Haruhiko Kuroda: Two years under QQE

Speech by Mr Haruhiko Kuroda, Governor of the Bank of Japan, to the Yomiuri International Economic Society, Tokyo, 15 May 2015.

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Introduction

It is a great honor to be invited to this meeting hosted by the Yomiuri International Economic Society today.

The last time I addressed this meeting, in April 2013, was immediately after the Bank of Japan's introduction of Quantitative and Qualitative Monetary Easing (QQE). Two years have passed since then, and the economic and price situation has improved substantially under QQE. Although the year-on-year rate of increase in the consumer price index (CPI) had declined, due mainly to the effects of the substantial decline in crude oil prices since last summer, and recently has been about 0 percent, the underlying trend in inflation has steadily been improving, as I will explain later in more detail.

Today, I will review the developments in Japan's economic activity and prices during the past two years and explain the effects QQE has been exerting. On this basis, I will touch on the outlook and the Bank's monetary policy, referring to the April 2015 Outlook for Economic Activity and Prices (hereafter the Outlook Report).

I. Effects of QQE

Transmission mechanism of QQE

The Bank, in introducing QQE two years ago, envisioned the following transmission mechanism of QQE as a main channel (Chart 1). Namely, (1) inflation expectations will be raised through a strong and clear commitment to achieving the price stability target of 2 percent and through large-scale monetary easing to underpin the commitment, (2) downward pressure will be put on nominal interest rates across the entire yield curve through massive purchases of Japanese government bonds (JGBs), thereby (3) decreasing real interest rates. The decline in real interest rates will stimulate private demand, which will lead to an upturn in the economy, improving the output gap. Then, the improvement in the output gap, together with a rise in inflation expectations, will increase inflation rates. As people experience actual price increases, their inflation expectations will rise further. Meanwhile, on the financial front, asset prices – such as stock prices and foreign exchange rates – reflect these developments in economic activity and prices or else incorporate future developments. Moreover, due to the decline in JGB yields, coupled with the Bank's purchases of exchange-traded funds (ETFs) and Japan real estate investment trusts (J-REITs), investors will increase their risk-taking, thereby exerting positive effects on prices of risk assets, and an increase in lending is also expected. These improvements in finance will support economic activity. QQE aims at giving rise to such a virtuous cycle of finance, economic activity, and prices, which in turn raises inflation rates toward 2 percent accompanied by a positive turnaround in the economy.

The downward effects on real interest rates

Let me assess the outcome of QQE. First, I will review to what extent real interest rates have declined, which is the starting point of the transmission mechanism.

Long-term interest rates, which had already been at historical low levels at the time of the introduction of QQE, have declined further with the Bank's massive purchases of JGBs. Yields on 10-year JGBs have declined by about 0.3 percentage point. Meanwhile, inflation expectations have increased. When asked "to what degree do you think prices will rise," I believe that you would feel differently now versus two years ago, and that your answer also would be different. The word "deflation" – or *defure* in Japanese – has not been heard so much except in the context of "overcoming of deflation." Firms' price- and wage-setting behavior has been changing and rises in base pay, which had not been seen for more than a decade, have taken place in two consecutive years starting from last year. Given these changes, there is no doubt that inflation expectations have increased. That said, when trying to express such expectations in terms of numeric figures, a single figure cannot be easily found because expectations are what exist in people's minds. The results of surveys conducted of various economic entities including households, firms, and economists, in addition to figures implied by inflation-indexed bonds that are traded in markets, are wide ranging. With this in mind, medium- to long-term inflation expectations of economists and market participants, for which the results can be obtained in a numerical form, have increased by about 0.5 percentage point. Based on these figures, the degree of decline in real interest rates seems to have been slightly less than 1 percentage point, as calculated by adding the degree of decline in nominal long-term yields mentioned earlier (Chart 2). There are various methods for estimating the degree of decline in real interest rates, such as calculating the degree of downward effects on real interest rates brought about by the Bank's cumulative JGB purchases thus far; interestingly, regardless of the method employed, the results have been mostly the same. The fact that similar results are obtained from different methods means that it is reasonable to judge that, numerically, real interest rates have declined by less than 1 percentage point; medium- to long-term inflation expectations have increased by about 0.5 percentage point and nominal long-term interest rates have decreased by about 0.3 percentage point. According to research conducted in the United States and Europe, a decline in long-term interest rates has policy effects on economic activity and prices that are approximately a couple of times larger than those of a decline in short-term interest rates. Moreover, our empirical analysis of downward pressure from QQE on nominal interest rates across the entire yield curve showed that, if the same effect were to be gained exclusively through the decline in short-term interest rates, it would be necessary to decrease the rate by about 2 percent. While these analyses are subject to a margin of error due to the situation for each country and to the relevant premises, the policy effects of QQE are such that they are roughly equivalent to those that would arise from making almost ten 0.25 percent cuts in short-term interest rates in one shot under conventional monetary policy.

Financial markets responded to QQE relatively swiftly. Stock prices have increased substantially and the appreciation of the yen was corrected in the foreign exchange markets. Lending, including that to small and medium-sized enterprises (SMEs), has been increasing moderately, at a pace of 2.5–3.0 percent on a year-on-year basis recently. In addition to the decline in real interest rates, such developments have made financial conditions even more accommodative.

Economic activity and prices under QQE

With QQE producing effects, a virtuous cycle from income to spending has been operating in both the corporate and household sectors, and the economy has seen a significant turnaround.

In the corporate sector, profits have improved to their highest level historically and fixed investment has been on a moderate increasing trend (Chart 3). Meanwhile, exports, which had been lacking momentum despite the correction of the appreciation of the yen, have finally been picking up clearly, as seen in their increase for three consecutive quarters since the July-September quarter of 2014 (Chart 4).

Turning to the household sector, labor market conditions have tightened and the employment situation has improved, as seen in the unemployment rate declining to around 3.5 percent. Consequently, in fiscal 2013 – during the year after the implementation of QQE – the number of employees increased in particular. In fiscal 2014 – the second year after the implementation – wages also turned to an increase. Employee income – that is, nominal wages multiplied by the number of employees – has been rising moderately (Chart 5). Against the background of an improvement in the employment and income situation, private consumption as a whole has been resilient. The effects of the consumption tax hike had been protracted during fiscal 2014, but they have been dissipating recently.

Reflecting this turnaround in the economy, the underlying trend in inflation has also steadily increased. As seen in the decline in the unemployment rate, labor and capital have been heavily utilized, and the output gap has already improved to about 0 percent, which is the level of the past long-term average. As mentioned earlier, inflation expectations have also increased. As a result, the year-on-year rate of change in the CPI (all items less fresh food) – about minus 0.5 percent before the introduction of QQE – improved to 1.5 percent last April excluding the direct effects of the consumption tax hike.

Thereafter, the rate of increase in the CPI has slowed against the background of somewhat weak developments in demand following the consumption tax hike and the substantial decline in crude oil prices since summer 2014. While the decline in crude oil prices exerts positive effects on Japan's economy, there is a risk that the mechanism I have explained thus far will not operate if it were to affect firms' price- and wage-setting behavior through changes in inflation expectations. In order to preempt the manifestation of such risk, the Bank expanded QQE in October 2014 to pursue a stronger monetary easing measure.

Looking at developments in inflation expectations thereafter, market-based indicators and various survey results have not declined despite the fall in crude oil prices. Moreover, in the annual labor-management wage negotiations this year, many firms will increase wages, including base pay, which was raised to a larger extent than last year. More firms have been shifting their price-setting behavior toward a strategy of raising sales prices while increasing value-added. Inflation expectations can be judged as rising on the whole from a somewhat longer-term perspective.

The financial, economic, and price developments I have outlined are mostly in line with the mechanism anticipated by QQE. The developments are qualitatively described as a decline in real interest rates, a rise in stock prices and depreciation of the yen, improvement in corporate profits, tightening in the labor market, an increase in employee income, and a rise in the CPI. Let me now explain these developments by referring to our quantitative analysis. During the two years since the introduction of QQE – more precisely, up to end-2014, for which quarterly data are available – actual changes in economic activity and prices amounted to improvement of 2 percentage points in the output gap, which represents improvement of about 10 trillion yen, and a 1.0 percentage point improvement in the year-on-year rate of increase in the CPI. Simulating the effects of the less than 1 percentage point decline in real interest rates that I have mentioned by using our macroeconometric model, the results are as follows: the output gap improved by 1–3 percentage points and the year-on-year rate of increase in the CPI rose by 0.6–1.0 percentage point. While these results vary depending on the assumption about how much stock prices and foreign exchange rates are affected by QQE, the results obtained by using the model are generally in line with the actual changes in economic activity and prices. During the past two years, there were both positive and negative effects on economic activity and prices in addition to QQE – such as measures by the government including large-scale public investment, the consumption tax hike, a surge in stock prices, foreign exchange rate movements, and a significant decline in crude oil prices. In reality, however, economic activity and prices as a whole could be assessed – even on a quantitative basis – as being mostly in line with the mechanism anticipated by QQE.

Having said this, the year-on-year rate of increase in the CPI has slowed to about 0 percent due to the effects of the decline in energy prices. In order to achieve the price stability target of 2 percent in a stable manner, it is necessary that the CPI inflation rise as inflation expectations increase further. As mentioned earlier, inflation expectations are rising on the whole from a somewhat longer-term perspective, due partly to the effects of the expansion of QQE last October despite the decline in crude oil prices. We will examine whether the trend rise in inflation expectations will continue in a situation where CPI inflation has declined. In the following, I will touch on the outlook for economic activity and prices.

II. Outlook for economic activity and prices

Outlook for economic activity

Looking ahead, Japan's economy is expected to continue its recovery trend with a virtuous cycle from income to spending maintained in both the household and corporate sectors and with a favorable environment of inexpensive crude oil prices. Exports are expected to increase moderately against the background of the recovery in overseas economies – mainly in advanced economies – and support from the correction of the appreciation of the yen. Turning to domestic demand, with an improvement in corporate profits and monetary accommodation both continuing to provide a boost, business fixed investment is projected to increase steadily, additionally supported by recently emerging developments toward the enhancement of domestic production capacity. Private consumption is projected to accelerate its pace of increase due to a steady improvement in the employment and income situation, given that consumer sentiment has been improving recently and that the effects of the decline in demand following the consumption tax hike in April 2014 have been dissipating.

Against this background, with regard to the outlook over the next three years, the economy is projected to continue growing at a pace above its potential from fiscal 2015 through fiscal 2016. Under these circumstances, the output gap is likely to turn positive and thereafter move further into excess demand territory. Expressing the outlook in terms of the median of the Policy Board members' forecasts of the real GDP growth rate, this was 2.0 percent for fiscal 2015 and 1.5 percent for fiscal 2016 (Chart 6). Subsequently, through fiscal 2017, the economy is projected to maintain its positive growth, although with a slowing in its pace to around a level somewhat below the potential growth rate. The slowdown is due mainly to (1) the effects of a front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike planned in April 2017 and (2) cyclical deceleration. In terms of the median of the Policy Board members' forecasts of the real GDP growth rate, this was 0.2 percent for fiscal 2017.

Outlook for prices

Next, I will discuss the outlook for prices. The improvement in the output gap and an increase in inflation expectations are likely to continue, and thus the underlying trend in inflation is expected to steadily rise. In addition, downward pressure from the decline in energy prices will gradually dissipate. Therefore, the year-on-year rate of increase in the CPI (all items less fresh food) is likely to be about 0 percent for the time being but accelerate toward 2 percent as the negative contribution of energy prices on a year-on-year basis narrows in the second half of fiscal 2015. Although the timing of the year-on-year rate of increase in the CPI reaching around 2 percent depends on developments in crude oil prices, this is projected to happen around the first half of fiscal 2016, when the negative contribution of energy prices will become almost zero, assuming that crude oil prices will rise moderately from the recent level. Thereafter, the year-on-year rate of increase in the CPI is expected to be around 2 percent on average, although it will be affected by various factors each month. In the April 2015 Outlook Report, the median of the Policy Board members' forecasts of the year-on-year rate of increase in the CPI (all items less fresh food) was 0.8 percent for fiscal 2015, 2.0 percent for fiscal 2016, and 1.9 percent for fiscal 2017 (Chart 6). Comparing the projections in the Outlook Report with those in the January 2015 interim assessment, the projected rate of increase in the CPI is somewhat lower. The timing of reaching around 2 percent is delayed, albeit slightly, from the former projection of "in or around fiscal 2015."

III. The Bank's monetary policy

As I have explained, QQE has exerted its intended effects. The improvement in economic activity and prices is likely to continue, and the CPI inflation is projected to reach the price stability target of about 2 percent around the first half of fiscal 2016. The Bank will keep its stance of continuing with QQE, aiming to achieve the price stability of 2 percent, as long as it is necessary for maintaining that target in a stable manner.

The timing of achieving the 2 percent target has been delayed compared to the previous forecast. Some have raised the question of how the delay should be reconciled with the Bank's commitment to achieving the price stability target at the earliest possible time, with a time horizon of about two years.

Changing people's deflationary mindset and raising inflation expectations through its commitment to achieving the price stability target of 2 percent at the earliest possible time is by itself an aim of overcoming deflation, and at the same time the starting point of QQE's effects. As I have explained, the perception of inflation by firms and households started to change markedly. This is because the Bank presented a time frame of achieving the price stability target at the earliest possible time with a time horizon of about two years, and made a clear commitment to doing whatever is necessary to achieve that target.

In reality, prices change due to various factors. A slowdown in the inflation rate in Japan since last summer is mainly attributable to the decline in crude oil prices, and it is common to many countries. The rate of decline in crude oil prices since last summer was very large – about 60 percent within about six months. It has been taken for granted among major central banks that the inflation rate would deviate for some time from the price stability target as a result of changes in commodity prices, such as crude oil prices. In fact, the year-on-year rates of change in the headline consumer price index have become zero or even slightly negative in economies such as of the United States, the United Kingdom, and the euro area, and the timing of reverting to 2 percent inflation is projected to be two or three years from now in these economies. In Japan, as I have described, the underlying trend in inflation has improved steadily, and as the effects of the decline in crude oil prices dissipate, the year-on-year rate of increase in the CPI is projected to accelerate toward the price stability target of 2 percent. We believe that this forecast is consistent with the commitment to achieving the price stability target at the earliest possible time, with a time horizon of about two years. That said, if there are changes in the underlying trend in inflation and it is deemed necessary to take action in order to achieve 2 percent inflation, the Bank will make adjustments as appropriate without hesitation.

Concluding remarks

So far, I have reflected on the progress made in the two years since the introduction of QQE, and with this in mind, I also have discussed the developments in economic activity and prices and the Bank's monetary policy. Lastly, I will conclude today's speech by sharing my thoughts.

In implementing economic policies, many things can happen, expected or unexpected. Looking back at the two years since the introduction of QQE, there have been expected developments and unexpected events. During the first year – in fiscal 2013 – most of the developments were judged as expected or as better than expected, as the economy experienced a positive turnaround and the inflation rates increased steadily. Exports, however, had been lacking momentum, and this was below my expectations. The effects of firms' relocation of production overseas, which had taken place amid the excessive appreciation of the yen, were more significant than I had expected. Because of these effects, it is only recently that exports have picked up. During the second year – in fiscal 2014 – private consumption was weaker than expected. This was attributed to the effects of the decline in demand following the consumption tax hike being somewhat prolonged, as well as to other factors, such as the effects of the bad weather last summer. From consumers' perspective, it was natural that they perceived the consumption tax hike as being part of price increases. Given that the rate of wage increases did not catch up with that of price increases including the tax hike, private consumption weakened. Such effects on private consumption have been anticipated since tax hikes place a burden on consumers, but they have been somewhat larger than our expectations. On top of this, I would note the decline in crude oil prices, which amounted to a 60 percent drop within about six months, as the most unexpected event. As a result, the CPI inflation rate has declined to about 0 percent from 1.5 percent. This decline in the inflation rate created a risk for the mechanism of QQE – namely, the formation of inflation expectations in particular – and this was why the Bank decided to expand QQE.

Despite these unexpected events, the mechanism of QQE has been operating as intended. During the past two years, QQE – in tandem with the government's policy measures – has markedly changed people's negative mindset, which had taken root under deflation. If the economy continues its turnaround and deflation is to be overcome, Japan will provide a rare example of a regime shift through macroeconomic policy. Despite some unexpected events, I feel encouraged by the fact that the big picture of economic development for these two years is in line with what we envisioned at the outset. The Bank will continue to steadily pursue QQE to achieve the price stability target of 2 percent at the earliest possible time.

Thank you.

Chart 1

Mechanism of QQE

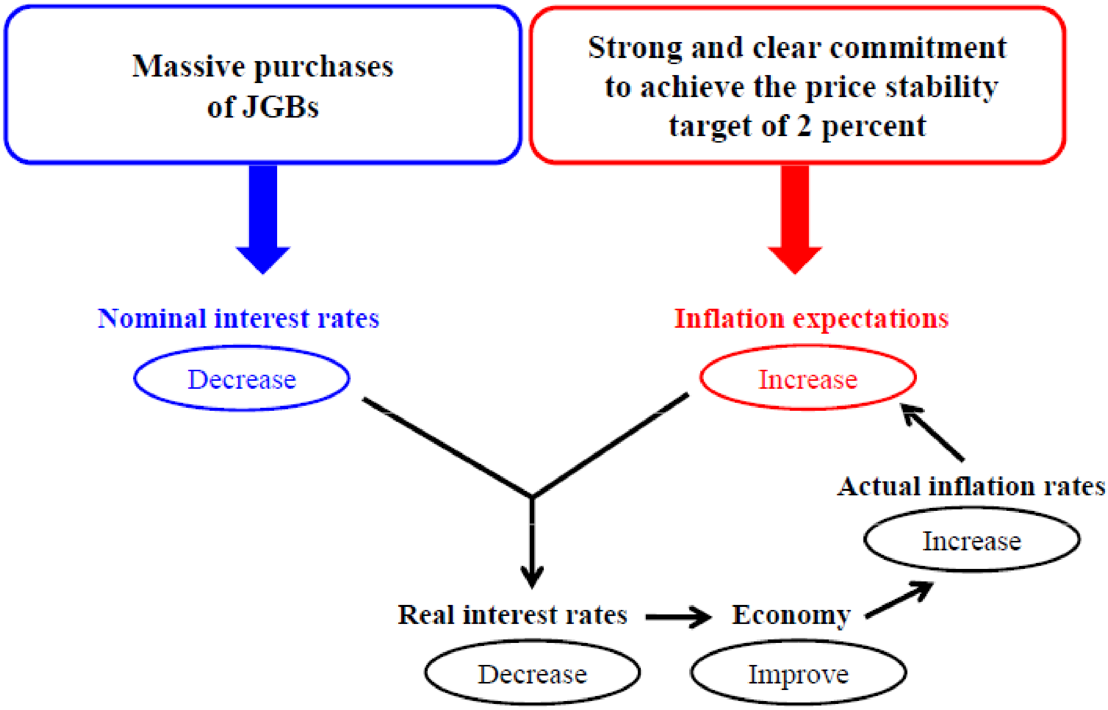

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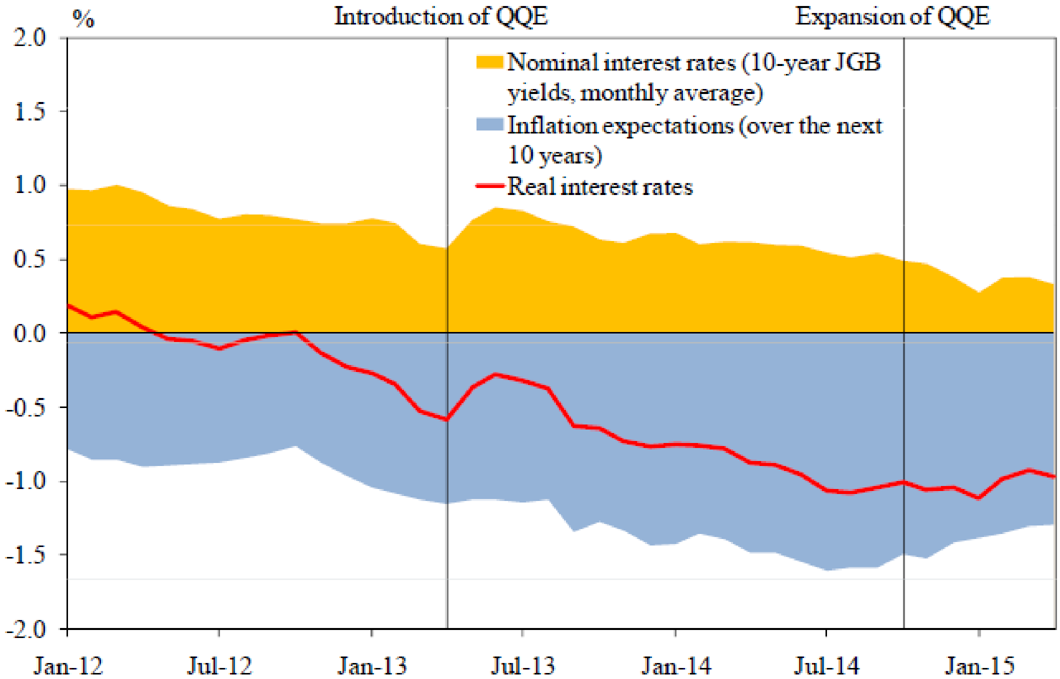
Chart 2

Real Interest Rates



Note: Figures for inflation expectations are taken from the "QUICK Monthly Market Survey (Bonds)." The sign of these figures is reversed. From the September 2013 survey, the survey has asked respondents to include the effects of the consumption tax hikes.
Sources: QUICK; Bloomberg.

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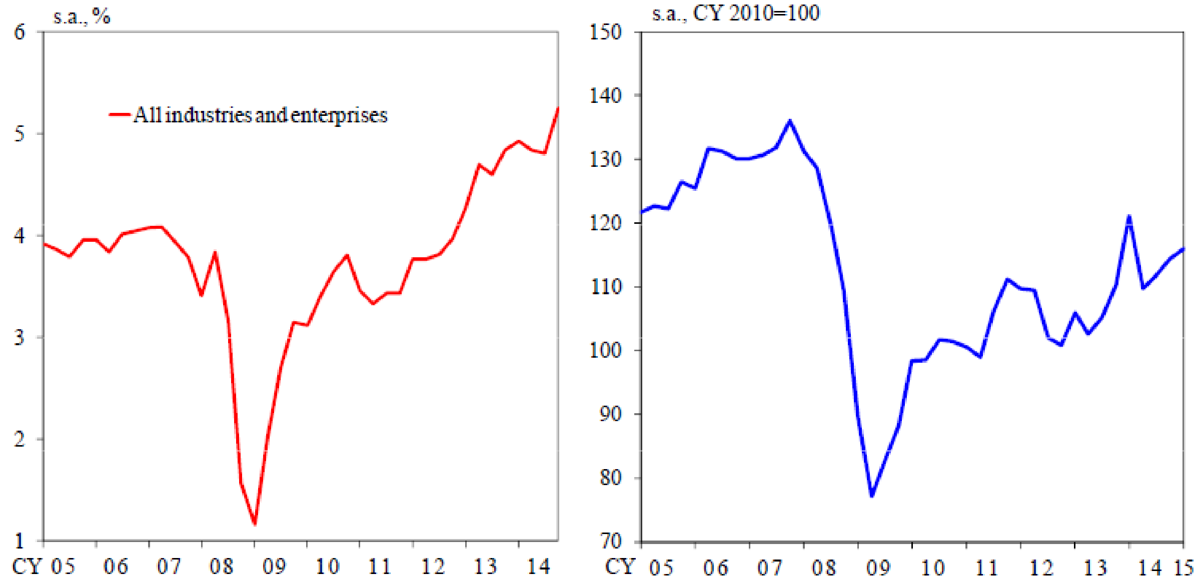
Chart 3

Corporate Profits and Business Fixed Investment

Ratio of Current Profits to Sales *Domestic Shipments and Imports of Capital Goods*



Note: The figure for domestic shipments and imports of capital goods for 2015/Q1 is the January-February average.
Sources: Ministry of Finance; Ministry of Economy, Trade and Industry.

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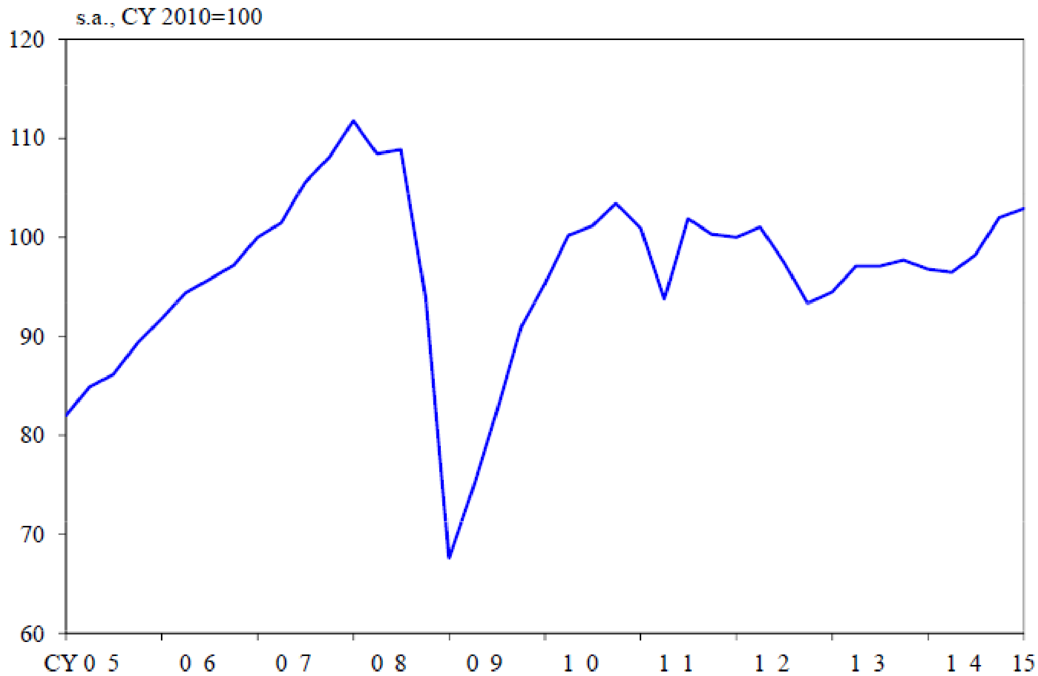
Chart 4

Real Exports



Sources: Ministry of Finance; Bank of Japan.

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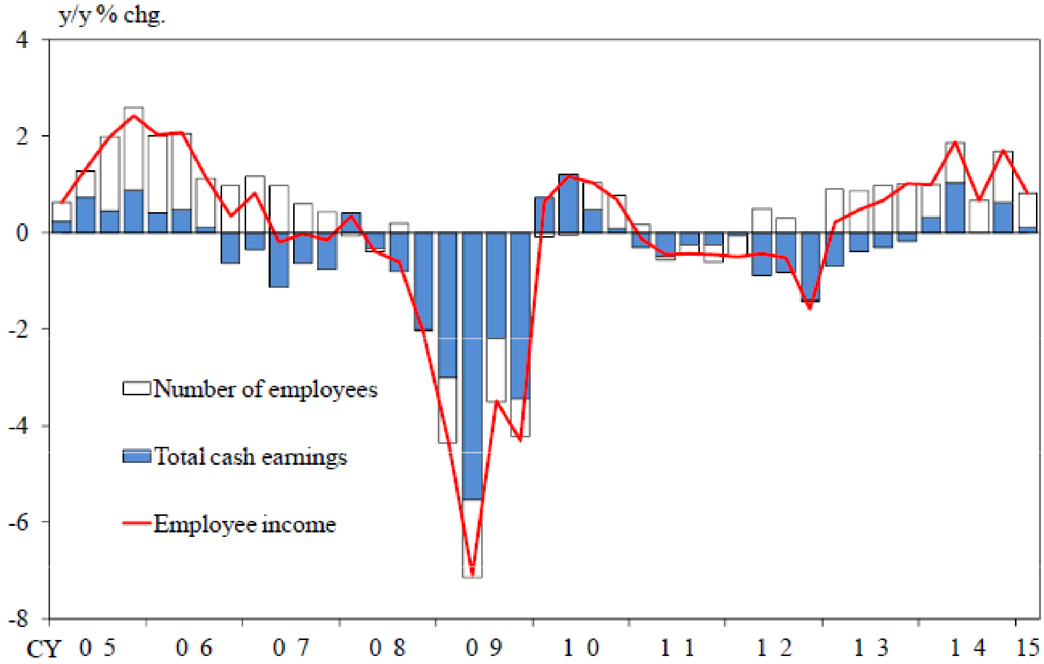
Chart 5

Employee Income



Notes: 1. Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February. Figures for 2015/Q1 are those of March.
2. Figures for "employee income" are calculated as the "number of employees" (Labour Force Survey) times "total cash earnings" (Monthly Labour Survey).

Sources: Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications.

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Chart 6

Outlook for Economic Activity and Prices (as of April 2015)

y/y % chg.

	Real GDP	CPI (all items less fresh food)	Excluding the effects of the consumption tax hikes
Fiscal 2015	+2.0	+0.8	
Forecasts made in January 2015	+2.1	+1.0	
Fiscal 2016	+1.5	+2.0	
Forecasts made in January 2015	+1.6	+2.2	
Fiscal 2017	+0.2	+3.2	+1.9

Note: Figures indicate the median of the Policy Board members' forecasts (point estimates).
Source: Bank of Japan.

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