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Japan's Economy: Monthly Review

Economy on recovery path partly reflecting Abenomics

Any deepening of European sovereign debt crisis/other risks warrant monitoring

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Main Points

- **Economic outlook revised:** In light of the second preliminary Oct-Dec 2012 GDP report (Cabinet Office), we have revised our economic growth outlook for FY12-14. We now forecast real GDP growth of +1.0% y/y for FY12 (previous forecast: +0.9%), +2.7% for FY13 (+2.7%), and +0.4% for FY14 (+0.4%).

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

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

1. Economic outlook revised

In light of the second preliminary Oct-Dec 2012 GDP report (Cabinet Office), we have revised our economic growth outlook for FY12-14. We now forecast real GDP growth of +1.0% y/y for FY12 (previous forecast: +0.9%), +2.7% for FY13 (+2.7%), and +0.4% for FY14 (+0.4%).

Real GDP posted annualized q/q gain of 0.2% in Oct-Dec 2012

In the second preliminary estimate of Oct-Dec (4Q) 2012 GDP (Cabinet Office), real GDP was flat q/q, annualized at +0.2%, posting an upgrade from the first preliminary estimate (down 0.1%; down 0.4%), and almost on par with the market consensus (up 0.1%; up 0.2%). In terms of contribution to q/q growth in real GDP, domestic demand made the first positive contribution in two quarters (+0.2 percentage points; first preliminary estimate: +0.1 point) but overseas demand saw the third negative contribution in a row (–0.2 points for both first and second estimates). Thus, conditions surrounding real GDP were unchanged from those in the first preliminary estimate. In other words, sluggish overseas demand dragged down GDP growth.

Main scenario for Japan’s economy

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

Risks facing Japan’s economy

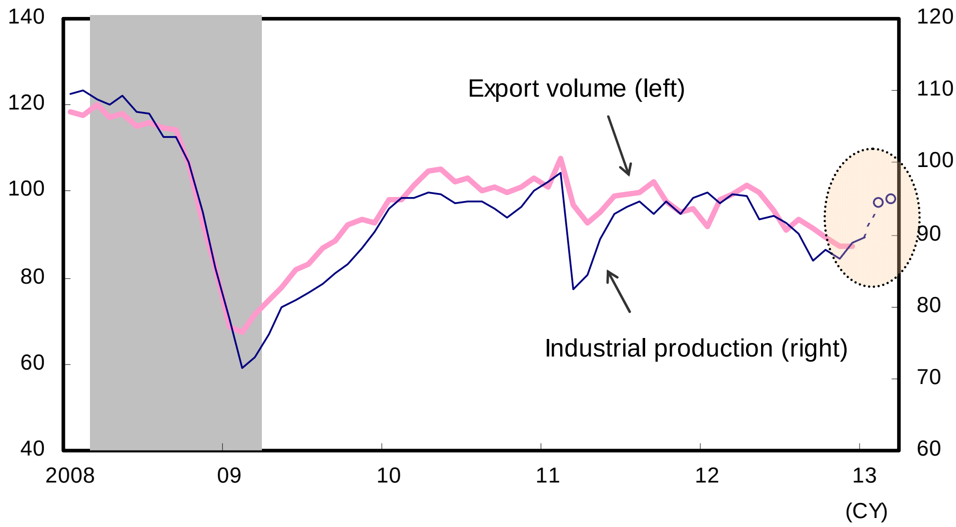
Risks that will need to be borne in mind regarding Japan’s economy are: (1) any deepening of the European sovereign debt crisis, reflecting likely political instability in Italy and Spain, (2) any worsening of Japan-China relations, (3) the US fiscal issue, and (4) a surge in crude oil prices stemming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

2. Current state of Japan’s economy: On a recovery path since November 2012

Japan’s economy to bottom out

After peaking in March 2012, Japan’s economy slipped into recession, impacted by the worsening of foreign economies. Since November 2012, however, the economy appears to be on a path toward recovery. As shown in Chart 1, industrial production in Japan has trended downward since the start of 2012 due to sluggish export volume. With the recovery of Asian economies centering on China, however, exports are bottoming, and industrial production is showing signs of bottoming out. The likelihood is growing that exports will turn upward reflecting the improvement in the export environment, such as the recovery of foreign economies and the yen’s ongoing depreciation. Hence, as exports rebound, industrial production is expected to bottom out.

Industrial Production and Export Volume (2005 = 100) **Chart 1**

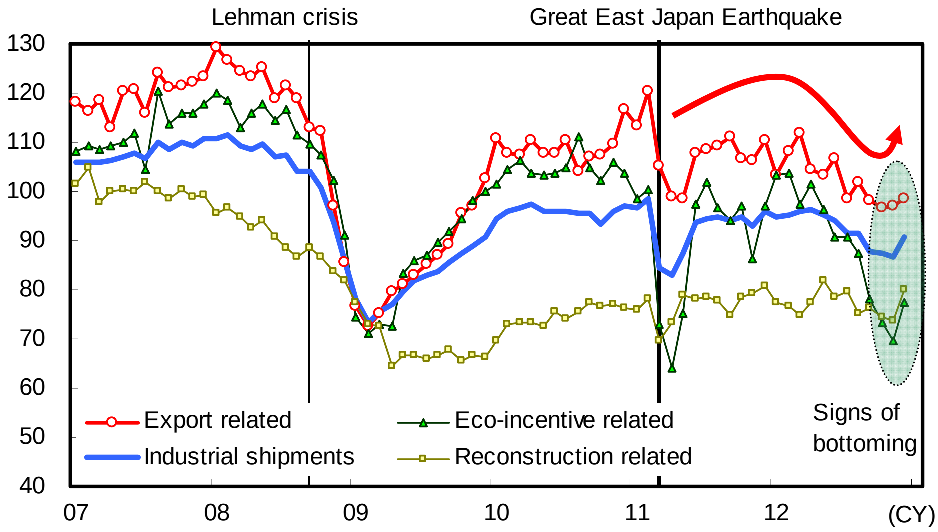


Source: Ministry of Economy, Trade and Industry (METI); Cabinet Office; compiled by DIR.
Notes: 1) Latest two months for industrial production: METI forecast survey.
2) Shaded area denotes economic downturn.

Breakdown of industrial shipments in Japan

Chart 2 provides a breakdown of industrial shipments in Japan. Here we can verify the reasons for the economy slipping into recession after peaking in March 2012. First, eco-incentive-related shipments, defined as domestic consumer durables that are eligible for eco-car tax breaks and eco-point programs, greatly slowed. In addition, export-related shipments declined on account of the sluggishness of foreign economies, centering on Europe and China. In contrast, reconstruction-related shipments, such as construction materials and capital goods (excl. transportation equipment) trended firmly for the most part. Thus, reconstruction demand appeared to be the sole source of support for Japan's economy.

Breakdown of Industrial Shipments (2005 = 100) **Chart 2**



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

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

3. Outlook for Japan's economy: Three positives supporting recovery

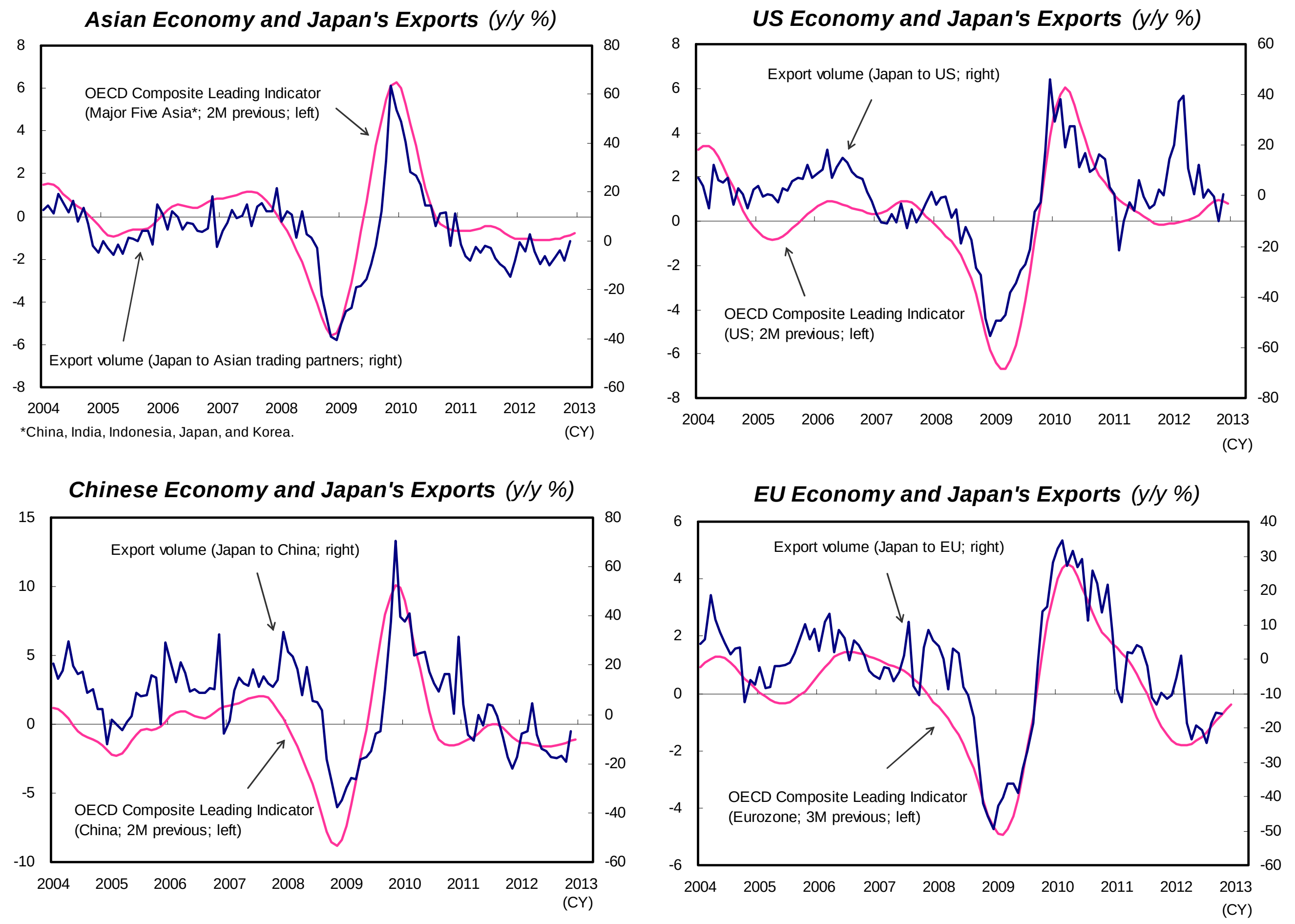
Positive 1: Pickup of the US and Chinese economies

Signs that foreign economies are gradually bottoming out

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

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

Japan's Exports by Trading Partner **Chart 3**



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

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

First of all, we would like to emphasize that the US is not slipping into a long-term structural recession similar to the Great Depression of the 1930s or Japan's Heisei recession. Chart 4 offers a comparison of the Great Depression, Japan's Heisei recession, and the current situation of the US and Europe. Currently in the US, (1) policy responses have been quick, (2) the labor market is flexible, and (3) financial system uncertainties have abated. Hence, the three basic conditions determining a long-term structural recession shared by the Great Depression and Japan's Heisei recession are not presently seen in the US. Therefore, we believe that the US will avoid a long-term structural recession accompanied by a deflationary spiral (so-called "Japanization"). In the case of European nations, since (1) policy responses have been slow, (2) labor markets are rigid, and (3) financial system uncertainties remain, some attention should be given to the risk that Europe will slip into a long-term structural recession.

Conditions Determining Protracted Structural Recession **Chart 4**

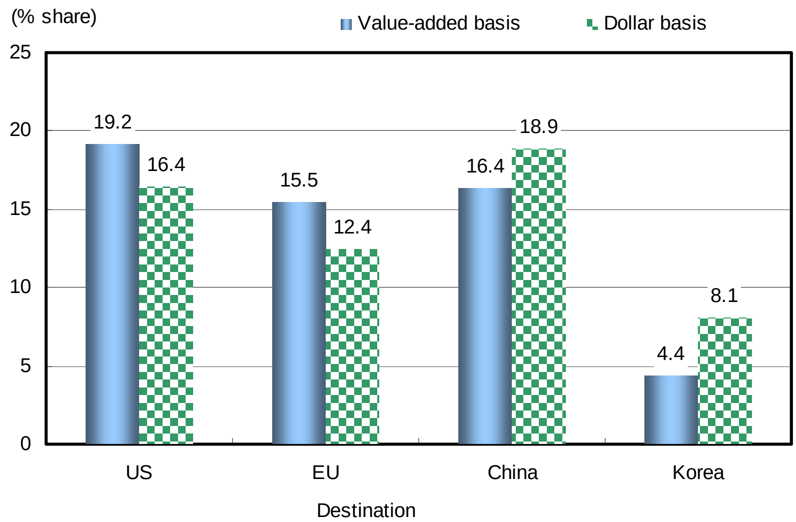
	Great Depression	Heisei Recession	Current status of US economy	Current status of European economy
① Failure of policy responses	✓	✓	X	0
② Real wages remaining high resulting in prolonged stagnation of capex	✓	✓	X	0
③ Impairment of financial system	✓	✓	X	0

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

Recovery of the US economy will have major significance for Japan

The recovery of the US economy will have major significance for Japan. Chart 5 compares the shares of exports from Japan by trading partner on a value-added basis and on a dollar basis. Comparing the situation for the US and China, the share of exports shipped to China is larger on a dollar basis, and that shipped to the US is larger on a value-added basis. This is an extremely interesting portrait of exports since it suggests the existence of a trade structure where Japan exports intermediate goods to China and other Asian trading partners, where these goods are assembled into finished goods that Asian economies export to European nations and the US, the source of final demand.

Export of Goods from Japan by Destination **Chart 5**



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

China's economy about to bottom out

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

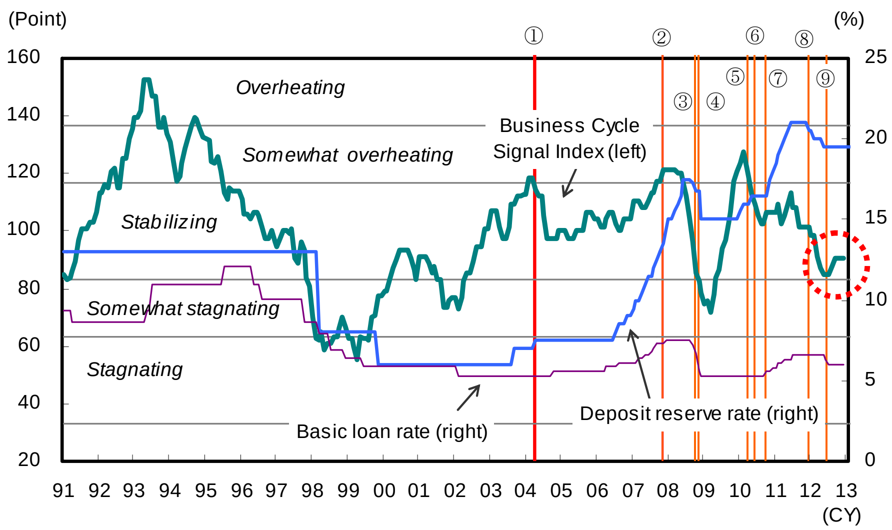
Business Cycle Signal Index suggests possibility of further implementation of policy measures

Chart 6 presents the Business Cycle Signal Index for China. According to this index, China's economy has slowed significantly. After peaking at 123.3 in February 2010, the index fell to 84.7 in August 2012, sinking to the low side of the stable zone between 83.33 and 116.66. Similar to previous instances when the economy has slowed to this extent, the authorities have implemented stimulus measures, such as monetary easing, since last year. As a result, the index is showing signs of rebounding. However, since the index remains at a low level, implementation of further policy measures is likely to come into view.

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

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

China: Business Cycle Signal Index **Chart 6**



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

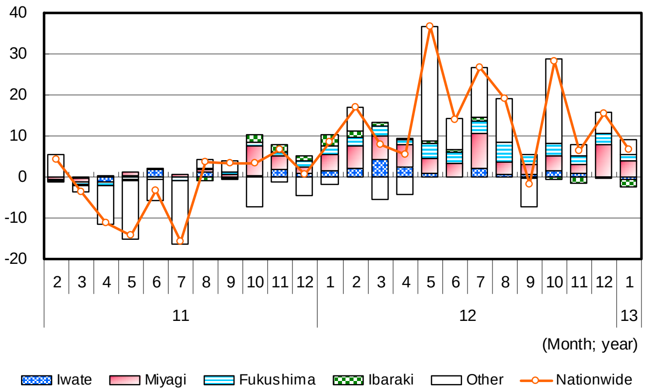
1. Apr 2004: Restrictions on aggregate loans strengthened
2. Oct 2007: Restrictions on aggregate loans strengthened
3. Oct 2008: Restrictions on aggregate loans eased
4. Nov 2008: Stimulus package of 4 tril yuan announced
5. Apr 2010: Real estate regulations strengthened
6. Jun 2010: More flexible regime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

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

Reconstruction demand will gradually materialize

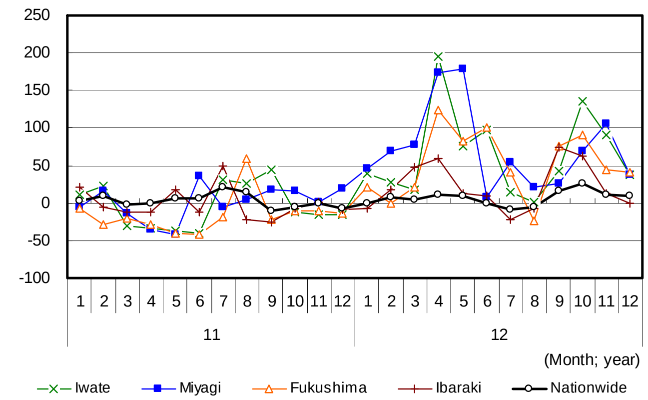
The second factor that will support Japan's economy going forward are prospects for the continuation of reconstruction projects related to the Great East Japan Earthquake and this being attended with the formation of a large-scale supplementary budget by the Abe administration. As shown in Chart 7, the yen amount of prepayment guarantees for public works projects has steadily increased since 2H11, with a significant contribution being provided by increases related to the three disaster-affected prefectures. Also, as shown in Chart 8, new housing starts by prefecture (totals) are continuing to grow firmly, centering on disaster-affected areas.

Prepayment Guarantees for Public Works by Prefecture (y/y %) **Chart 7**



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

New Housing Starts by Prefecture (y/y %) **Chart 8**



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

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

Chart 9 provides an estimation of the effect on Japan's GDP of developments related to reconstruction demand and also of reconstruction surtaxes. Given that the supplementary budget for FY12 has been factored into public works spending, GDP is anticipated to receive a boost of around 1.5% in FY13. At the present moment, higher public works spending is not causing the long-term interest rate to rise, and personal consumption, housing investment, and capex can be expected to increase as the economy expands.

Impact of Reconstruction Demand and Change in Taxation on Real GDP (% deviation from base scenario) **Chart 9**

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

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

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

The yen cannot be said to be excessively undervalued

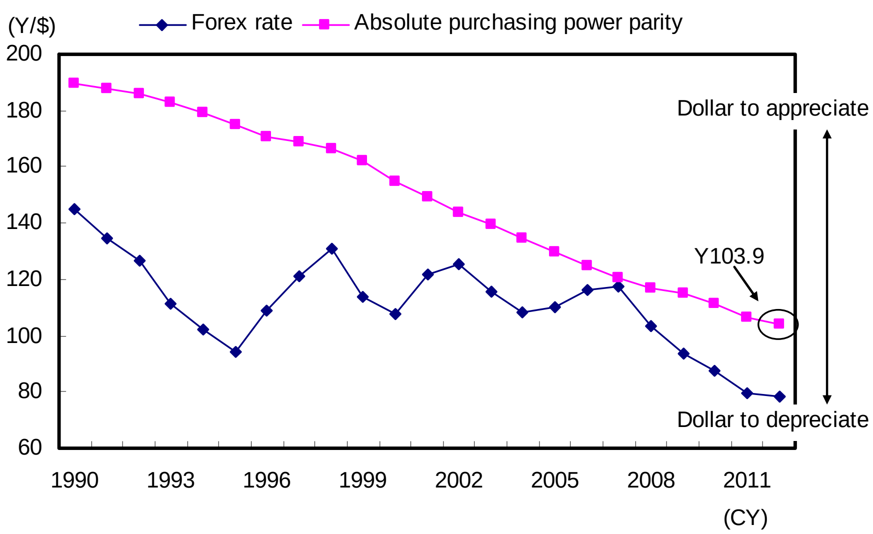
The third factor that will support Japan's economy going forward is the ongoing depreciation of the yen/ascent of stock prices accompanying BOJ's adoption of inflation targeting. We believe that a correction of the yen's excessive appreciation is currently under way in foreign exchange markets. Also, a comparison with the real economy suggests that stock prices are potentially still undervalued at their current levels.

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

Chart 10 depicts absolute purchasing power parity (PPP) of the yen against the dollar estimated by the OECD, which is currently Y103.9/$. Absolute PPP is a mechanism that shows the equilibrium level of prices for equivalent goods. Absolute PPP estimated by the OECD takes into account a broad range of goods and services that constitute GDP. However, it is not an indicator that reflects changes in import and export prices, which should not be overlooked. However, absolute PPP should always be borne in mind as an indicator followed by global financial market participants.

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

Absolute Purchasing Power Parity and Forex Rate **Chart 10**



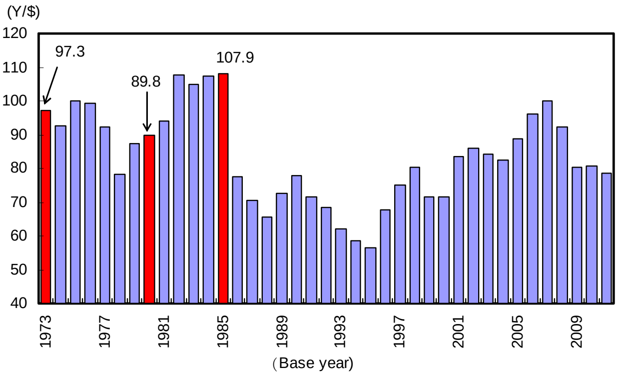
Source: OECD; compiled by DIR.

Appropriate yen-dollar rate in terms of relative PPP

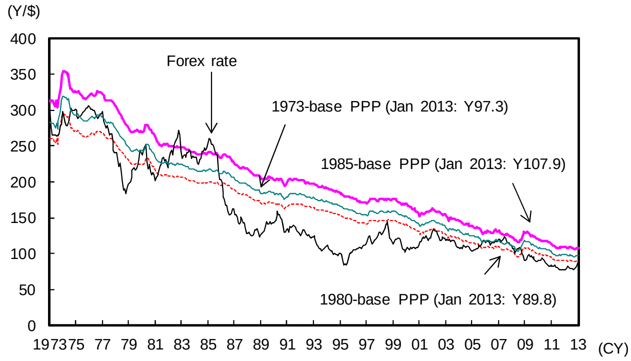
Relative PPP is also often used for the long-run equilibrium level of exchange rates. It is, however, associated with a drawback, namely that its level changes depending on the base year selected. Chart 11.1 demonstrates to what extent current PPP (as of January 2013) for the yen against the dollar changes when the base year is shifted. The yen is the weakest when the base year is 1985, yielding a

PPP of Y107.9/$. In contrast, the yen is the strongest when the base year is 1995, yielding a PPP of Y56.4/$. As indicated in Chart 11.2, PPP as of January 2013 for the widely used base years of 1973, 1980, and 1985 is respectively Y97.3/$, Y89.8/$, and Y107.9/$. Hence, PPP on a Corporate Goods Price Index basis suggests that it would be difficult to say that the yen has depreciated too far.

Comparison of Jan 2013 Y/$ Purchasing Power Parity Measured by Base Year — Chart 11.1



Relative Purchasing Power Parity and Forex Rate — Chart 11.2



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

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

It is interesting to recall that Japan's currency authorities have intervened to purchase the yen twice in the past to halt its depreciation (Chart 12.1). The first was from 1991 to 1992 and the second 1997 to 1998. Intervention at those times occurred when the yen was in the Y125-140/$ range.

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

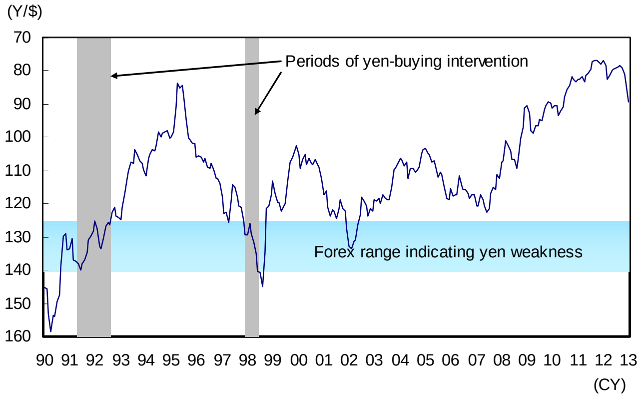
Chart 12.2 reveals that currency authorities in Japan have intervened to purchase the yen when financial markets are overtaken by turmoil, such as in the form of falling stock prices. In 1991 and 1992, the collapse of an asset bubble induced capital flight from Japan, and, for a period, the yen depreciated while stock prices fell. In 1997 and 1998, influenced by BIS capital adequacy requirements, the depreciation of the yen gave rise to growing concerns about the management of Japan's financial institutions, and the yen depreciated and stock prices fell in a spiral fashion.

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

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

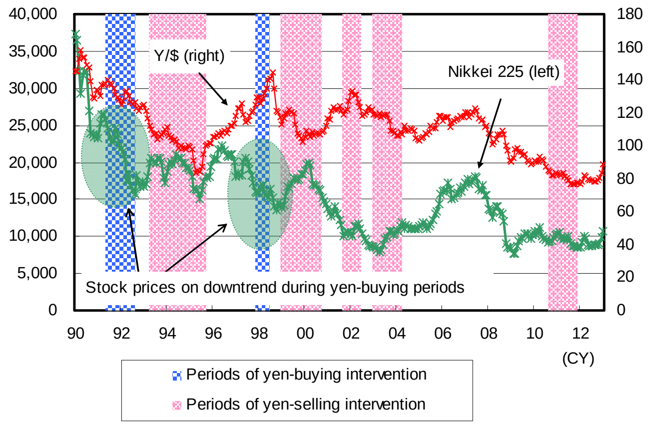
At the G20 meeting of finance ministers and central bank governors held in Moscow on 16 February 2013, Japan succeeded in gaining a certain degree of understanding from foreign nations that the objective of Abenomics is to solve a domestic problem of overcoming deflation and not to weaken the yen. To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

Forex Rate and Yen-buying Operations Chart 12.1



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

Nikkei 225 vs. Forex Market Intervention Chart 12. 2



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

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

Since Japan has an export-led economic structure, a weaker yen is basically a plus for the economy. Charts 13 and 14 present a quantitative analysis of the effect of a weaker yen on Japan's economy and corporate earnings. A view frequently heard in Japan is one that emphasizes only the negative aspects of a weaker yen, such as worsening of the trade balance on a yen basis and/or the adverse impact on some import industries. From a macroeconomic perspective, however, these concerns are partial in scope. To conclude, as long as the yen's depreciation does not give way to turmoil in financial markets in the form of falling stock and/or JGB prices, Japan's currency authorities are basically expected to maintain their stance of tolerating a weaker yen.

Impact of Weaker Yen on Japan's Economy (deviation from Y80/$ case) Chart 13

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

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

Impact of Y10 Depreciation vs. $ on Corporate Earnings (% deviation from Y80/$ case) Chart 14

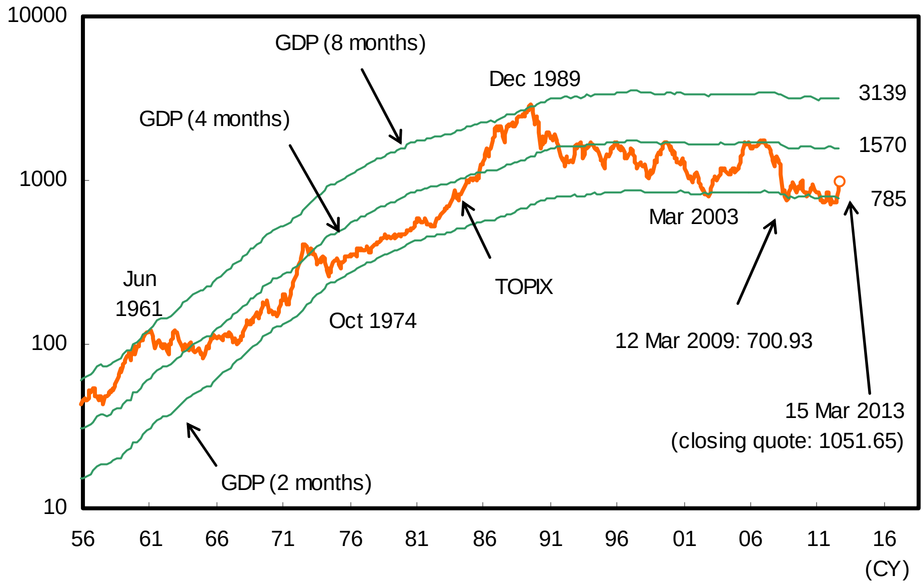
		FY12	FY13	FY14
Sales	All industries	0.4	2.5	2.5
	Manufacturing	0.5	3.4	3.4
	Non-manufacturing	0.3	2.1	2.1
Recurring profit	All industries	0.0	4.9	4.8
	Manufacturing	5.3	25.3	22.5
	Non-manufacturing	-1.8	-5.0	-4.4

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

Possibility that stock prices still undervalued

Finally, it is worth pointing out that, compared to the real economy, stock prices are likely still undervalued at their current levels. Chart 15 illustrates the long-term trends of Japanese stocks and nominal GDP. In historical terms, Japanese stocks have traded within a band defined by nominal GDP for more than 50 years. In December 1989, when the asset bubble reached its peak, this band's upper limit became a ceiling for share prices. In October 1974 following the first oil crisis, in March 2003 in the wake of Japan's banking crisis, in March 2009 in the wake of the Lehman crisis, and in March 2011 immediately after the Great East Japan Earthquake, stock prices found a floor at the GDP band's lower limit. Japanese stocks are currently trending near the GDP band's lower limit, making it reasonable to conclude that they are trading in an undervalued zone in comparison to the real economy.

TOPIX (pt) **and Nominal GDP** (Y100 bil) **Chart 15**



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

Outlook for Japanese Economy, Interest Rates **Chart 16**

Indicator	2012 Oct-Dec	2013 Jan-Mar	2013 Apr-Jun	2013 Jul-Sep	2013 Oct-Dec	2014 Jan-Mar	FY11	FY12	FY13	FY14
	Actual	DIR estimates					Actual	DIR estimates		
Real GDP										
Q/q %, annualized	0.2	2.0	2.9	4.5	5.2	4.8				
Y/y %	0.5	-0.7	0.3	2.4	3.6	4.4	0.3	1.0	2.7	0.4
Current account balance SAAR (Y tril)	2.5	0.6	1.1	1.6	2.1	2.5	7.6	3.2	1.8	7.1
Unemployment rate (%)	4.2	4.2	4.2	4.1	4.1	4.1	4.5	4.3	4.1	4.0
CPI (excl. fresh foods; 2010 prices; y/y %)	-0.1	-0.4	-0.1	0.1	0.3	0.4	-0.0	-0.2	0.2	2.6
Unsecured overnight call rate (period end; %)	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
10-year JGB yield (period average; %)	0.76	0.75	0.80	0.85	0.90	0.95	1.05	0.78	0.88	0.95

Source: Compiled by DIR.
Note: Estimates taken from DIR's *Japan's Economic Outlook No. 176 Update*.