# Haruhiko Kuroda: Overcoming deflation and after

Speech by Mr Haruhiko Kuroda, Governor of the Bank of Japan, at the Meeting of Councillors of Nippon Keidanren (Japan Business Federation), Tokyo, 25 December 2013.

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*Accompanying charts can be found at the end of the speech. Original presentation is on the Bank of Japan's website: www.boj.or.jp/en/announcements/press/koen_2013/ko131225a.htm/*

## Introduction

It is a great honor to have this opportunity to address such a distinguished gathering of business leaders in Japan today.

There is only one week left this year. As for Japan's economy this year, it has been following a recovery path as expected, due partly to the effects of both monetary and fiscal policies (Chart 1). During the three quarters after the turn of the year, real GDP registered an average annualized growth rate of 3 percent on a quarter-on-quarter basis, which was substantially above the potential growth rate that is estimated to be around 0.5 percent. Business sentiment in the *Tankan* survey (Short-Term Economic Survey of Enterprises in Japan) released last week has continued to show a clear improvement and, on an all industry and all-sized enterprise basis, it has gotten back to the level of a peak prior to the Lehman crisis.

There has also been an improvement on the price front this year (Chart 2). The year-on-year rate of change in the consumer price index (CPI, all items excluding fresh food) turned positive in June, increased to 0.9 percent in October, and is likely to slightly exceed 1 percent by the end of the year. Not only a rise in the prices of energy-related goods, including petroleum products, has contributed to raise the index, but also an improvement has been spreading in a wide range of items as the aggregate supply and demand balance of the economy has been improving. That can be confirmed by the fact that the year-on-year rate of change in the CPI (all items excluding food and energy) turned positive at 0.3 percent in October, the highest rate of increase in 15 years since August 1998.

The Bank of Japan, with the aim of overcoming deflation at the earliest possible time, introduced quantitative and qualitative monetary easing (QQE) in April this year. Today, toward the year-end, I will express my views on what kind of economy and society we aim at by overcoming deflation while looking back at the developments in Japan's economy from a medium- to long-term perspective.

## I. The problem of deflation

The word "deflation" is generally understood as referring to a state in which prices decline persistently. Since the latter half of the 1990s, Japan's economy has been in deflation for nearly 15 years (Chart 3).

During that period, Japan's economy was caught in various negative shocks: the nonperforming loan problem and the Asian currency crisis in the latter half of the 1990s, and a burst of an IT bubble in the United States, the Lehman crisis, and the Great East Japan Earthquake after the turn of the 2000s. In addition, there were many factors that put direct downward pressure on prices, such as an inflow of inexpensive import goods from emerging economies, firms' low-price strategy amid intensified competition associated with deregulation, and reduction in the wage level due to an increasing use of non-regular employment. While it is not easy to specify the causes of deflation, what is important is that deflation was not only a result of economic stagnation but also a cause that protracted economic stagnation. Namely, amid nearly 15 years of deflation, behavior based on

recognition that “prices would not rise” or “prices would moderately decline” has been embedded in the economy.

Let me explain somewhat in detail about that point. Viewed from firms’ side, under deflation, as they cannot raise the prices of their products and services, their sales will not increase and profits will hardly increase. Therefore, firms will restrain labor costs and business fixed investment as much as possible. For households, as wages will not increase, consumption will be restrained. In addition, if future prices are to decline, they will become more inclined to defer consumption as much as possible. They will be better off if they buy after prices decline. If consumption is restrained in such a manner, firms will be forced to reduce the prices of their products and services. As a result, a vicious cycle of a decline in prices, a decrease in sales and profits, a restraint in wages, a slump in consumption, and a decline in prices will continue.

What is important here is that both firms and households are acting rationally as respective economic entities. Notwithstanding each entity taking action considered rational, it leads to a bad result as a whole: that state is called a “fallacy of composition” or a “coordination failure” in terms in economics. Japan’s deflation since the latter half of the 1990s is a typical example of that.

Let us confirm that point in terms of macroeconomic indicators since the 1990s. Nominal GDP and nominal employee income have not been able to get out of the long-term downtrend since their peaks in 1997 (Chart 4). Namely, amid deflation, Japan’s economic activity on a nominal basis has been consistently contracting. Such situation is quite rare among advanced economies. In the United States, nominal GDP and nominal employee income have maintained long-term growth trends, albeit a temporary decline due to the Lehman crisis. Japanese firms have been in a situation in which they have not been able to pass the costs related to production on to sale prices because of intensified competition (Chart 5). As for price conditions in the *Tankan* survey, since the latter half of the 1990s, the diffusion index of output prices has been consistently lower than that of input prices. As a reason for the difficulty in price pass-through, many firms have pointed out severity in price competition with rival firms, thus suggesting that the “fallacy of composition” or the “coordination failure” might have been taking place. At the same time, firms’ medium- to long-term growth expectations have been on a declining trend for a protracted period since the 1990s (Chart 6). Furthermore, the fact that the expected growth rate on a nominal basis was lower than that on a real basis even when corporate profits increased substantially in the mid-2000s tells us how persistent deflationary expectations were.

Also viewed from the financial side, protracted deflation has deprived Japan’s economy of vitality. First, when deflationary expectations were embedded, real interest rates obtained by subtracting the expected rates of inflation from nominal interest rates remained high (Chart 7). What matters for firms’ decision-making in business fixed investment is developments in not nominal but real interest rates. Even though nominal interest rates decline, if prices are expected to decline as a trend, investment cost on a real basis will remain high and incentive for business fixed investment will wane. In order for firms to transform innovative ideas into actual technologies and products, it is necessary to introduce new machines and build new factories. The fact that real interest rates remained high amid deflation has deprived firms of incentive to make growth-enhancing investment.

Second, when deflationary expectations were embedded, holding cash and deposits became a relatively better investment even if nominal interest rates were zero or at extremely low levels (Chart 8). Deflation reduced the rate of return on risk assets such as stocks and investment trusts on the one hand, but on the other increased the real rate of return on cash and deposits, whose principals are guaranteed. Against such a backdrop and due partly to investors’ long-standing preference toward safe assets, risk money backed by investors’ search for high returns was lacking in Japan’s financial market, and that weakened the power to support firms’ growth from the financial side.

An aggregate flow of funds has substantially changed from the past amid a vicious cycle of deflation. The corporate sector had long been a "fund shortage" sector, in which investment exceeds savings, up to the first half of the 1990s. Firms' innovations are a source of economic growth, and it is a normal state of the economy in which the corporate sector raises funds, conducts business fixed investment, and makes research and development investment. However, since the latter half of the 1990s, the corporate sector drastically changed to a "fund surplus" sector, in which savings chronically exceed investment. And firms have channeled most of their savings accumulated every year to relatively safe and better investment tools of cash and deposits (Chart 9). Viewed from the banking sector, that means an increase in the liability of deposits on the balance sheet, and, as firms' appetite for business fixed investment remained stagnant, the banking sector could not easily increase its asset side of lending. Therefore, the banking sector has increased investment in Japanese government bonds (JGBs), which generates safe and certain returns even with low nominal interest rates (Chart 10). In the meantime, the government sector has been running substantial fiscal deficits due to a decline in tax revenue and repeated implementation of an economic stimulus and to an increase in the social security burden stemming from a declining and aging population. Consequently, government debt outstanding has continued to rise, but JGBs were issued smoothly, supported by buoyant demand from the banking sector.

As deflation became protracted, a mechanism based on the assumption that prices will not increase has been embedded in Japan's economic and social system. As I have mentioned earlier, each economic entity has been acting rationally and has been lacking incentive to change its behavioral pattern. In that sense, deflation has been in a state of equilibrium. That is why it has been also called "deflationary equilibrium." It can be said that deflationary equilibrium has become protracted and become increasingly difficult to overcome precisely because it has been stable. However, such state of equilibrium will not continue forever. Above all, one cannot expect the long-term development of Japan's economy in the absence of firms' active efforts to create new businesses. For the sake of the future of Japan's economy, it is critical to overcome deflation at the earliest possible time and convert "bad and shrinking equilibrium" to "good and expanding equilibrium."

## II. Ideas behind QQE – drastic change in expectations

Then, how can the economy overcome deflation? The Bank's answer to this question was nothing but the QQE introduced in April.

As mentioned earlier, the essence of deflation is in that taking action on the assumption that prices will not increase has been rational for both firms and households. To get out of such "deflationary equilibrium," the economic environment needs to be changed so that taking action on the assumption that prices will moderately increase becomes a better option. Under deflation due to a "fallacy of composition," raising prices and wages by only one firm will be a disadvantage. As many firms raising prices and wages simultaneously will have a positive effect on the economy as a whole, the policy authorities have to come up with bold policy measures that enable firms to change their mindset in such a manner. In sum, there is a need to change the rules of the game that prevailed in the "deflationary equilibrium."

To that end, the Bank is strongly and clearly committed to achieving the price stability target of 2 percent CPI inflation rate at the earliest possible time, with a time horizon of about two years. Besides, to underpin the strong and clear commitment, the Bank has decided to enter a new phase of bold monetary easing both in terms of quantity and quality (Chart 11). Furthermore, the Bank is also committed to continuing with the QQE as long as it is necessary to maintain the 2 percent target in a stable manner. In the process, the Bank will examine both upside and downside risks to economic activity and prices, and make appropriate adjustments. The Bank is totally committed to achieving the 2 percent price stability target.

As specific measures for monetary easing, the Bank will purchase JGBs so that their holdings will increase at an annual pace of about 50 trillion yen, and double the monetary base in two years (Chart 12). The monetary base two years later will reach about 60 percent of nominal GDP. That size far exceeds that of the current 22 percent at the Federal Reserve (Fed) in the United States and 22 percent at the Bank of England in the United Kingdom, and thus the QQE is truly unprecedented monetary easing in modern history.

The QQE anticipates various transmission channels, and what differs greatly from the Bank's past monetary easing policies and the current monetary easing policies pursued by major central banks overseas is a particular focus on "a drastic change in expectations." The QQE aims at, through strong and clear commitment and monetary easing that underpins the commitment, drastically changing the market's and economic entities' expectations, thereby working directly on raising inflation expectations. If inflation expectations rise and a recognition that prices will rise in the future becomes embedded, stimulative effects through channels such as a decline in real interest rates and portfolio rebalancing will be strengthened. Namely, first, the Bank's purchases of JGBs put downward pressure on nominal long-term interest rates through directly influencing the supply and demand conditions of JGBs, and if a rise in inflation expectations is added to that, real long-term interest rates will further decline, thereby strengthening the effect of stimulating investment. Second, if inflation expectations rise, the relative attractiveness of holding cash and deposits will decline and thus it is expected that investors and financial institutions will shift their investment to risk assets such as stocks and foreign bonds or increase lending.

Transmission channels of the effect of the QQE that focuses on influencing expectations are nothing but a process of reversing the vicious cycle embedded under deflation. Starting from dispelling deflationary expectations, the Bank aims at creating and embedding an economic virtuous cycle of a moderate rise in prices, an increase in sales and profits, an increase in wages, a boost in consumption, and a moderate rise in prices.

## III. Raising inflation expectations

While the QQE focuses on raising inflation expectations, it seems that there have still been skeptical views among market participants and economists about the feasibility of raising inflation expectations through policy measures. To begin with, we are thoroughly aware that a central bank cannot change at will people's and the market's expectations. Having said that, here, I would like to make two points.

First, looking at history, while there were not many cases in which people's inflation expectations shifted dramatically in a short period, those cases were underpinned by a bold policy regime change being implemented based on the policy authorities' strong resolution. For example, in the United States during the Great Depression in the 1930s, President Roosevelt clearly showed his strong resolution toward overcoming deflation and implemented the New Deal Policy (Chart 13). By that, inflation expectations shifted upward in a relatively short period, and severe deflation associated with the Great Depression was contained. Also in Japan during the same period, a combination of expansionary foreign exchange, fiscal, and monetary policies, the so-called Takahashi Economic Policy, achieved a significant result in overcoming the Showa Depression. While it is an example of containing inflation, it is well known that Fed Chairman Paul Volcker succeeded in lowering inflation expectations through aggressive monetary tightening from the end of the 1970s to the beginning of the 1980s, and laid a sound foundation for prosperity of the U.S. economy under low inflation (Chart 13).

Second, in formulating inflation expectations, what is important is not only a forward-looking element, which is the Bank's commitment and actions, but also an adaptive or backward-looking element, which is an accumulation of achievements that the actual inflation rate increases as monetary easing progresses. The year-on-year rate of change in the CPI increased to 0.9 percent in October and is expected to hover at slightly above 1 percent

through the first half of 2014. Given that deflation has continued for nearly 15 years, those are important changes. If people actually experience a rise in prices, inflation expectations are supposed to change substantially. The Bank holds the view that, due to a backward-looking element together with a forward-looking element, inflation expectations will continue on a rising trend, gradually converging to around 2 percent – the price stability target.

While I have said that prices are expected to rise gradually, the Bank has been aiming at ensuring price stability and not by any means artificially creating inflation. A numerical definition of what the Bank considers price stability based on a specific price index is 2 percent in terms of the year-on-year rate of change in the CPI. There are several reasons why 2 percent might be desirable. First, the existence of upward bias that an inflation rate calculated from the CPI will become higher than the true inflation rate. In other words, when the year-on-year rate of change in the CPI is 0 percent, that situation is in deflation to the extent of the bias. Therefore, to overcome deflation, it is necessary to aim at a somewhat positive inflation rate. Second, the idea of securing a "buffer" to reinforce monetary policy in responding to a price decline and economic deterioration. Nominal interest rates cannot be lowered to below zero percent. Since lowered to 0.5 percent in 1995, the short-term rate in Japan has been between 0 percent and 0.5 percent for about 20 years (Chart 14). Japan has been in a situation in which it has been difficult to stimulate economic activity by lowering nominal short-term interest rates even if prices decline or economic activity deteriorates. In fact, even in response to an extremely large adverse shock of the Lehman crisis, the Bank was only able to reduce about 0.4 percent of the nominal short-term interest rate. In the future, when about 2 percent inflation will be achieved in a stable manner and nominal interest rates will be formed at a somewhat high level reflecting the inflation rate, room will increase for flexibly responding to a price decline and economic deterioration by reducing the short-term interest rate. For similar reasons, many countries have set an inflation target at about 2 percent, and 2 percent has become a global standard.

**Concluding remarks**

As I have explained, the Bank has been aiming at creating a state in which 2 percent inflation rate will be maintained in a stable manner. It might be difficult to imagine such a situation because deflation has continued for a protracted period. I would like to conclude my speech today by briefly touching on an image of the economy and society after overcoming deflation.

A state in which 2 percent inflation will be maintained in a stable manner is, to put it briefly, a state that each economic entity will act based on a recognition that prices will rise by about 2 percent even when the economy is in a normal state. In other words, a state in which about 2 percent inflation has been factored in price-setting and wage-setting.

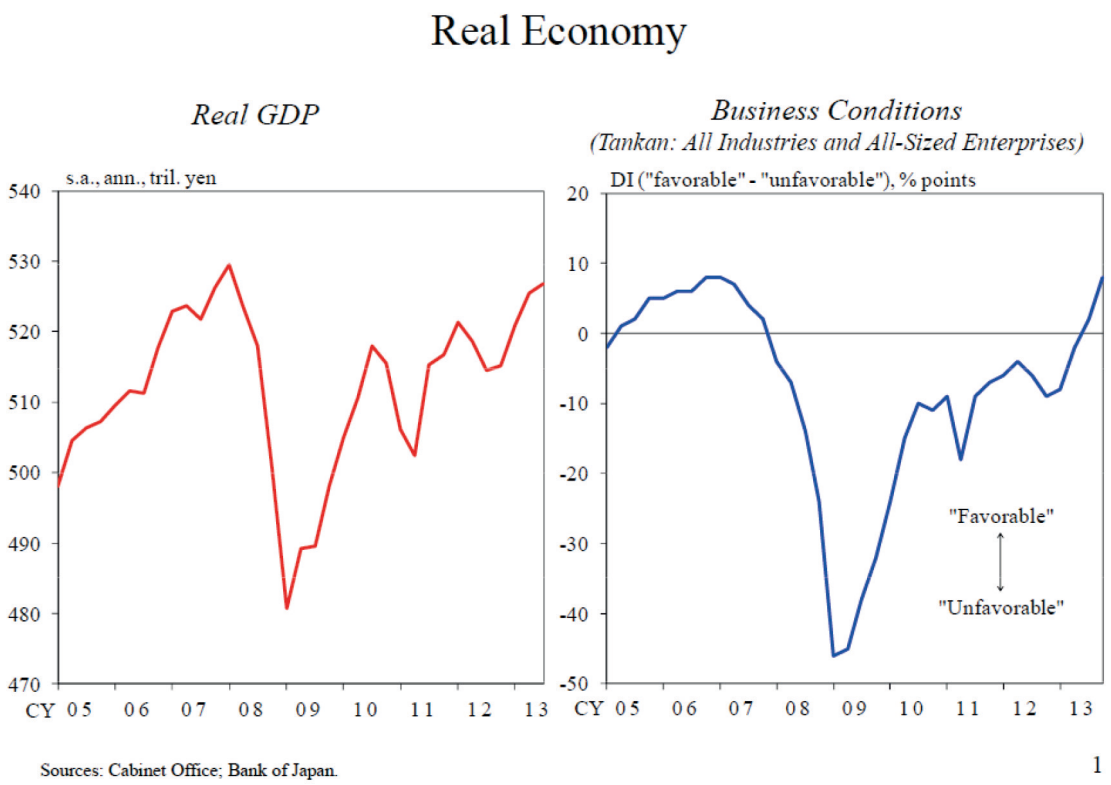
Such state has already been achieved in advanced economies such as in the United Stated and Europe, in which people's medium- to long-term inflation expectations have been stable at about 2 percent. As about 2 percent inflation has been firmly embedded in the social system and practices, those economies have been able to avoid deflation of a continued decline in prices and wages even when there was temporary downward pressure on prices and wages due to economic deterioration. Let me cite one unique example. In wage negotiations between employees and employers in Sweden, a mechanism that the 2 percent inflation target set by the central bank serves as an important starting point for discussion to determine the wage increase rate was established as a common practice (Chart 15). In fact, in Sweden, as wages rise stably, the year-on-year rate of change in the CPI has been around 2 percent over the business cycle.

Japan's economy is now seeing a wide range of positive developments in the real economy and the financial market, as well as an improvement in people's mindset and expectations. It is a golden opportunity for overcoming deflation. Let me reiterate that the Bank is committed to pursuing the QQE and achieving the 2 percent price stability target at the earliest possible

time. I strongly expect that the favorable moves to achieve an economic virtuous cycle will spread in business and industrial circles.

Thank you.

Chart 1

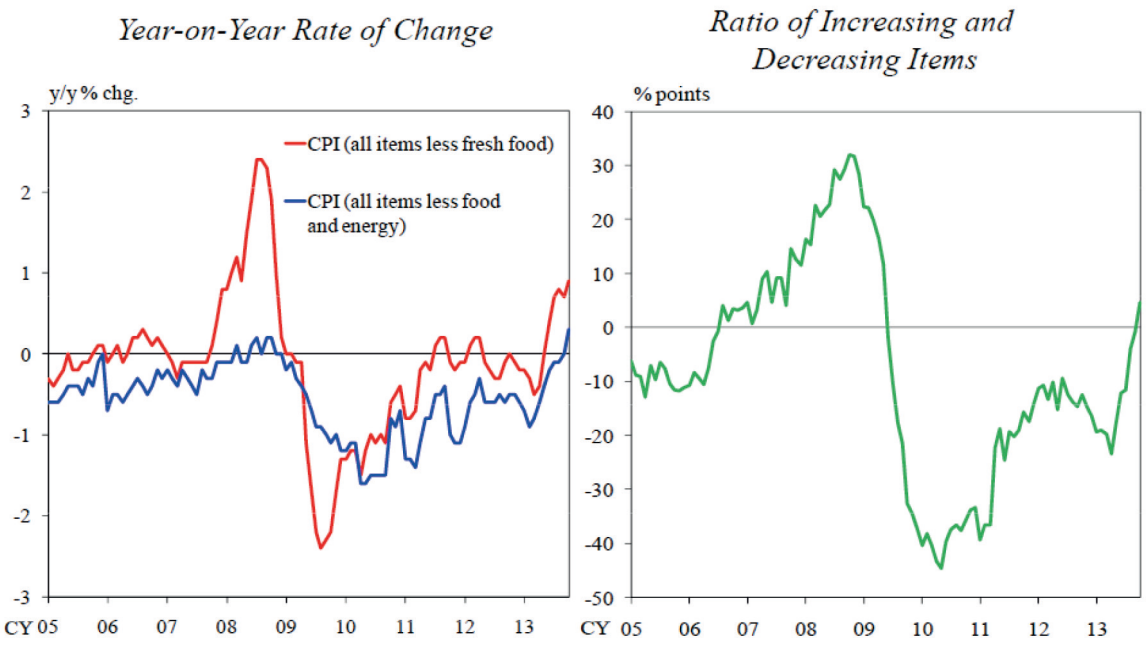



Sources: Cabinet Office; Bank of Japan.

1

Chart 2

# Consumer Price




Note: The chart on the right indicates the difference between the ratio of items whose year-on-year rates of price change increased and that of items whose year-on-year rates of price change decreased. All items less fresh food.
Source: Ministry of Internal Affairs and Communications.

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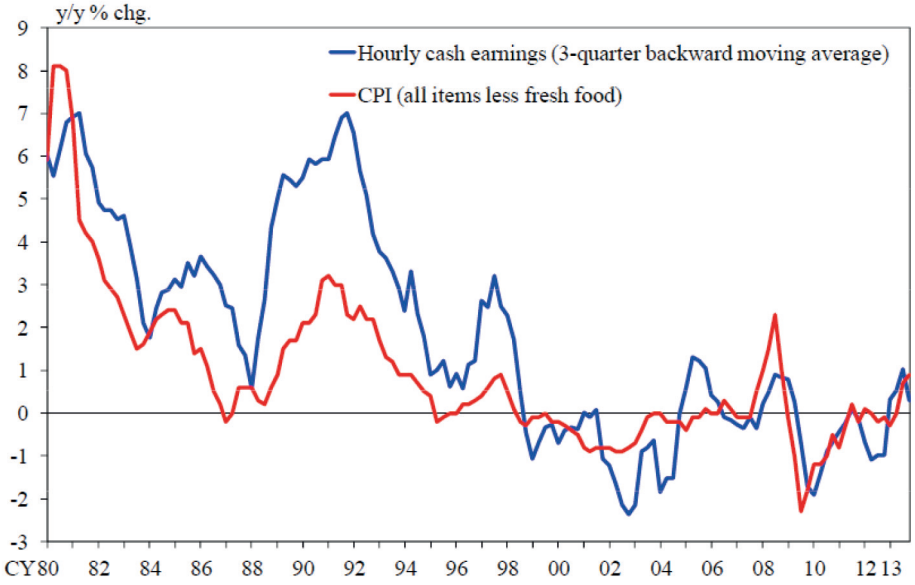
Chart 3

# Consumer Price and Wages

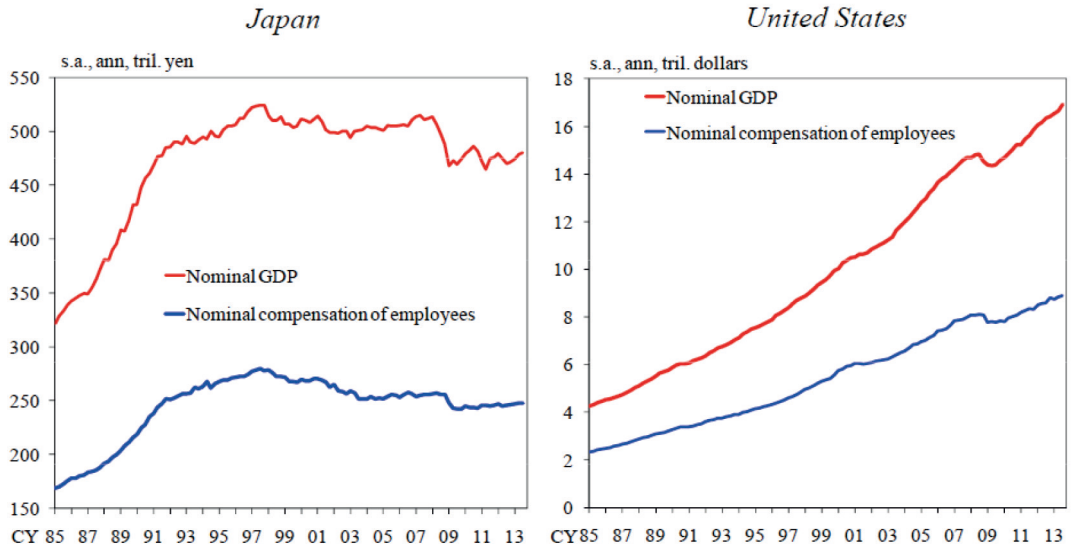



Notes 1. Figures for the CPI are adjusted to exclude the effect of changes in the consumption tax rate.
2. Figures for hourly cash earnings up through 1990/Q4 are those for establishments with 30 or more employees.
3. Figures for 2013/Q4 are those of October.
Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare.

3

Chart 4

# GDP and Employee Income (Nominal)




Sources: Cabinet Office; BEA.

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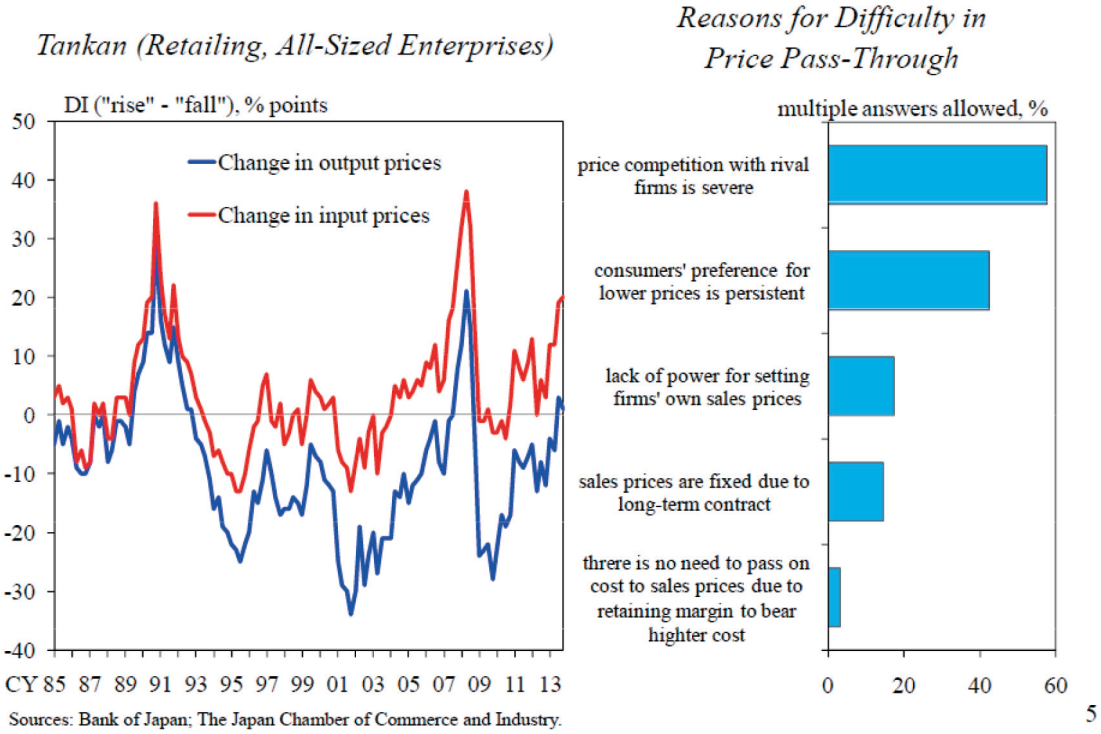
Chart 5

# Pricing Power of Firms




Sources: Bank of Japan; The Japan Chamber of Commerce and Industry.

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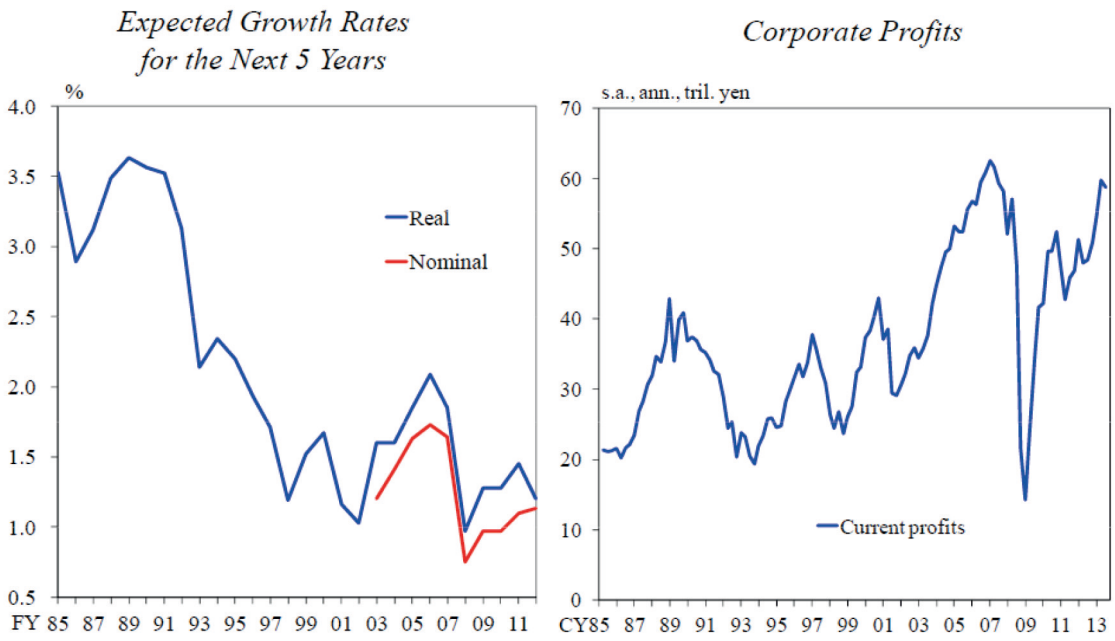
Chart 6

# Growth Expectations and Corporate Profits




Notes 1. Expected growth rates are taken from "Annual Survey of Corporate Behavior."
2. Corporate profits are taken from the "Financial Statements Statistics of Corporations by Industry, Quarterly."
Figures are based on all enterprises except finance and insurance.
Sources: Cabinet Office; Ministry of Finance.

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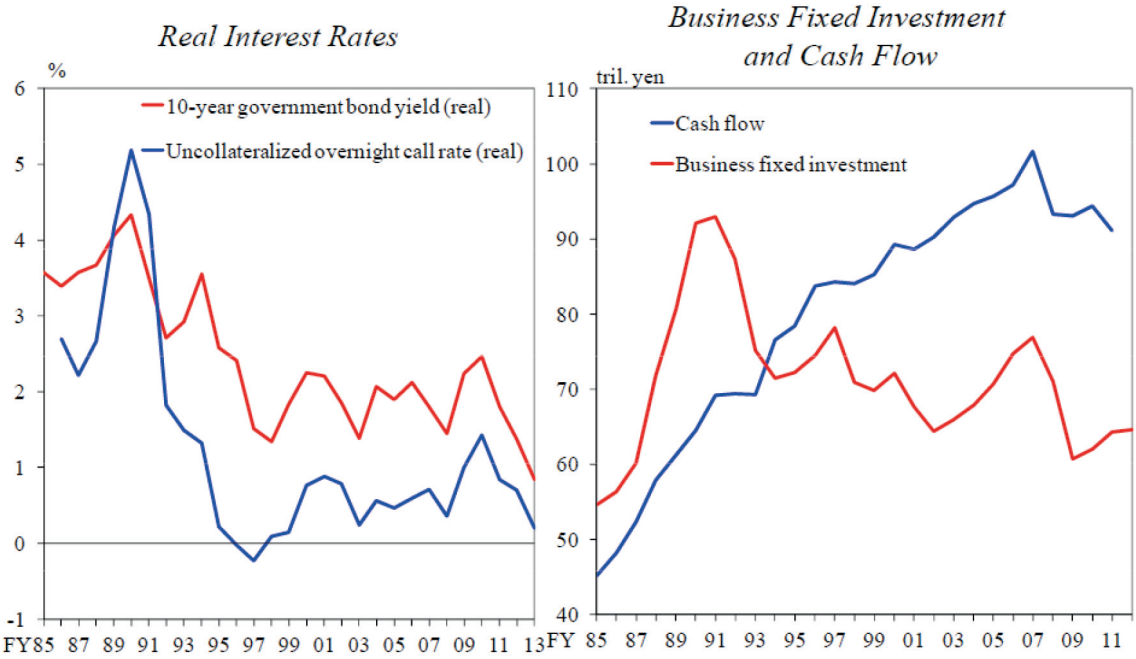
Chart 7

# Real Interest Rates and Business Fixed Investment

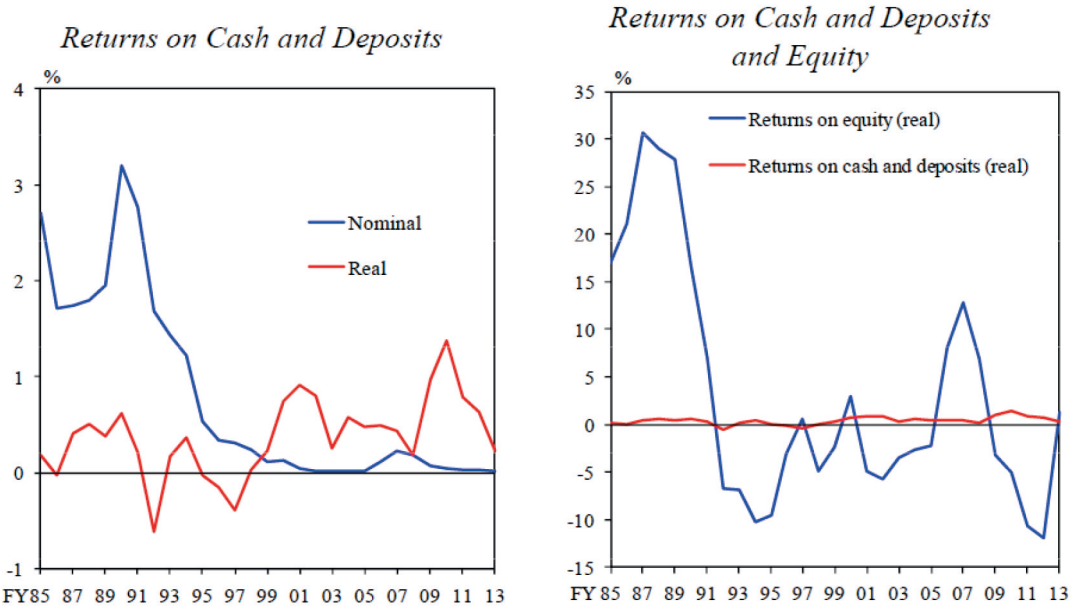



Notes: 1. Figures for real interest rates are calculated by subtracting the year-on-year rate of change in the CPI (less food and energy, adjusted to exclude the effect of changes in the consumption tax rate) from each nominal yield.
2. Business fixed investment and cash flow are taken from the "National Accounts."
Cash flow = consumption of fixed capital + (operating surplus + net property income) / 2
Figures up through fiscal 1993 are on the 2000 base.
Sources: Bloomberg; Ministry of Internal Affairs and Communications; Cabinet Office.

7

Chart 8

# Real Returns on Cash and Deposits




Notes: 1. Returns on cash and deposits are weighted average rates of interest rates on deposits (that on currency is regarded as zero) and amounts outstanding of cash and deposits of nonfinancial corporations in the "Flow of Funds."
2. Figures for real returns are calculated by subtracting the year-on-year rate of change in the CPI (less food and energy, adjusted to exclude the effect of changes in the consumption tax rate) from each nominal return.
3. Figures for returns on equity are annual returns on equity listed on the first section of the Tokyo Stock Exchange, over a 5-year investment period. They are calculated by using TOPIX (Total Return Index) after 1994 and JSRI estimates up through 1993.

Sources: Bank of Japan; Japan Securities Research Institute (JSRI); Tokyo Stock Exchange; etc.

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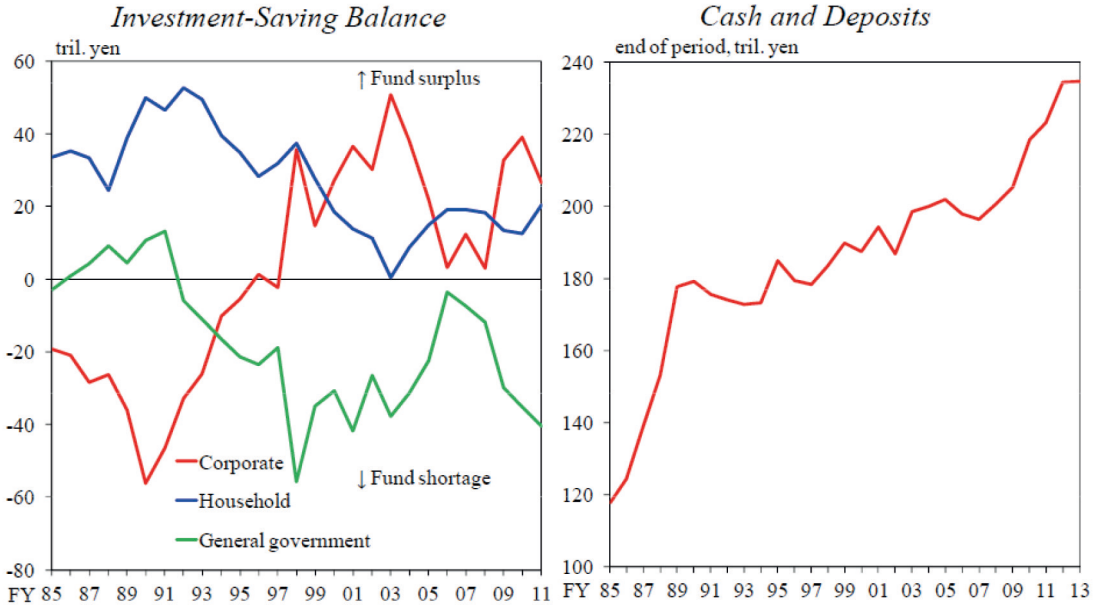
Chart 9

# Corporate Saving




Notes: 1. The chart on the right indicates amounts outstanding of cash and deposits held by nonfinancial corporations in the "Flow of Funds."
2. Figures for fiscal 2013 are those of September.

Sources: Cabinet Office; Bank of Japan.

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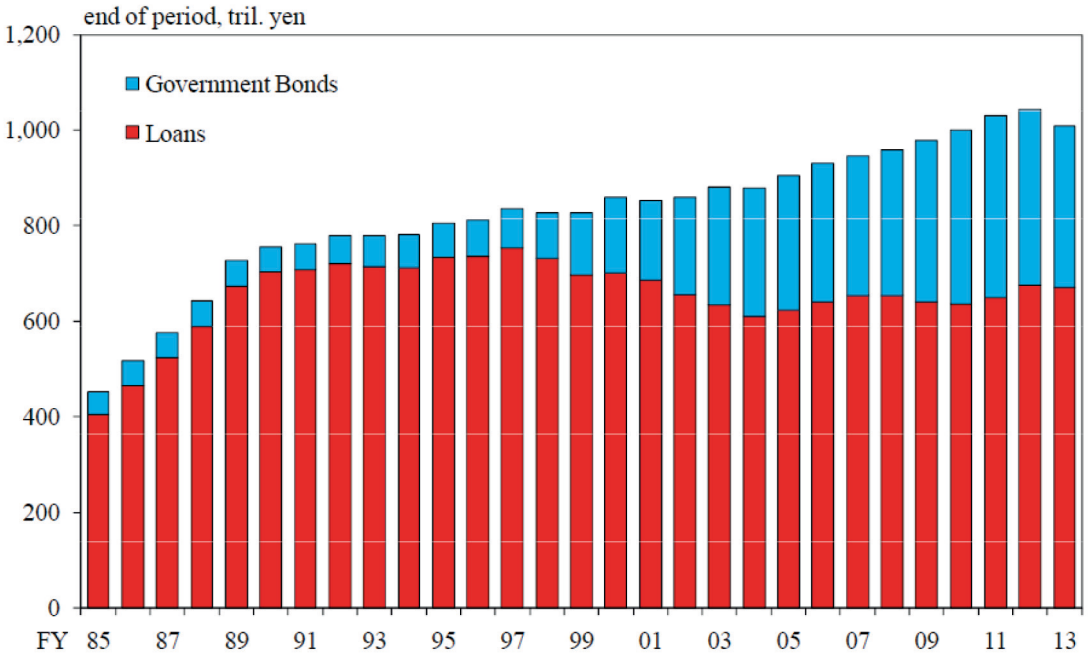
Chart 10

## Asset Portfolio of Banks




Notes: 1. Banks include Japan Post Bank.
2. Government bonds are sum of "central government securities and FILP bonds" and "treasury discount bills."
3. Figures for fiscal 2013 are those of September.
Source: Bank of Japan.

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Chart 11

## Quantitative and Qualitative Monetary Easing (QQE)

*Introduced on April 4, 2013*

### Strong and Clear Commitment

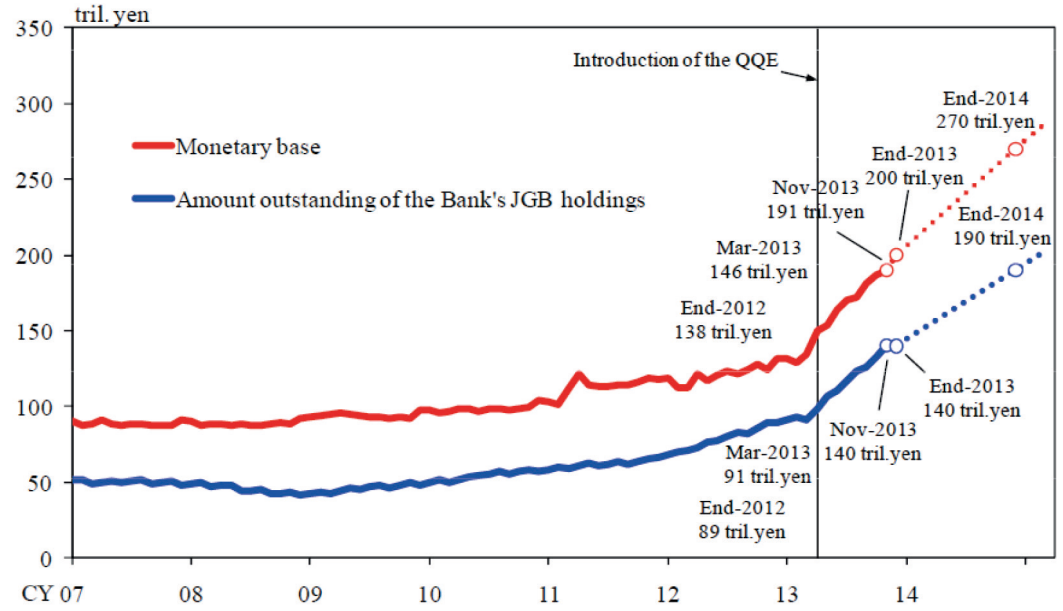
- Achieve the price stability target of 2%, at the earliest possible time, with a time horizon of about 2 years.

### New Phase of Monetary Easing Both in Terms of Quantity and Quality to Underpin the Commitment

- Monetary base: Annual increase of about 60-70 tril. yen (x2 in 2 years).
- Amount outstanding of the Bank's JGB holdings: Annual increase of about 50 tril. yen (more than x2 in 2 years).
- Average remaining maturity of the Bank's JGB purchases: Extended to about 7 years (more than x2).
- Amount outstanding of ETF holdings: Annual increase of about 1 tril. yen (more than x2 in 2 years).

Chart 12

## Expansion in the Monetary Base and JGB Holdings




Source: Bank of Japan.

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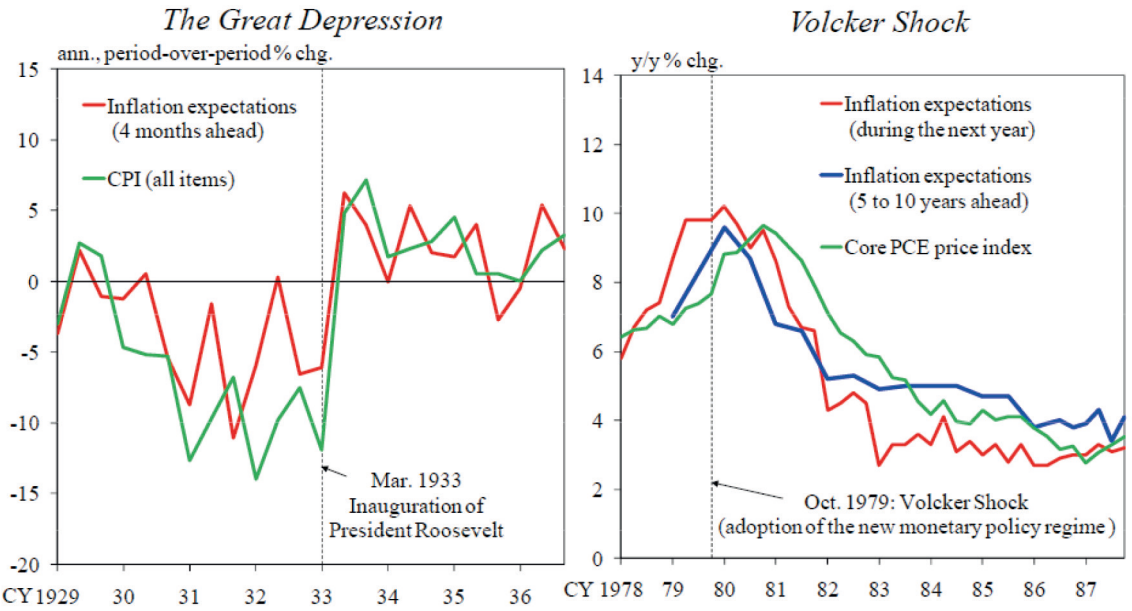
Chart 13

## Inflation Expectations in United States




Notes: 1. Figures for inflation expectations are based on Hamilton (1992) in the left chart, and on "Survey of Consumers" conducted by the Michigan University in the right chart.
2. Missing values are linearly interpolated.

Sources: Hamilton, J., "Was the Deflation during the Great Depression Anticipated? Evidence from the Commodity Futures Market." *American Economic Review* 82 (1), 1992; BLS; Thomson Reuters and Michigan University.

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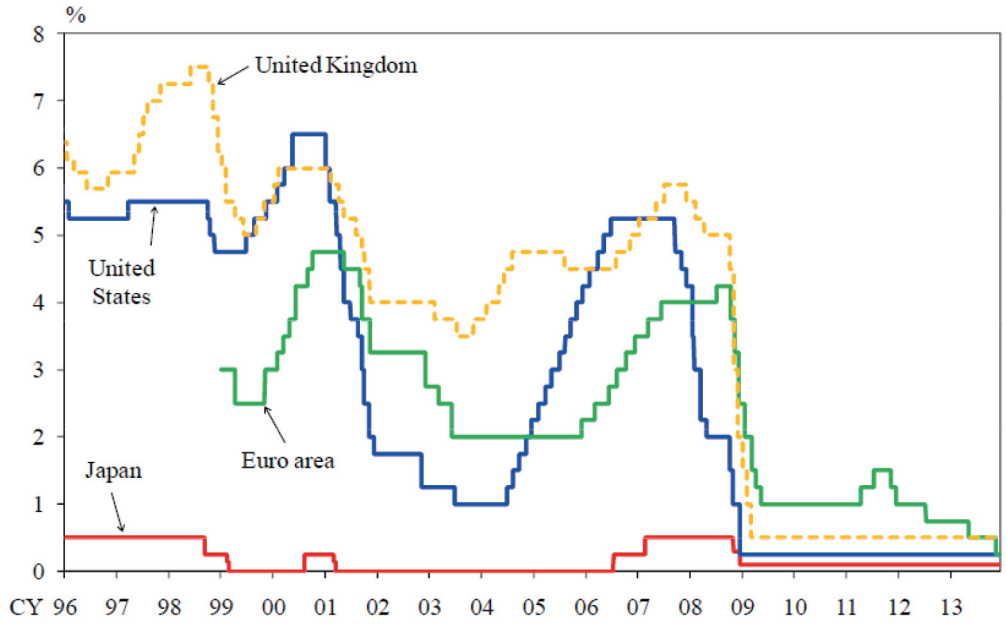
Chart 14

## 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 QQE (since April 4, 2013).

Sources: Bank of Japan; Federal Reserve; European Central Bank; Bank of England.

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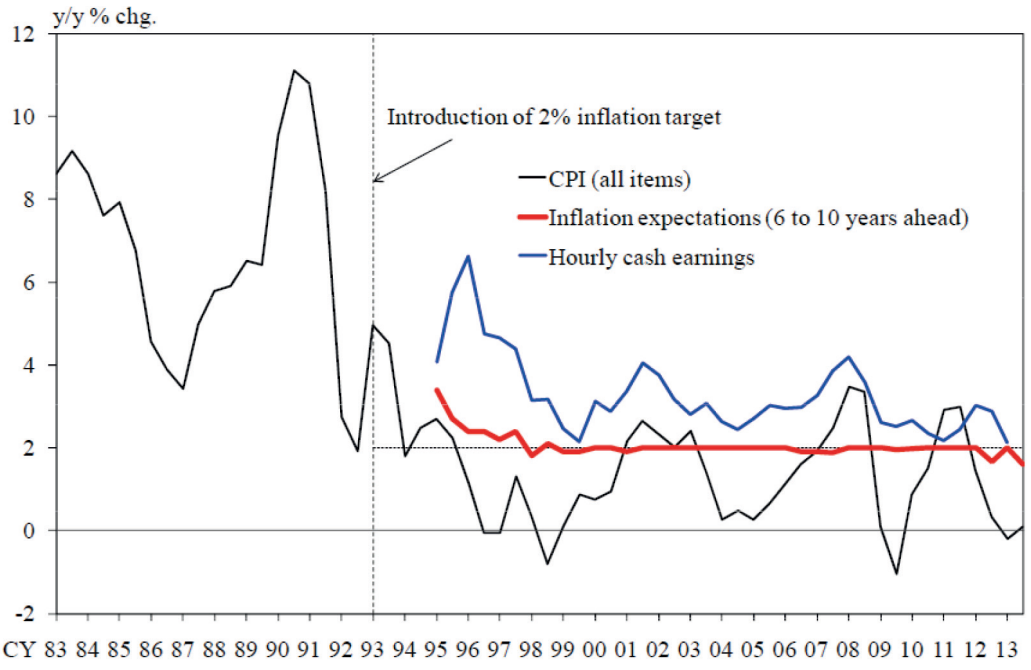
Chart 15

## Inflation Expectations and Wages in Sweden




Sources: OECD; Consensus Economics Inc.

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