

## **Hiroshi Nakaso: Japan's economy and monetary policy**

Speech by Mr Hiroshi Nakaso, Deputy Governor of the Bank of Japan, at the Joint Luncheon of the American Chamber of Commerce in Japan (ACCJ), the European Business Council in Japan (EBC), and the Swiss Chamber of Commerce and Industry in Japan (SCCI), Tokyo, 8 July 2014.

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### **Introduction**

It is my pleasure to have the opportunity to speak at the joint luncheon of the Swiss Chamber of Commerce and Industry in Japan, the American Chamber of Commerce in Japan, and the European Business Council in Japan – one of the events to commemorate the 150th anniversary of diplomatic relations between Switzerland and Japan.

Since the 2008 global financial crisis, the economies of the United States and Europe have been sluggish and have yet to see a full-fledged recovery. Against this backdrop, the inflation rate in the euro area has been low and there are concerns that the euro area may face protracted disinflation. Japan suffered from deflation from the latter half of the 1990s, that is, preceding the global financial crisis, but under quantitative and qualitative monetary easing, dubbed QQE and introduced in April last year, Japan appears to have finally embarked on a path toward overcoming deflation. Today, I would like to talk about Japan's experience under 15 years of deflation while referring to monetary policies in the United States and Europe since the global financial crisis.

### **I. Japan's deflationary equilibrium**

Since the latter half of the 1990s, Japan's economy had been in a state of deflation, in which the year-on-year rate of change in the consumer price index (CPI) was either zero or slightly negative. A distinctive feature of Japan's deflation is that it was moderate but persistent (Chart 1). The annual average rate of decline in the CPI from fiscal 1998 to fiscal 2012 was a meager minus 0.3 percent, but this decline went on for 15 years. It is difficult to clearly identify the causes of deflation. However, the situation in the latter half of the 1990s, when Japan's economy fell into deflation, suggests the following.

First, following the burst of the asset bubble at the beginning of the 1990s, firms and financial institutions were forced to repair their impaired balance sheets. However, financial institutions' nonperforming assets continued to build up due mainly to protracted economic stagnation (Chart 2). In 1997, the financial crisis in Japan reached its peak after the successive collapse of major financial institutions. In this situation, the functioning of financial intermediation, which had already been impaired, was substantially damaged further. The erosion of financial intermediation acted as a negative shock to the real economy, so that it took even more time to make headway with balance sheet adjustments. It can be said that the financial system and the economy deteriorated through mutually reinforcing negative shocks. A similar adverse feedback effect, in which the burst of a bubble and ensuing balance-sheet adjustments acted as headwinds to the economy, could also be observed during the recession that followed the global financial crisis.

Second, in response to the downturn of the economy following the burst of Japan's bubble in the early 1990s and the decline in inflation, the Bank of Japan successively lowered the policy interest rate. The policy rate, which had stood at 6 percent in August 1990, was reduced to the then globally unprecedented level of 0.25 percent in September 1998 (Chart 3). As a result, conventional monetary policy tools had been almost exhausted by around 1997–98 when anxiety about the financial system due to the financial crisis reached its peak. As a result of the erosion of banks' intermediation function, Japan's economy fell into a

situation in which the effects of monetary policy did not sufficiently feed through to the economy.

Against the backdrop of these overlapping events, Japan's economy fell into deflation. From the 2000s onward, the decline in the labor force due to demographic changes became an additional factor exerting downward pressure on the economy. Since deflation persisted, deflationary expectations became entrenched, and economic behavior based on the assumption that prices would not rise or would moderately decline took hold. As a result, the economy tumbled into a vicious cycle of declining prices, declining sales and profits, stagnating or falling wages, sluggish consumption, and further price declines. Such a situation can be called a deflationary equilibrium in that it becomes extremely difficult to escape once the economy becomes trapped in it. The longer deflation continues, the more difficult it becomes to overcome deflation. Therefore, what is critical is not to allow deflation to take hold for too long. This is one of the important lessons we have learned.

## **II. The Bank of Japan's unconventional monetary policies**

### ***Prior to QQE***

As I just mentioned, the Bank of Japan lowered the policy rate to 0.25 percent in September 1998, reaching a situation in which the conventional monetary policy tool of setting the policy interest rate had been almost exhausted. In the jargon, Japan's economy was facing the "zero lower bound on nominal interest rates." However, economic activity and prices did not improve. In this situation, the Bank decided to embark on various unconventional monetary policy measures (Chart 4).

I believe many of you have heard expressions such as "zero interest rate policy," "quantitative easing," "credit easing," and "forward guidance." These are names of unconventional monetary policy measures introduced by central banks in the United States and Europe after the global financial crisis. In fact, most of these policy measures were originally implemented in one form or another by the Bank of Japan ahead of other central banks in response to the 15 years of deflation since the latter half of the 1990s. Because of time constraints, I will skip discussing the specifics of the respective policies; but examining the policy responses taken prior to QQE highlights the following two points.

First, the past policies have contributed to preventing Japan's economy from falling into a deflationary spiral of continuing rapid economic deterioration and considerable price declines, by containing systemic disruption of the financial system and underpinning the economy. With financial institutions burdened with massive nonperforming loans, the financial system was under considerable stress. However, large-scale liquidity provision by the Bank had the effect of dispelling financial institutions' anxiety about liquidity, and, as a result, prevented a severe credit contraction. One of the important lessons we have learned the hard way thus concerns how liquidity provision by central banks through their lender of last resort function can contribute to maintaining the stability of the financial system. I have shared this lesson from Japan's experience with the central banking community, and it has been incorporated in the responses of the major economies to the 2008 global financial crisis. From immediately after the collapse of Lehman Brothers, central banks in the major economies provided large amounts of liquidity. In addition, they took coordinated action in providing U.S. dollar funds-supplying operations. In my view, the past policies by the Bank of Japan contributed not only to maintaining the stability of the financial systems, but also to underpinning the economy by providing accommodative financial conditions. In fact, Japan's long-term interest rates remained at a low level in the range of 1–2 percent throughout most of the 2000s. Real GDP grew at an annual average rate of 1.5 percent between 2000 and 2007. In this manner, Japan's economy avoided falling into a deflationary spiral.

Second, however, Japan's inflation rates continued to slide, despite the various unconventional monetary policies pursued by the Bank. In that sense, the Bank's past

policies were not sufficient to lift Japan's economy out of deflation. So, what was lacking in those policies? In my view, two elements are worth noting.

The first is the lack of a strong enough commitment to price stability. In hindsight, since the commitment in past policies was not sufficiently strong, the Bank was unable to dispel the deflationary expectations that had taken hold. The Bank was yet to introduce an explicit numerical price stability target at the time of quantitative easing (QE) between 2001 and 2006. Instead, it introduced forward guidance under QE, stating that QE would be continued until the annual rate of change in the CPI (excluding fresh food) registered zero percent or above in a stable manner, but the threshold of zero percent was perhaps too low.

The second element that had been lacking is policies that have a sufficiently large impact. When an economy falls into a *deflationary equilibrium*, then – because it is a situation of equilibrium – sufficient escape velocity needs to be provided to the economy to get out of it. To that end, policies need to have a large impact. The Bank implemented policies that consisted of lowering short-term interest rates as close as possible to 0 percent and expanding the size of its balance sheet to close to 30 percent of nominal GDP, which back then was globally unprecedented in terms of scale. Nevertheless, the impact provided by those policies proved insufficient to allow the economy to escape from its deflationary equilibrium.

### ***Introduction of QQE***

Based on this experience, the QQE policy introduced in April last year was designed to overhaul the past policies (Chart 5). QQE has the following two features. One feature is a strong and clear commitment to achieve price stability. Specifically, the Bank has committed itself to achieving the price stability target of 2 percent at the earliest possible time, with a time horizon of about two years. This does not mean, however, that the Bank will end QQE in two years. The Bank also committed itself to continuing with QQE as long as it is necessary for maintaining that target in a stable manner. The other feature is large-scale monetary accommodation to underpin the commitment. In introducing QQE, the Bank decided to double the monetary base – the money it directly provides – in two years and, to achieve this, the Bank would purchase massive amounts of Japanese government bonds (JGBs), including bonds with longer remaining maturities.

The Bank expects QQE to work via several transmission channels, and of these channels, raising inflation expectations is of particular importance. The salient feature of QQE is that it seeks to actively influence expectation formation. Not only is raising inflation expectations in and of itself critical in overcoming deflation, it also provides room for further monetary easing. At the time of introducing QQE, 10-year interest rates were below 1 percent and there was limited room for further reduction in nominal interest rates in Japan. But it is real interest rates – nominal interest rates minus the expected rate of inflation – that affect decisions with regard to business fixed investment and private consumption. While there was little room for lowering nominal interest rates in Japan, there was sufficient room for raising the expected rate of inflation, since it was quite low compared with the price stability target of 2 percent. Therefore, if the Bank can raise inflation expectations while keeping increases in nominal interest rates smaller than the rise in inflation expectations by putting downward pressure on nominal interest rates through large-scale purchases of government bonds, then real interest rates will decline. This will stimulate the real economy.

### ***Monetary policy in Japan, the United States, and Europe***

Next, let me compare monetary policy in Japan with that in the United States and Europe since the global financial crisis. The first thing to note is that monetary policy in the United States and Europe since the global financial crisis has been quite similar to the monetary policy pursued by the Bank since the 1990s. That is, central banks responded to the crisis by lowering policy rates as long as there was room for that (Chart 3). After reaching the zero lower bound, many central banks adopted policies to expand their balance sheets (Chart 6).

However, since the economic and inflation situation in the United States and Europe differs from that in Japan, the challenges for monetary policy naturally differ. Although the economies of the United States, the United Kingdom, and the euro area are on a recovery trend, there does remain considerable slack in these economies, as seen in the still-high unemployment rates (Chart 7). In the jargon, the output gap remains negative. On the other hand, while actual inflation has been declining, medium- to long-term inflation expectations in these economies appear to have remained more or less anchored at about 2 percent (Chart 8). Given this economic and inflation situation, the challenge for monetary policy is how to stimulate the economy and lower the unemployment rate while keeping inflation expectations unchanged.

By contrast, in Japan, the unemployment rate has declined to 3.5 percent, which is below the trough prior to the global financial crisis, and there is limited slack in the economy. On the other hand as I have explained, under 15 years of deflation, deflationary expectations became entrenched and medium- to long-term inflation expectations drifted down to a very low level. In such a situation, the policy challenge for us is how to raise inflation expectations. Taking this challenge into account, QQE focuses on directly working on inflation expectations.

Meanwhile, Switzerland has been facing a challenge that differs from that in the United States, the United Kingdom, the euro area, and even Japan. Switzerland has seen a decline in inflation as a result of a decline in import prices due to the appreciation of the Swiss Franc. Therefore, the Swiss National Bank (SNB) set a ceiling for the Swiss Franc against the euro, stating that it would enforce the ceiling with unlimited interventions. The fact that the ratio of the SNB's balance sheet to nominal GDP is higher than that of the Bank of Japan's reflects the increase in its holdings of foreign currency denominated assets under this policy.

### **III. Achievements under one year of QQE**

#### ***Developments in the past year***

More than one year has passed since the Bank introduced QQE. During this time, QQE has produced its intended effects, with Japan's economy on track to achieving the 2 percent price stability target. Under the Bank's large-scale purchases of government bonds, long-term interest rates have been stable at a low level and have recently been below 0.6 percent (Chart 9). Inflation expectations judged from break-even inflation rates calculated from the yield of inflation-indexed bonds and various surveys have been rising (Chart 10). As a result, real interest rates have declined, thereby stimulating private demand. Against this backdrop, the virtuous cycle among production, income, and expenditure has kept the growth momentum intact and Japan's economy has continued to recover moderately. Real GDP growth has been positive for six consecutive quarters (Chart 11).

On the inflation front, the year-on-year rate of change in the CPI (excluding fresh food), which was minus 0.5 percent when QQE was introduced, as of May this year has risen to plus 1.4 percent excluding the direct effects of the consumption tax hike. Two mechanisms are at work behind this rise in inflation. First, slack in the economy has declined and the output gap has improved. The output gap has narrowed and has recently reached close to 0 percent, that is, the long-term average (Chart 12). This mainly reflects the tight labor market conditions brought about by the fact that domestic demand, which tends to be directed toward more labor intensive activities than external demand and hence is associated with more substantial job creation, has been firm. In this situation, upward pressure on wages and prices has been increasing.

Second, medium- to long-term inflation expectations have been rising, and that has started to affect actual wage and price setting. As mentioned at the outset, under deflation, it was rational to refrain from consumption and investment on the assumption that prices would not rise or would moderately decline, and such behavior took hold in Japan. As a result, the

practice of incorporating inflation in base pay adjustments in annual wage reviews disappeared for quite a while under deflation. However, wage negotiations this spring saw a return to increases in base pay at many firms. Thus, the rise in inflation has started to be taken into account even in wage negotiations between labor and management.

Going forward, trend inflationary pressure is expected to continue through the improvement in the output gap and the rise in inflation expectations. Thus, the year-on-year rate of change in the CPI is likely to reach about 2 percent – the price stability target – in or around fiscal 2015. Having said that, the road to achieving the price stability target is not necessarily going to be a straight one, since inflation is susceptible to various factors in the short term. In this regard, I would like to add that, especially through the summer, the year-on-year increase in the CPI is likely to decelerate temporarily, because the base effects of the depreciation of the yen and the rise in energy prices will likely dissipate, but is then likely to accelerate again thereafter.

### ***Criticisms from two viewpoints***

QQE has been criticized from two different viewpoints. Let me talk about my view on these criticisms.

The first criticism is that the year-on-year rate of increase in the CPI is unlikely to reach about 2 percent – the price stability target – in or around fiscal 2015 as forecasted by the Bank. In fact, although many private sector economists have recently revised their inflation forecasts upward, these forecasts continue to be conservative compared to that of the Bank. Since QQE is an unprecedented policy, we understand that there remains skepticism regarding the policy's effectiveness.

However, looking at price developments over the course of the past year, the inflation rate has no doubt been much higher than many had forecasted at the time of the introduction of QQE in April last year. That is, inflation over the past year has been above levels suggested by the relationship between the output gap and inflation data for recent years. This implies that inflation expectations have been edging up. The Bank will therefore continue with QQE, aiming to achieve the price stability target, as long as it is necessary for maintaining that target in a stable manner. Of course, if the outlook changes and if it is judged necessary for achieving the price stability target of 2 percent, the Bank will make adjustments without hesitation.

The second criticism focuses on potential difficulties related to exiting from QQE. In particular, there are concerns that, even after achieving the price stability target of 2 percent, the Bank might be obliged to continue its massive purchases of government bonds due to considerations of the fiscal situation. On the issue of exit, let me mention just two points. First, the Bank is pursuing QQE and purchasing government bonds solely to achieve the price stability target of 2 percent. The Bank has no intention to go beyond this objective and monetize government debt. Second, the Bank of Japan is the only central bank which has hands-on experience in exiting from unconventional monetary policy. At the time when the Bank exited from QE, which lasted from 2001 to 2006, I was responsible for market operations as the head of the Financial Markets Department of the Bank. While of course QE and QQE are different, in my view, the Bank already has an extensive range of operational instruments to exit from QQE. That being said, what I would like to emphasize is that the Bank is still in the midst of striving to achieve the price stability target of 2 percent at the earliest possible time, and exit policies should be designed depending on the then prevailing economic and inflation situation. Therefore, it would be premature to discuss the specifics of an exit at this stage.

## Concluding remarks

### ***Urgent need for strengthening growth potential***

Finally, let me talk about the medium- to long-term challenges facing Japan's economy.

I pointed out that one of the factors behind the rise in the year-on-year rate of change in the CPI is that the output gap has been narrowing and recently has reached around 0 percent, that is, the long-term average. This is mainly due to the increase in demand accompanying the moderate economic recovery. But from a somewhat longer-term perspective, it is also due to a decline in supply capacity in the economy. In fact, Japan's potential growth rate has been on a downtrend since the 1990s (Chart 13).

The potential growth rate is determined by the growth in labor input, capital input, and improvements in productivity through innovation and the like. Let me review the trends in these three sources of growth – labor input, capital input, and productivity – that underlie the downtrend in the potential growth rate.

First, labor input has been substantially affected by demographic changes. While demographic changes due to aging can be seen in many advanced economies, such changes have been much more pronounced in Japan than elsewhere (Chart 14). These demographic changes have been one factor putting downward pressure on the potential growth rate through the decline in labor supply.

Second, capital accumulation has slowed because Japanese firms were weighed down by the need to resolve the problem of excess capital stock during the process of adjusting their balance sheets following the burst of the bubble. In addition, protracted deflation reduced firms' investment appetite and resulted in the deferral of business fixed investment.

Third, productivity growth has also declined. One reason is that while concentrating on dealing with the aftermath of the bubble, Japanese firms were unable to adapt fully to major changes in the global economy such as advances in information and communication technology and intensified global competition. In addition, in the aforementioned deflationary equilibrium, innovation by firms was stifled and productivity growth thus subdued for a protracted period.

Against this backdrop, for Japan's economy to grow on a sustained basis, it is critical to address all three sources of growth. While it has been recognized for quite some time that strengthening the growth potential is a key challenge facing Japan's economy, it was not seen as an urgent issue when demand was weak. In that sense, with supply capacity constraints having surfaced, now is a golden opportunity to address Japan's longstanding challenge of raising the growth potential.

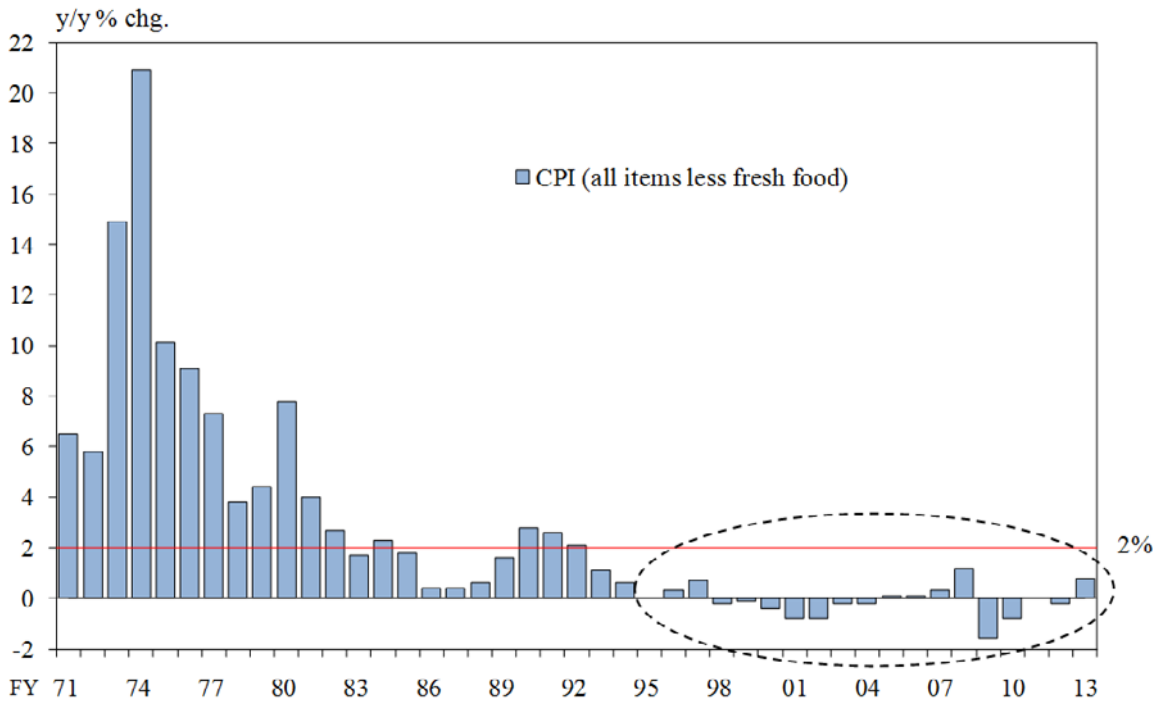
Specifically, it is essential to (1) enhance labor supply capacity by raising the labor participation of women and the elderly as well as utilizing high-skilled foreigners, (2) encourage forward-looking investment by firms and increase capital stock, and (3) raise productivity through regulatory and institutional reforms. In this regard, it is critical that private entities and authorities push ahead with initiatives in their respective roles. Innovation occurs through actual business activities, and since it is firms that decide what to invest in, it goes without saying that initiatives by private entities are crucial. In addition, the role of authorities is also important, in that they need to provide an environment that encourages such initiatives. With a view to this, the government has formulated the Japan Revitalization Strategy, which aims to raise the growth potential, and has started implementing measures in the past year. The revised Strategy was announced last month. In my view, the government's growth strategy, which includes measures to address all three sources of growth, is commendable. I strongly hope that the government will continue to implement the growth strategy unwaveringly.

### ***Concluding remarks***

The conquest of deflation in Japan is now in sight. We intend to achieve the price stability target of 2 percent at the earliest possible time by steadily pursuing QQE. If the economy can escape from its deflationary equilibrium and shift to one in which inflation of about 2 percent is sustained in a stable manner as we envisioned, that will revive the animal spirits of firms and households and promote proactive investment and innovations. This will in turn enhance the medium- to long-term growth potential of Japan's economy. I believe this will also contribute to the development of the global economy as a whole.

Chart 1

## Long-Term Developments in the Consumer Price Index

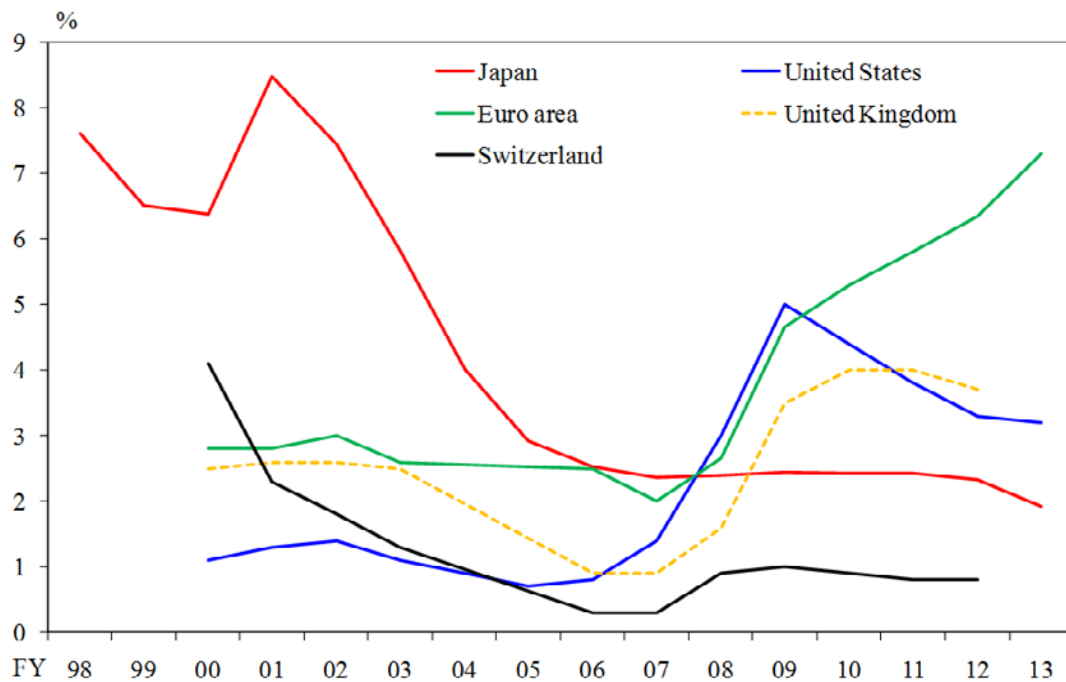


Note: Figures for the CPI are adjusted to exclude the effect of changes in the consumption tax rate.  
Source: Ministry of Internal Affairs and Communications.

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Chart 2

## Nonperforming Loan Ratio

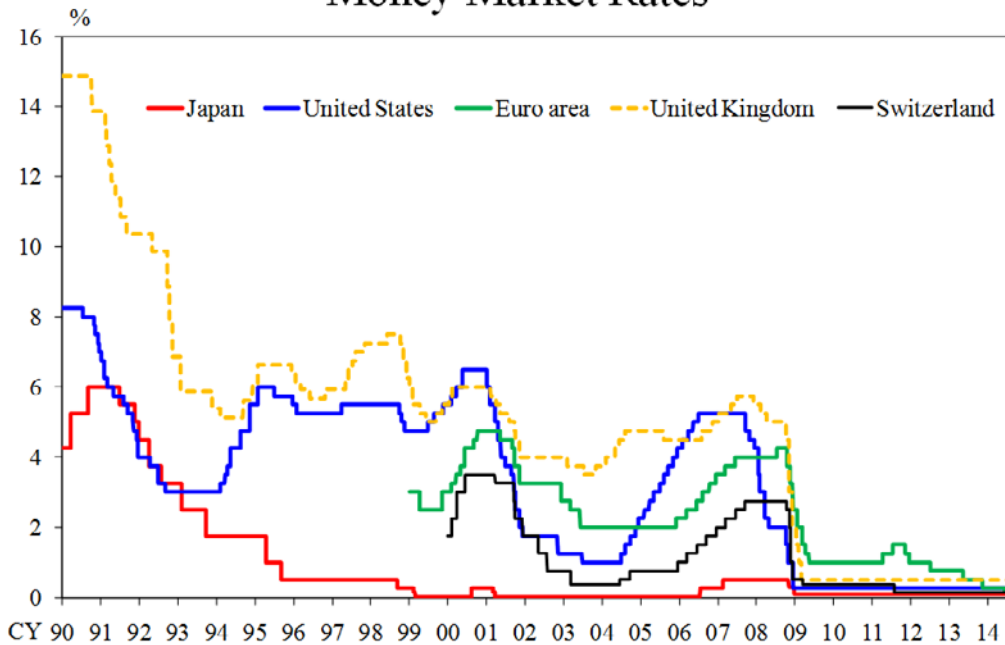


Note: Missing values are linearly interpolated.  
Sources: Bank of Japan; The World Bank.

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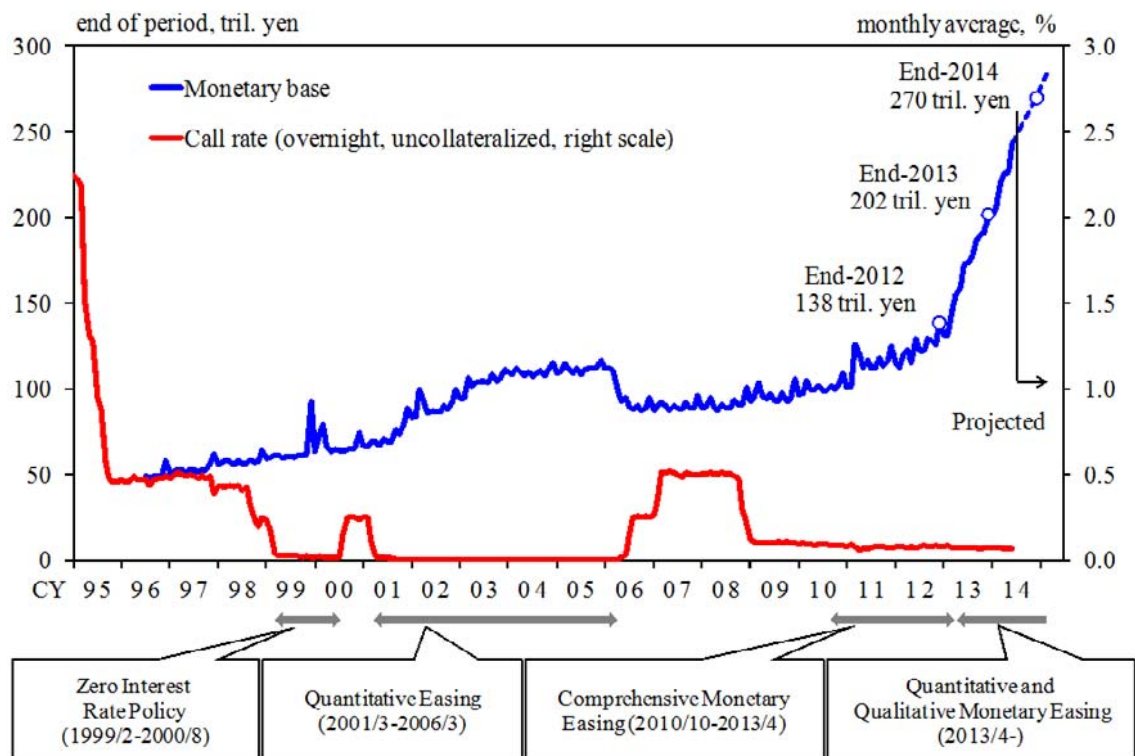


### Money Market Rates



Notes: 1. In the United States, the target range for the federal funds rate has been 0 to 0.25 percent since December 16, 2008.  
 2. In Japan, the money market rate was zero percent during the period of "Quantitative Easing" (March 19, 2001-March 8, 2006), and 0.1% (the interest rate applied to the complementary deposit facility) during the period of "Comprehensive Monetary Easing" (October 5, 2010-April 3, 2013) and "Quantitative and Qualitative Monetary Easing" (since April 4, 2013).  
 3. The money market rate in Switzerland is the midpoint of the target range of the Libor for three-month interbank loans in Swiss francs.  
 Sources: Bank of Japan; Federal Reserve; European Central Bank; Bank of England; Swiss National Bank.

### Monetary Policy in Japan



Source: Bank of Japan.

## Quantitative and Qualitative Monetary Easing (QQE)

### Strong and Clear Commitment

- Achieve the price stability target of 2% at the earliest possible time, with a time horizon of about 2 years.

### Clear Commitment into the Future

- Continue with the QQE as long as it is necessary for maintaining that target in a stable manner.

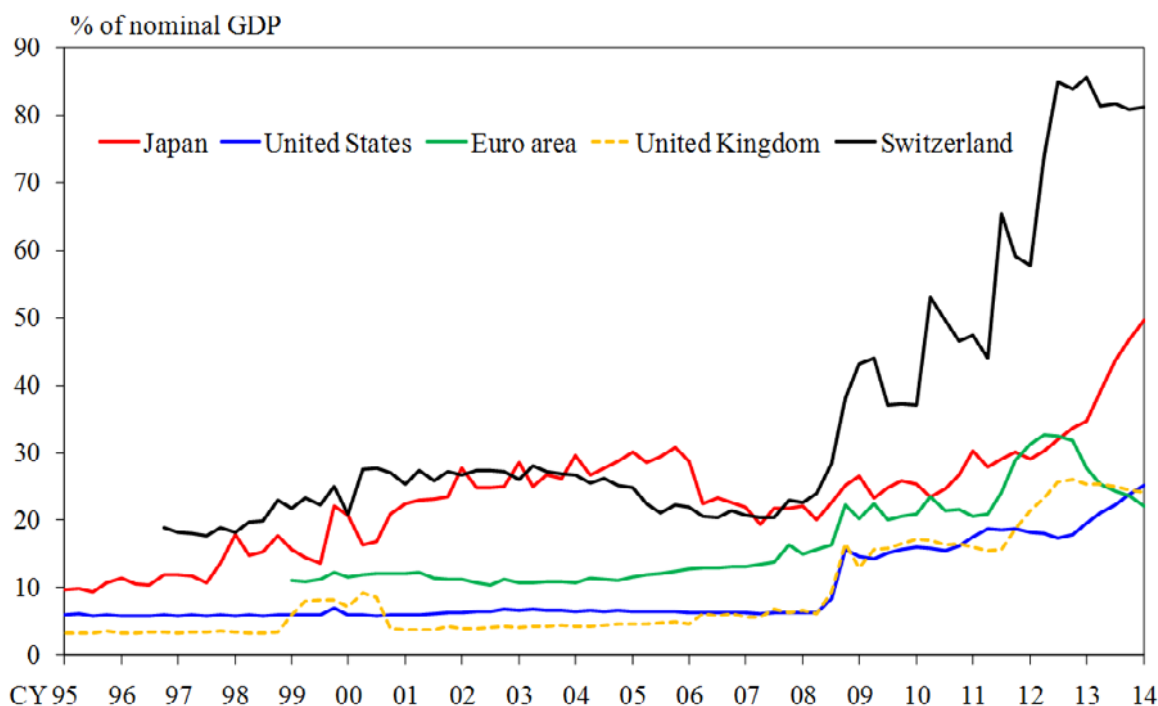
### New Phase of Monetary Easing to Underpin the Commitment

- Double the monetary base in 2 years.

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Chart 6

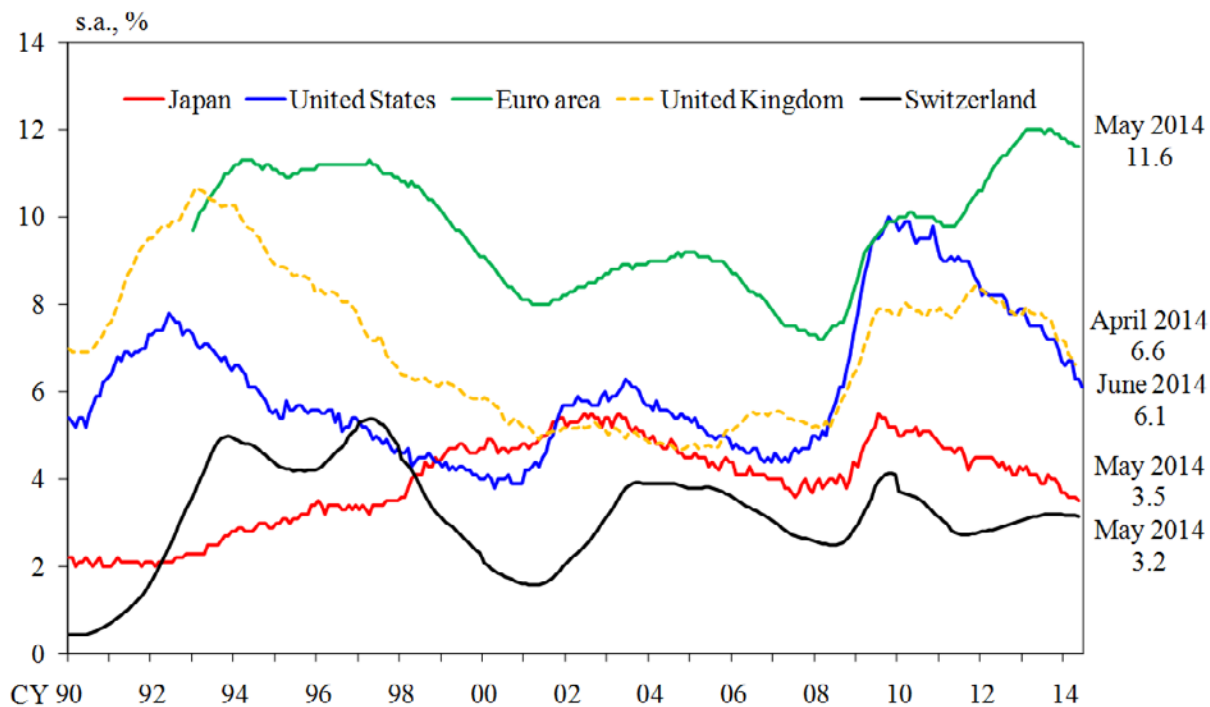
## Central Bank Assets



Sources: Bank of Japan; Federal Reserve; European Central Bank; Bank of England; Swiss National Bank, etc.

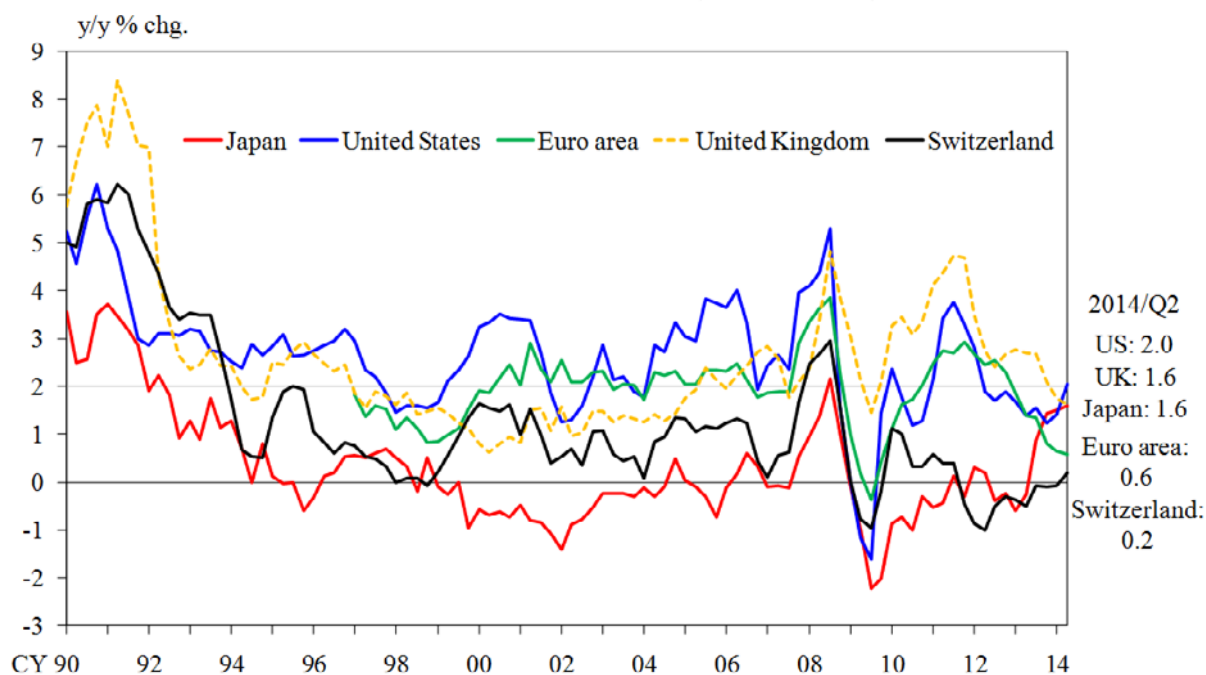
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## Unemployment Rates



Sources: Ministry of Internal Affairs and Communications; BLS; Eurostat; ONS; Swiss National Bank.

## Consumer Price Index (All items)

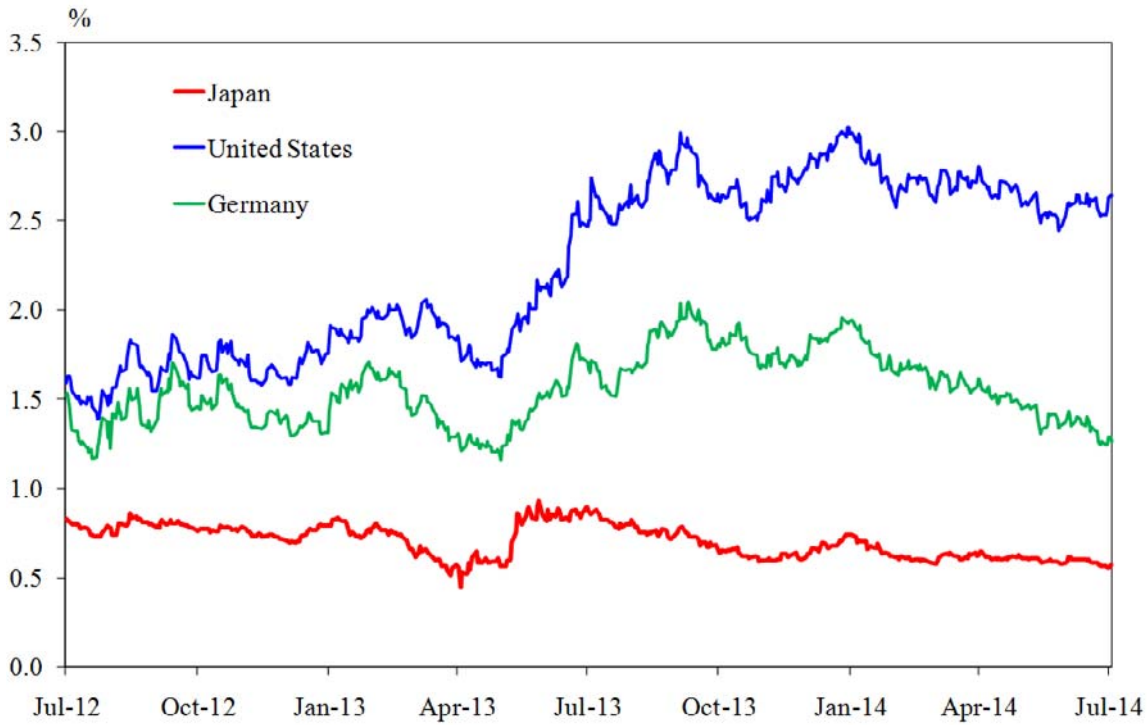


Notes: 1. The figures for 2014/Q2 in Japan, United States, United Kingdom, and Switzerland are those of April-May averages.

2. Figures for the CPI in Japan are adjusted to exclude the effect of changes in the consumption tax rate.

Sources: Ministry of Internal Affairs and Communications; BLS; Eurostat; ONS; SFSO.

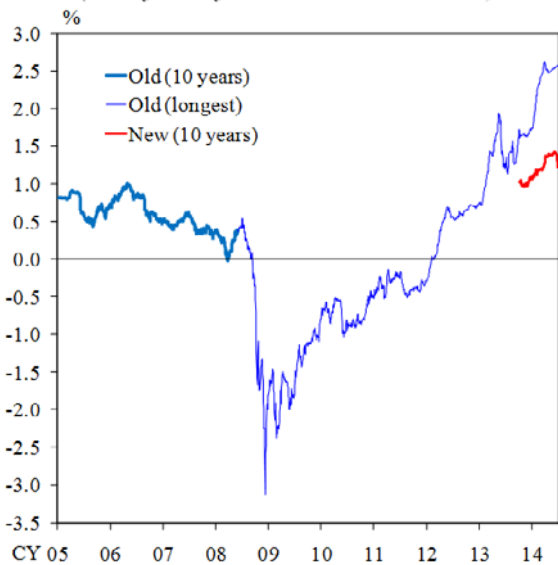
## Long-Term Interest Rates



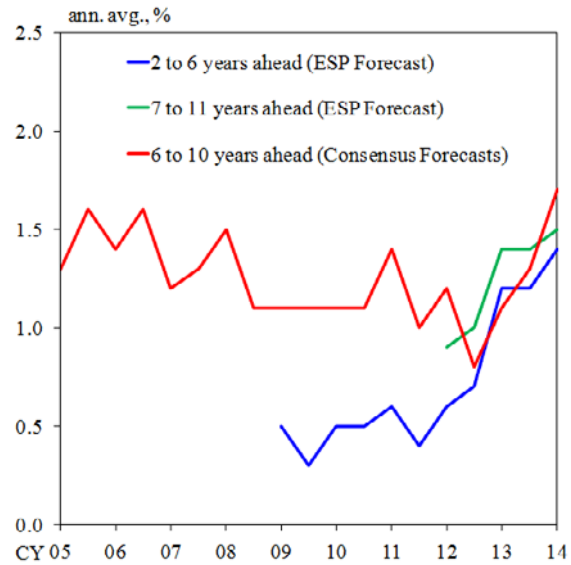
Source: Bloomberg.

## Inflation Expectations

*Market Participants*  
(BEI for Inflation-Indexed JGBs)



*Economists*

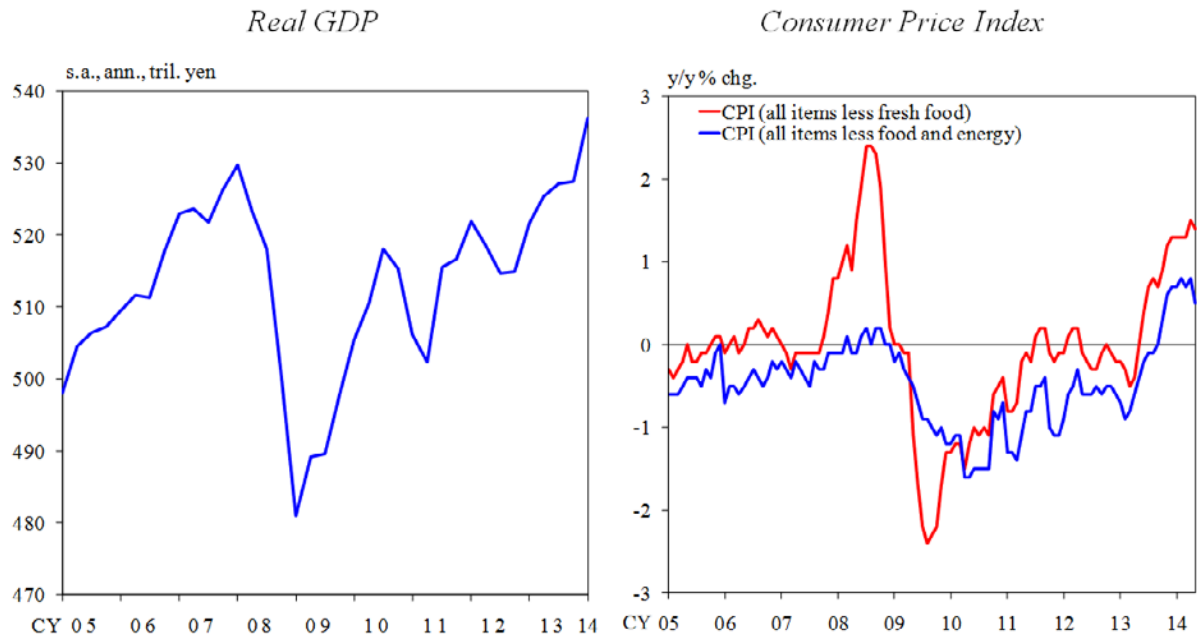


Notes: 1. BEI (break-even inflation) rates are yield spreads between fixed-rate coupon-bearing JGBs and inflation-indexed JGBs. Inflation-indexed JGBs issued since October 2013 are designated as "new," while the rest are designated as "old." Figures for "old (longest)" are calculated using yield data for issue No.16 of the inflation-indexed JGBs, which matures in June 2018.

2. Figures for the ESPForecast exclude the effects of the consumption tax hikes.

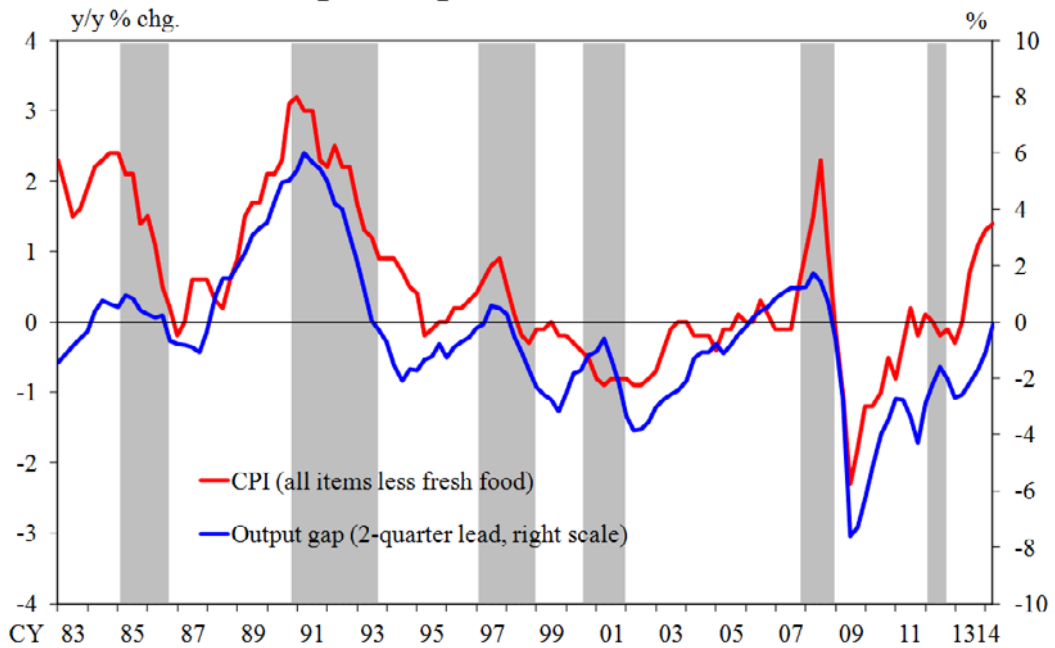
Sources: Bloomberg; Consensus Economics Inc.; JCER.

## Real GDP and Consumer Price Index



Note: Figures for the CPI from April 2014 onward are calculated to adjust the direct effects of the consumption tax hike.  
Sources: Cabinet Office; Ministry of Internal Affairs and Communications.

## Output Gap and Inflation Rate



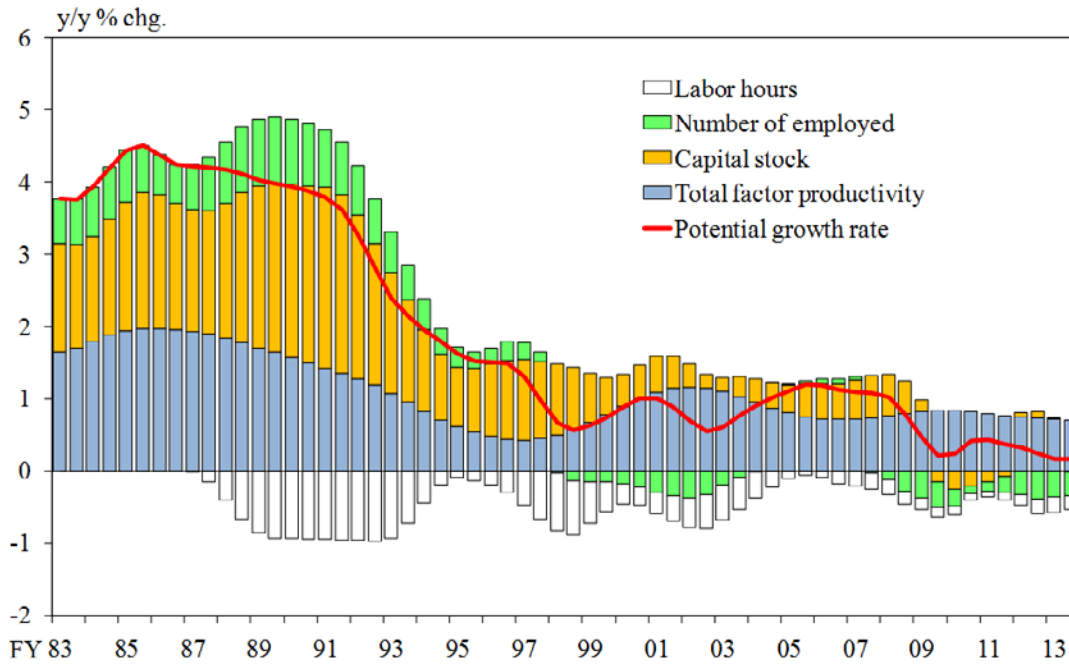
Notes: 1. Shaded areas indicate recession periods.

2. The output gap is estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3.

3. Figures for the CPI are adjusted to exclude the effect of changes in the consumption tax rate. The figure for 2014/Q2 is the April-May average.

Sources: Ministry of Internal Affairs and Communications; Cabinet Office; Bank of Japan, etc.

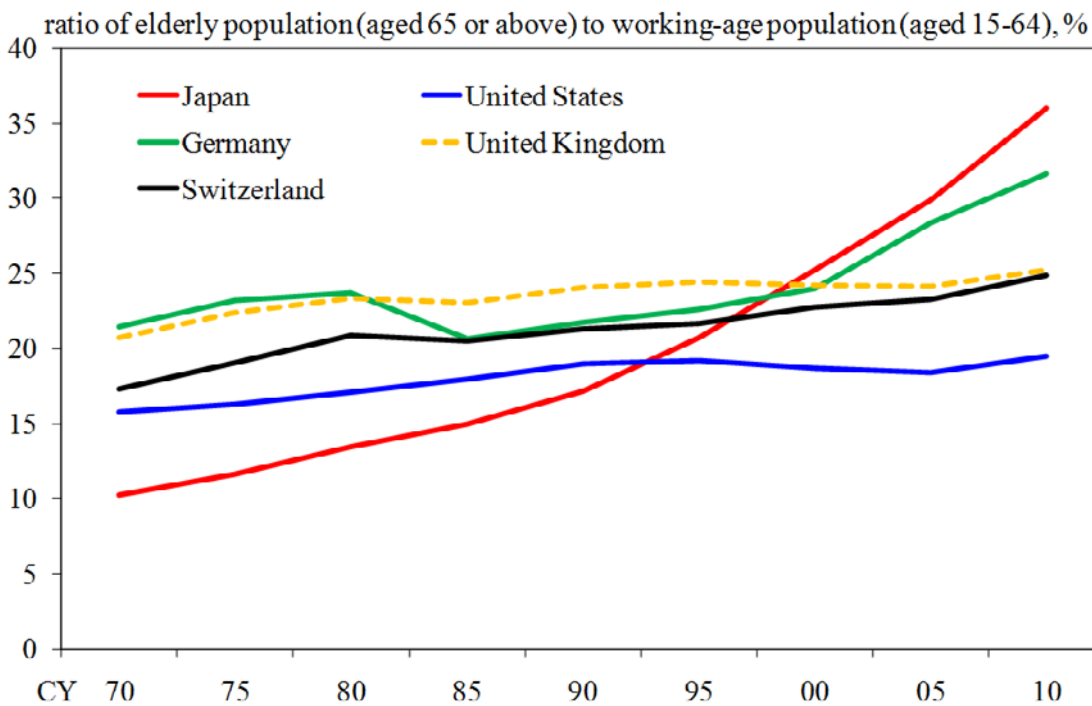
### Potential Growth Rate



Note: The potential growth rate is estimated by the Research and Statistics Department, Bank of Japan. For the estimation procedures, see "The New Estimates of Output Gap and Potential Growth Rate," Bank of Japan Review Series, 2006-E-3. Figures for the second half of fiscal 2013 are those of 2013/Q4.

Sources: Cabinet Office; Bank of Japan; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry, etc.

### Old-Age Dependency Ratio



Source: United Nations.