				
Y/y %	9.0	4.9	0.9	0.2	0.7	3.2	9.2	14.9	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	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	525.0	522.8	527.4	530.9	533.0	534.9	536.8	538.7	526.3	535.9	527.5	533.9
Q/q %, SAAR	-7.3	-1.6	3.6	2.6	1.6	1.4	1.4	1.4				
Y/y %	-0.2	-1.2	0.1	-0.9	1.6	2.4	1.8	1.5	-0.5	1.8	0.4	1.2
Domestic demand	515.9	513.8	517.8	521.0	522.9	524.3	525.8	527.3	517.2	525.1	519.9	523.5
Q/q %, SAAR	-11.2	-1.6	3.1	2.5	1.4	1.1	1.1	1.1				
Y/y %	-0.1	-1.5	-0.9	-2.0	1.3	2.1	1.4	1.2	-1.1	1.5	0.4	0.7
Private demand	390.1	387.2	391.1	394.5	396.6	398.3	400.2	402.0	390.7	399.4	393.7	397.3
Q/q %, SAAR	-14.5	-3.0	4.1	3.5	2.1	1.8	1.8	1.9				
Y/y %	-0.4	-2.2	-1.2	-2.9	1.6	2.9	2.2	2.1	-1.7	2.2	0.2	0.9
Final consumption	305.5	306.6	309.3	311.5	312.5	313.2	314.0	314.8	308.2	313.7	310.8	312.8
Q/q %, SAAR	-18.6	1.5	3.6	2.8	1.3	0.9	1.0	1.0				
Y/y %	-2.6	-2.7	-1.7	-3.2	2.3	2.2	1.5	1.1	-2.5	1.8	-0.9	0.7
Residential investment	13.9	13.0	13.1	13.3	13.5	13.6	13.7	13.9	13.3	13.7	13.9	13.5
Q/q %, SAAR	-34.3	-24.1	2.0	7.4	5.3	4.1	3.9	3.6				
Y/y %	-2.0	-12.3	-13.7	-14.2	-3.2	4.8	5.2	4.3	-10.8	2.8	-4.5	-2.3
Non-residential investment	70.8	70.6	71.7	72.7	73.5	74.5	75.4	76.4	71.4	75.0	71.9	73.9
Q/q %, SAAR	-17.9	-0.9	6.1	5.7	5.0	5.1	5.2	5.3				
Y/y %	3.8	2.8	3.7	-2.4	4.0	5.6	5.2	5.2	1.7	5.0	5.6	2.8
Change in inventories	-0.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-2.2	-3.0	-2.9	-3.0
Public demand	125.8	126.6	126.6	126.5	126.3	126.0	125.6	125.2	126.5	125.7	126.2	126.2
Q/q %, SAAR	0.2	2.7	0.1	-0.4	-0.6	-1.0	-1.2	-1.3				
Y/y %	0.7	0.8	0.1	0.6	0.6	-0.5	-1.0	-1.3	0.6	-0.6	1.1	-0.1
Government final consumption	102.2	102.6	102.9	103.2	103.5	103.8	104.1	104.4	102.7	104.0	102.5	103.7
Q/q %, SAAR	-0.2	1.3	1.1	1.2	1.2	1.2	1.2	1.3				
Y/y %	-0.0	0.3	0.3	0.9	1.2	1.2	1.2	1.2	0.4	1.2	0.3	1.1
Fixed investment	23.5	24.0	23.8	23.3	22.8	22.2	21.5	20.7	23.7	21.7	23.7	22.5
Q/q %, SAAR	1.2	8.9	-4.0	-7.2	-8.4	-10.5	-12.0	-13.1				
Y/y %	5.2	2.9	-0.8	-0.2	-2.7	-7.9	-9.5	-11.1	1.3	-8.3	4.5	-5.1
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	9.9	10.4	10.7	10.9	11.2	11.6	12.0	12.5	10.5	11.8	9.2	11.4
Exports of goods and services	88.7	89.9	91.0	91.7	92.7	93.9	95.1	96.3	90.3	94.5	89.7	93.3
Q/q %, SAAR	-1.9	5.3	4.9	3.2	4.5	5.2	5.2	5.4				
Y/y %	5.4	7.4	8.6	2.8	4.5	4.5	4.5	5.1	6.0	4.7	7.7	4.1
Imports of goods and services	78.9	79.5	80.3	80.8	81.5	82.3	83.1	83.9	79.8	82.7	80.5	81.9
Q/q %, SAAR	-19.9	3.1	4.1	2.8	3.5	3.8	3.9	4.0				
Y/y %	6.0	5.0	2.3	-3.1	3.4	3.6	3.5	3.8	2.4	3.6	6.9	1.8

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	474.3	470.3	470.5	475.8	477.4	479.3	479.9	487.4	472.6	481.4	473.8	478.1
Q/q %, SAAR	-5.2	-3.3	0.2	4.6	1.4	1.6	0.5	6.3				
Y/y %	2.1	-0.9	-1.0	-1.0	0.6	1.9	2.0	2.9	-0.2	1.9	0.5	0.9
Domestic demand	483.3	480.6	481.4	486.9	488.3	493.9	497.8	507.4	483.0	497.3	483.2	491.7
Q/q %, SAAR	-3.8	-2.2	0.6	4.7	1.2	4.6	3.2	8.0				
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	366.1	363.4	363.6	366.5	367.0	371.1	374.0	383.5	364.8	374.2	365.1	369.6
Q/q %, SAAR	-2.1	-2.9	0.2	3.3	0.5	4.6	3.2	10.4				
Y/y %	3.3	0.4	-0.6	-0.4	0.3	2.0	2.8	5.2	0.6	2.6	1.7	1.2
Final consumption	289.0	285.7	287.4	290.2	292.0	293.5	295.4	301.4	288.1	295.7	287.7	292.7
Q/q %, SAAR	-0.1	-4.5	2.3	3.9	2.6	2.1	2.5	8.5				
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	14.3	9.4	7.7	7.1	12.2	22.1	15.7	10.4				
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	66.2	64.9	64.4	63.4	64.6	65.2	66.0	71.0	64.7	66.9	65.3	64.7
Q/q %, SAAR	3.0	-7.3	-3.3	-6.2	8.2	3.8	4.7	34.1				
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	-2.7	-1.2	-2.4	-1.4	-4.5	-3.3	-3.5	-5.6	-1.9	-4.2	-1.6	-3.2
Public demand	117.2	117.2	117.8	120.4	121.4	122.8	123.7	124.0	118.1	123.1	118.0	122.1
Q/q %, SAAR	-8.7	0.0	2.1	9.1	3.3	4.7	3.2	0.8				
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	96.0	96.6	97.2	98.7	98.2	98.2	98.4	99.0	97.1	98.5	96.9	98.4
Q/q %, SAAR	-8.1	2.6	2.5	6.3	-2.0	-0.0	0.8	2.4				
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	20.5	20.6	21.8	23.1	24.6	25.3	24.9	21.0	24.6	21.1	23.7
Q/q %, SAAR	-11.2	-11.3	1.7	25.6	25.7	29.2	11.2	-6.1				
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	0.0	-0.0	-0.2	0.0	-0.1	0.0	0.1	-0.0	0.0	0.0	-0.0
Net exports of goods and services	-9.0	-10.3	-10.8	-11.1	-10.9	-14.6	-17.8	-20.1	-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	79.7	83.9	70.4	80.0	69.8	77.6
Q/q %, SAAR	-2.2	-15.7	-3.2	42.8	22.4	2.3	6.5	22.8				
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	80.3	78.7	78.6	85.2	88.9	93.0	97.5	103.9	80.8	95.9	79.2	91.2
Q/q %, SAAR	6.8	-7.9	-0.3	38.2	18.2	19.9	20.9	29.1				
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	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	486.9	483.2	490.1	494.0	496.6	499.0	501.6	504.4	488.6	500.7	487.2	498.0
Q/q %, SAAR	-0.4	-3.0	5.9	3.2	2.1	2.0	2.1	2.2				
Y/y %	1.9	0.8	2.1	1.1	2.1	3.3	2.4	2.2	1.5	2.5	1.9	2.2
Domestic demand	500.2	498.4	502.5	506.5	509.1	511.3	513.6	516.0	502.0	512.6	502.4	510.2
Q/q %, SAAR	-5.6	-1.5	3.4	3.2	2.1	1.7	1.8	1.9				
Y/y %	2.3	0.9	0.9	-0.3	1.8	2.7	2.1	1.9	1.0	2.1	2.2	1.6
Private demand	374.9	371.8	375.8	379.8	382.5	384.8	387.4	390.1	375.6	386.4	376.6	383.6
Q/q %, SAAR	-8.6	-3.4	4.4	4.3	2.9	2.5	2.7	2.8				
Y/y %	2.2	0.1	0.4	-1.1	1.9	3.6	3.0	3.0	0.4	2.9	1.9	1.8
Final consumption	291.6	292.7	295.6	298.0	299.4	300.5	301.7	303.0	294.5	301.2	295.4	299.9
Q/q %, SAAR	-12.4	1.4	4.1	3.3	1.9	1.4	1.6	1.7				
Y/y %	-0.1	-0.4	0.1	-1.2	2.7	2.7	2.1	1.7	-0.4	2.3	0.9	1.5
Residential investment	15.3	14.2	14.3	14.6	14.9	15.1	15.3	15.4	14.6	15.2	15.1	15.0
Q/q %, SAAR	-28.3	-24.6	2.8	8.8	6.7	5.3	5.1	4.9				
Y/y %	2.8	-9.0	-11.5	-11.9	-2.6	6.0	6.5	5.6	-7.8	3.9	-1.3	-0.8
Non-residential investment	67.9	67.9	68.9	70.2	71.2	72.3	73.5	74.7	68.8	73.0	69.0	71.7
Q/q %, SAAR	-16.3	-0.1	6.1	7.4	6.2	6.4	6.7	6.8				
Y/y %	5.0	3.9	4.5	-1.3	4.9	6.6	6.7	6.6	2.7	6.2	6.7	3.9
Change in inventories	0.1	-3.1	-3.1	-3.1	-3.1	-3.1	-3.1	-3.1	-2.2	-3.0	-2.9	-3.0
Public demand	125.3	126.6	126.7	126.7	126.7	126.5	126.2	125.9	126.4	126.2	125.7	126.6
Q/q %, SAAR	4.2	4.4	0.4	-0.0	-0.2	-0.6	-0.8	-0.9				
Y/y %	2.8	3.5	2.4	2.3	1.3	-0.3	-0.6	-1.1	2.7	-0.2	3.0	0.7
Government final consumption	99.9	100.5	100.9	101.3	101.7	102.1	102.5	102.9	100.7	102.3	100.1	101.9
Q/q %, SAAR	3.4	2.5	1.5	1.6	1.6	1.7	1.7	1.7				
Y/y %	1.7	2.5	2.6	2.3	1.8	1.5	1.6	1.7	2.2	1.6	1.8	1.8
Fixed investment	25.4	26.1	25.8	25.4	24.9	24.3	23.7	22.9	25.7	23.9	25.5	24.6
Q/q %, SAAR	7.7	11.8	-4.0	-6.1	-7.3	-9.3	-10.7	-11.6				
Y/y %	9.3	6.8	1.8	2.3	-1.4	-7.1	-8.2	-9.9	4.4	-7.2	7.6	-3.7
Change in inventories	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Net exports of goods and services	-13.4	-15.2	-12.4	-12.5	-12.5	-12.3	-12.0	-11.6	-13.3	-12.1	-15.2	-12.3
Exports of goods and services	83.4	85.7	89.5	90.7	92.1	93.5	94.9	96.4	87.3	94.2	85.5	92.8
Q/q %, SAAR	-2.1	11.3	19.0	5.7	6.2	6.1	6.2	6.4				
Y/y %	6.4	9.3	12.2	8.1	10.7	9.1	6.1	6.2	9.0	8.0	10.3	8.5
Imports of goods and services	96.8	100.9	101.9	103.2	104.6	105.8	106.9	108.0	100.6	106.3	100.8	105.1
Q/q %, SAAR	-24.8	18.2	4.1	5.3	5.6	4.4	4.3	4.2				
Y/y %	8.5	8.4	4.3	-0.7	8.3	4.9	5.0	4.7	4.9	5.7	10.5	4.3

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	90.9	90.7	91.2	91.1	91.3	91.0	91.6	91.0
Q/q %, SAAR	-0.7	-0.3	0.4	-0.3	-0.4	-0.2	0.5	-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	93.7	93.1	93.5	93.3	93.1	93.3	93.9	93.7	93.4	93.5	93.6	93.4
Q/q %, SAAR	-0.5	-0.7	0.4	-0.2	-0.2	0.2	0.7	-0.1				
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	102.6	102.4	103.3	104.1	104.6	105.5	107.0	107.2	103.1	106.1	103.0	105.4
Q/q %, SAAR	-0.9	-0.2	0.9	0.7	0.5	0.8	1.5	0.2				
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	95.1	95.5	95.5	94.4	95.3	94.4	95.0
Q/q %, SAAR	-0.1	-0.5	0.2	0.4	0.2	0.3	0.4	0.1				
Y/y %	-0.0	-0.6	-0.2	0.1	0.4	1.1	1.3	0.9	-0.2	0.9	-0.3	0.7
Government final consumption	96.3	96.6	96.5	97.2	96.1	96.0	96.0	96.8	96.6	96.2	96.7	96.3
Q/q %, SAAR	-1.6	0.3	-0.0	0.7	-1.1	-0.1	0.0	0.8				
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	104.8	105.8	106.3	103.5	105.3	103.4	104.8
Q/q %, SAAR	-0.7	0.0	0.5	0.5	-0.2	0.8	1.0	0.4				
Y/y %	-0.2	-1.0	-0.3	0.3	0.9	1.7	2.3	2.0	-0.3	1.8	-0.3	1.3
Exports of goods and services	84.7	84.5	86.6	90.8	92.7	93.8	95.1	94.1	86.7	94.0	85.1	93.2
Q/q %, SAAR	-0.0	-0.3	2.4	4.9	2.1	1.2	1.3	-1.1				
Y/y %	-3.2	-2.9	1.0	7.4	9.1	11.1	10.2	3.6	0.6	8.4	-2.0	9.4
Imports of goods and services	108.8	107.3	109.4	117.4	119.5	122.9	124.3	124.7	110.8	123.0	108.7	121.1
Q/q %, SAAR	-0.1	-1.3	2.0	7.2	1.9	2.8	1.1	0.3				
Y/y %	-1.7	-3.5	0.6	7.9	9.5	14.3	14.0	6.3	0.8	11.0	-0.5	11.5

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	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	92.4	92.9	93.1	93.2	93.3	93.5	93.6	92.8	93.4	92.3	93.3
Q/q %, SAAR	1.8	-0.3	0.6	0.1	0.1	0.1	0.2	0.2				
Y/y %	2.0	2.1	2.0	2.1	0.5	0.9	0.6	0.7	2.0	0.6	1.5	1.0
Private final consumption	95.5	95.5	95.6	95.7	95.8	95.9	96.1	96.3	95.5	96.0	95.0	95.9
Q/q %, SAAR	1.8	-0.0	0.1	0.1	0.1	0.1	0.2	0.2				
Y/y %	2.6	2.4	1.8	2.0	0.4	0.5	0.5	0.6	2.2	0.5	1.8	0.9
Private residential investment	109.6	109.4	109.6	110.0	110.3	110.7	111.0	111.3	109.7	110.8	108.9	110.5
Q/q %, SAAR	2.2	-0.2	0.2	0.3	0.3	0.3	0.3	0.3				
Y/y %	4.9	3.8	2.5	2.6	0.6	1.1	1.2	1.2	3.4	1.1	3.4	1.5
Private non-residential investment	96.0	96.2	96.2	96.6	96.9	97.2	97.5	97.8	96.3	97.4	96.0	97.0
Q/q %, SAAR	0.5	0.2	-0.0	0.4	0.3	0.3	0.3	0.4				
Y/y %	1.2	1.1	0.7	1.1	0.9	1.0	1.4	1.3	1.0	1.2	1.0	1.1
Government final consumption	97.7	98.0	98.1	98.2	98.3	98.4	98.5	98.6	98.0	98.4	97.7	98.3
Q/q %, SAAR	0.9	0.3	0.1	0.1	0.1	0.1	0.1	0.1				
Y/y %	1.7	2.2	2.2	1.4	0.6	0.3	0.3	0.4	1.9	0.4	1.4	0.6
Public fixed investment	107.9	108.6	108.6	109.0	109.3	109.7	110.1	110.5	108.6	110.0	107.8	109.5
Q/q %, SAAR	1.6	0.7	0.0	0.3	0.3	0.4	0.4	0.4				
Y/y %	3.9	3.7	2.6	2.6	1.3	0.9	1.3	1.4	3.1	1.2	2.9	1.6
Exports of goods and services	94.0	95.3	98.4	99.0	99.3	99.6	99.8	100.0	96.6	99.7	95.4	99.4
Q/q %, SAAR	-0.1	1.4	3.2	0.6	0.4	0.2	0.2	0.2				
Y/y %	1.0	1.8	3.3	5.2	5.9	4.4	1.5	1.1	2.8	3.2	2.4	4.2
Imports of goods and services	122.7	127.0	127.0	127.7	128.4	128.6	128.7	128.8	126.0	128.6	125.2	128.3
Q/q %, SAAR	-1.6	3.5	-0.0	0.6	0.5	0.2	0.1	0.0				
Y/y %	2.4	3.3	2.0	2.4	4.8	1.3	1.5	0.8	2.4	2.0	3.4	2.5

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	-0.6	-0.6	-0.3	1.4	0.8	0.6	-0.4	1.6	0.7	2.2	1.5	1.5
Domestic demand	-0.2	-0.1	-0.2	1.0	0.7	1.0	0.2	1.8	1.4	2.7	2.3	1.8
Private demand	-0.0	-0.0	-0.3	0.6	0.3	0.7	0.1	2.0	1.1	1.7	1.9	1.0
Private consumption	0.3	-0.3	0.1	0.7	0.5	0.2	-0.0	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	0.1	1.0	0.1	0.4	0.5	-0.2
Change in private inventories	-0.5	0.3	-0.3	0.1	-0.5	0.3	-0.1	-0.5	-0.1	-0.5	0.1	-0.3
Public demand	-0.2	-0.0	0.1	0.4	0.5	0.3	0.1	-0.1	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	1.0	-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	-1.2	-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	2.9	0.7	2.2	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	-0.3	-0.1	0.1	1.7	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	0.7	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	-0.5	-1.5	-2.7	-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	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	-1.9	-0.4	0.9	0.7	0.4	0.4	0.3	0.4	-0.5	1.8	0.4	1.2
Domestic demand	-2.9	-0.5	0.8	0.6	0.3	0.3	0.3	0.3	-1.1	1.5	0.5	0.8
Private demand	-2.9	-0.7	0.7	0.6	0.4	0.3	0.3	0.4	-1.3	1.6	0.2	0.9
Private consumption	-3.1	0.2	0.5	0.4	0.2	0.1	0.1	0.1	-1.5	1.0	-0.5	0.4
Residential investment	-0.3	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.1	-0.1	-0.1
Private fixed investment	-0.7	-0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.8	0.4
Change in private inventories	1.2	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-0.1	0.0	-0.0
Public demand	0.0	0.2	0.0	-0.0	-0.0	-0.1	-0.1	-0.1	0.1	-0.1	0.3	-0.0
Government final consumption	-0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
Public fixed investment	0.0	0.1	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	-0.4	0.2	-0.3
Change in public inventories	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	0.0	0.0
Net exports of goods and services	1.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.6	0.3	-0.1	0.3
Exports of goods and services	-0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	1.0	0.8	1.2	0.7
Imports of goods and services	1.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.3	-0.5	-1.3	-0.4
2) Y/y %												
GDP growth rate	-0.2	-1.2	0.1	-0.9	1.6	2.4	1.8	1.5	-0.5	1.8	0.4	1.2
Domestic demand	-0.1	-1.6	-0.9	-2.0	1.3	2.1	1.4	1.2	-1.1	1.5	0.5	0.8
Private demand	-0.2	-1.8	-0.9	-2.2	1.2	2.2	1.7	1.5	-1.3	1.6	0.2	0.9
Private consumption	-1.6	-1.7	-1.0	-1.9	1.3	1.3	0.9	0.6	-1.5	1.0	-0.5	0.4
Residential investment	-0.1	-0.4	-0.4	-0.4	-0.1	0.1	0.1	0.1	-0.3	0.1	-0.1	-0.1
Private fixed investment	0.5	0.4	0.5	-0.4	0.5	0.8	0.7	0.8	0.2	0.7	0.8	0.4
Change in private inventories	1.0	-0.0	0.1	0.5	-0.6	0.0	-0.0	0.0	0.3	-0.1	0.0	-0.0
Public demand	0.2	0.2	0.0	0.2	0.2	-0.1	-0.2	-0.3	0.1	-0.1	0.3	-0.0
Government final consumption	-0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2
Public fixed investment	0.2	0.1	-0.0	-0.0	-0.1	-0.3	-0.5	-0.6	0.1	-0.4	0.2	-0.3
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	0.3	1.0	0.9	0.3	0.2	0.2	0.3	0.6	0.3	-0.1	0.3
Exports of goods and services	0.9	1.2	1.3	0.5	0.8	0.8	0.8	0.9	1.0	0.8	1.2	0.7
Imports of goods and services	-1.1	-1.0	-0.3	0.5	-0.5	-0.5	-0.5	-0.6	-0.3	-0.5	-1.3	-0.4

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	3.3	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	199.4	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	4.0				
Y/y %	1.1	1.5	1.7	1.5	1.5	1.2	0.8	1.6	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	96.0	96.6	97.2	98.7	98.2	98.2	98.4	99.0	97.1	98.5	96.9	98.4
Q/q %, SAAR	-8.1	2.6	2.5	6.3	-2.0	-0.0	0.8	2.4				
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	20.5	20.6	21.8	23.1	24.6	25.3	24.9	21.0	24.6	21.1	23.7
Q/q %, SAAR	-11.2	-11.3	1.7	25.6	25.7	29.2	11.2	-6.1				
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	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 %	3.3	3.3	3.0	3.7	3.7	3.7	3.8	3.8	3.4	3.7	3.3	3.7
Crude oil price (WTI futures; $/bbl)	103.0	97.2	80.0	80.0	80.0	80.0	80.0	80.0	90.1	80.0	94.7	80.0
Y/y %	9.4	-8.1	-18.0	-18.9	-22.3	-17.7	0.0	0.0	-9.1	-11.2	-3.4	-15.5
2) US economy												
Real GDP (chained [2009]; $ bil; SAAR)	16,010	16,151	16,271	16,372	16,475	16,586	16,691	16,789	16,201	16,635	16,066	16,531
Q/q %, SAAR	4.6	3.5	3.0	2.5	2.5	2.7	2.6	2.4				
Y/y %	2.6	2.3	2.2	3.4	2.9	2.7	2.6	2.5	2.6	2.7	2.3	2.9
Consumer Price Index												
(1982-84 avg=100)	237.0	237.7	238.2	239.1	240.2	241.3	242.5	243.6	238.0	241.9	237.0	240.8
Q/q %, SAAR	3.0	1.1	0.9	1.6	1.8	1.9	2.0	1.8				
Y/y %	2.1	1.8	1.7	1.7	1.3	1.5	1.8	1.9	1.8	1.6	1.7	1.6
Producer Price Index												
(Finished goods; 1982=100)	201.3	201.7	202.0	202.7	203.6	204.6	205.5	206.5	201.9	205.0	201.1	204.1
Q/q %, SAAR	3.8	0.9	0.5	1.5	1.7	2.0	1.9	1.8				
Y/y %	2.8	2.4	2.3	1.7	1.1	1.4	1.8	1.8	2.3	1.5	2.3	1.5
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	2.50	2.45	2.56	2.78	2.94	3.10	3.31	2.53	3.03	2.58	2.85
3) Japanese economy												
Nominal government final consumption												
Y tril; SAAR	99.9	100.5	100.9	101.3	101.7	102.1	102.5	102.9	100.7	102.3	100.1	101.9
Q/q %, SAAR	3.4	2.5	1.5	1.6	1.6	1.7	1.7	1.7				
Y/y %	1.7	2.5	2.6	2.3	1.8	1.5	1.6	1.7	2.2	1.6	1.8	1.8
Nominal public fixed investment												
Y tril; SAAR	25.4	26.1	25.8	25.4	24.9	24.3	23.7	22.9	25.7	23.9	25.5	24.6
Q/q %, SAAR	7.7	11.8	-4.0	-6.1	-7.3	-9.3	-10.7	-11.6				
Y/y %	9.3	6.8	1.8	2.3	-1.4	-7.1	-8.2	-9.9	4.4	-7.2	7.6	-3.7
Exchange rate (Y/$)	102.1	103.9	114.0	118.0	118.0	118.0	118.0	118.0	109.5	118.0	105.7	118.0
(Y/€)	139.5	137.8	144.0	148.0	148.0	148.0	148.0	148.0	142.3	148.0	140.4	148.0
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.