Haruhiko Kuroda: Aiming at *2 percent* inflation. Why?

Speech by Mr Haruhiko Kuroda, Governor of the Bank of Japan, at the Japan Chamber of Commerce and Industry, Tokyo, 20 March 2014.

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Introduction

It is my honor to be given the opportunity to speak in front of you, who are successful at the forefront of Japan's economic world.

The Bank of Japan, aiming at overcoming deflation at the earliest possible time, introduced quantitative and qualitative monetary easing (QQE) last April. Almost one year has passed since then, and the QQE has been steadily exerting its effects and Japan's economy has been following a path toward achieving a price stability target of 2 percent as expected.

Japan's economy has continued to recover moderately in association with a virtuous cycle among production, income, and spending. The real GDP growth rate has marked five consecutive quarters of positive growth, and domestic demand has been registering high growth at an annual rate of about 3 percent since last year (Chart 1). As for the outlook, while the economy will be affected by a swing of the front-loaded increase and subsequent decline in demand prior to and after the consumption tax hike, it is expected to continue to recover moderately as a trend.

As the economic recovery continues, prices have also been improving. The year-on-year rate of change in the consumer price index (CPI) excluding fresh food turned positive in June last year and accelerated since then, and was plus 1.3 percent for December last year and January this year. Not only have energy-related goods pushed up prices, but an improvement has also been seen in a wide range of items given that underlying upward pressure on prices has increased as the aggregate supply and demand balance has improved and inflation expectations have risen. Such spreading improvement is suggested by the fact that the year-on-year rate of change in the CPI excluding food and energy has increased to plus 0.7 percent (Chart 2). As for the outlook, the CPI inflation rate – on the basis of figures excluding the direct effects of the consumption tax hike – is likely to be around 1¼ percent until around this summer, as the underlying upward pressure on prices is likely to strengthen while the positive contribution stemming from the rise in energy prices will decline. Subsequently, against the background of further improvement in the aggregate supply and demand balance and the rise in inflation expectations, the inflation rate is expected to gradually return to an increasing trend, and is likely to reach around the price stability target of 2 percent toward the end of fiscal 2014 through fiscal 2015.

The Bank considers that *2 percent* in terms of the year-on-year rate of change in the CPI is the *price stability target* the Bank should aim at. On this point, various concerns have been raised. Among these, two are that "daily life will become difficult if prices go up" and "only prices might increase without an increase in wages." For firms, there might be a concern that they cannot mark up output prices to the extent input prices have risen. In particular, as the consumption tax will be raised from next month, many might be worried about an increase in general prices. Therefore, today, I would like to explain my views, focusing on why the Bank aims at *2 percent* inflation.

I. Problems of deflation

Let me start with confirming why deflation is problematic, by looking back at the past 15 years.

In Japan's economy, deflation has continued for 15 years since the second half of the 1990s. Deflation was not only a result of economic stagnation but also a cause that protracted

economic stagnation. Amid 15 years of deflation, behavior based on the recognition that prices would not rise or prices would moderately decline has been embedded in the economy, and that led to protracted economic stagnation.

Viewed from firms' side, under deflation, as they cannot raise the prices of their products and services, their sales and profits will not 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. If households hold back consumption, firms will be forced to reduce the prices of their products and services in order to tap consumption.

Deflation also affects the investment decisions of firms. For firms to decide on business fixed investment, what matters is developments not in nominal but in real interest rates. If deflationary expectations are embedded, real interest rates, which are obtained by subtracting expected rates of inflation from nominal interest rates, remain high. Namely, even with no change in nominal borrowing interest rates, expected profits will become less if a price decline is expected to continue, and the effective burden of repayment of borrowings will increase. In this situation, it is natural that firms' incentives for business fixed investment will wane. Also, for households, if they expect that general prices will decline in the future, they will become more inclined to defer consumption as much as possible. They will be better off if they buy goods and services after those prices decline.

Meanwhile, under deflation, holding cash and deposits will become a relatively better investment. Deflation will reduce the rate of return on investment in businesses and in risk assets such as stocks on the one hand, but on the other hand increase the real rate of return on cash and deposits, for which nominal values do not decrease. Therefore, for firms and households, it becomes a rational behavior to restrain business fixed investment and consumption and to hold surplus funds in the form of cash and deposits.

Thus, under deflation, as firms and households turn away from risk-taking activities, a vicious cycle of a decline in prices, a fall in sales and profits, restraint in wages, stagnation in consumption, and further decline in prices has continued.

Looking back at Japan's economy for the past 15 years through macroeconomic indicators, GDP and employee income on nominal bases peaked in 1997 and have since been on a long-term downtrend (Chart 3). Amid deflation, Japan's economic activity on a nominal basis has been consistently scaling down. Under deflation, Japan's economy has been faced with the fallacy of composition that, despite each economic entity acting rationally, the economy as a whole has been contracting. As a result, it can be said that Japan's economy has been trapped in deflationary equilibrium.

Now, while deflation has been continuing in Japan's economy, are you aware to what extent the CPI has declined? In the 15 years from fiscal 1998 to fiscal 2012, the annual decline in the CPI was actually only 0.3 percent on average (Chart 4). It may safely be said that the rate of change in the CPI during this period was negative, but almost 0 percent. This fact suggests that even an almost 0 percent rate of change in terms of the CPI is actually a state of deflation. In terms of what firms recognize, in the *Tankan* survey (Short-Term Economic Survey of Enterprises in Japan) for the past 15 years, the proportion of firms responding that output prices of their products and services declined has almost consistently exceeded that of firms responding that those prices increased (Chart 5).

Taking account of these points, in order to overcome deflation, we have to aim at an inflation rate in terms of the year-on-year rate of change in the CPI that is higher than 0 percent. The question is, to what extent of a positive rate should we aim? The Bank considers this to be 2 percent. Let me explain the reasons for this in what follows.

II. Aiming at *2 Percent* Inflation. Why?

A. Price stability

As stipulated in the Bank of Japan Act, an aim of the monetary policy the Bank conducts is "achieving price stability, thereby contributing to the sound development of the national economy." To achieve price stability is an aim of monetary policy as well as the Bank's responsibility. After all, what the Bank aims at is price stability in this sense, and it has no intention to artificially create inflation.

On that basis, the Bank considers that, if price stability is to be defined numerically in terms of the year-on-year rate of change in the CPI, this is 2 percent. There are three reasons for this (Chart 6). First, there is a feature to note in the CPI. The CPI has an upward bias – namely, there is a tendency toward seeing higher figures in the growth rate of the CPI. Second, there is a view that it is necessary to have a so-called buffer. In order to maintain the ability of monetary policy to respond to a substantial deterioration in economic activity, it would be better to secure some degree of an inflation rate. Third, these views have been widely shared among major central banks, and many are conducting monetary policy that aims at achieving an inflation rate of 2 percent. In other words, 2 percent has become a global standard. Let me elaborate on these three reasons.

B. Features of price indices: upward bias in the CPI

The prices that monetary policy should target are not prices of individual goods and services, of course, but prices as a whole. That said, to measure the level of prices in general, it is necessary to weight prices of individual goods and services and compile them; according to compiling methods, various indexes are then created. In judging price conditions, these indexes need to be used by taking account of the features they entail. While I will not go into detail, as this becomes too technical, it is generally known that the CPI has a tendency toward its growth rate showing higher figures – that is, to exhibit an upward bias. As for the GDP deflator, which is a price index used to calculate real GDP, its growth rate has become somewhat low. This is mainly because the deflator includes capital goods, for which price declines have been substantial. It is also because a rise in import prices has not been completely passed on to output prices, and this has worked to lower the deflator. In fact, since fiscal 1998, the year-on-year rate of change in the CPI has been about 1 percent higher on average than that in the GDP deflator (Chart 7).

Many central banks, including the Bank of Japan, mainly use the CPI to judge price trends. This is because the CPI is an index in line with the public's actual sentiment that covers goods and services that households consume, and is a quickly available statistic that is published monthly. Taking account of these points, the Bank's price stability target is also defined as the year-on-year rate of change in the CPI. However, as I have just mentioned, the CPI has an upward bias, and thus, when defining the price stability target in the form of the year-on-year rate of change in the CPI, it needs to be presented as a somewhat positive figure.

C. Ensuring room to reduce interest rates: the so-called buffer

Let me turn to the view that there is a need to secure room for an interest rate reduction by maintaining a positive inflation rate, thereby enhancing the ability of monetary policy to respond to economic deterioration; that is, that there is a need to have the so-called buffer.

Put in extremely simple terms, an interest rate level that is neutral to economic activity is determined by the sum of the economy's growth potential and an average inflation rate. For example, if the potential growth rate is 1 percent and the inflation rate is 2 percent, the interest rate neutral to economic activity will be 3 percent. In this case, against economic deterioration, there is room amounting to 3 percent for a central bank to stimulate the economy by reducing the interest rate. However, even if the potential growth rate is

1 percent, if the inflation rate is 0 percent, the room to reduce the interest rate amounts to only 1 percent as the level of the neutral interest rate is 1 percent.

Therefore, when the level of the neutral interest rate is low, the interest rate will easily reach the 0 percent bound. A situation in which the interest rate reaches close to 0 percent and there is no room for further monetary easing through interest rate control is called the "zero interest rate lower bound."

Japan was the first among advanced economies to face the zero lower bound. Since the Bank reduced its official discount rate to 0.5 percent in September 1995, for almost 20 years now, Japan's short-term interest rate has not exceeded 0.5 percent and has been hovering in the range of 0–0.5 percent (Chart 8). Of the two pillars of macroeconomic policy – fiscal policy and monetary policy – there has been a continuing situation whereby the effectiveness of monetary policy has been significantly impaired.

In the meantime, the Bank took various initiatives ahead of other central banks in the world, including the adoption of various unconventional monetary policy measures ranging from the zero interest rate policy and quantitative easing to forward guidance in recent terminology. To be sure, even under the zero lower bound, there is still some room to pursue monetary easing through such unconventional monetary policy measures. However, it is also certain that, during this period, the most effective and traditional monetary policy channel of interest rate control has been lost.

In my view, the Bank's monetary policy has yielded results to some extent over the past 15 years in smoothing economic fluctuations. However, it was not sufficient to stave off a worsening of disinflation and preempt deflation from becoming entrenched.

If the Bank had aimed at a price stability target of 2 percent at an earlier stage, it could have pursued more timely and bolder monetary easing in response to a decline in the inflation rate, thereby enabling the economy to overcome deflation at an early stage. With its protraction, deflation has become a problem that is increasingly stubborn and difficult to overcome.

Based on the difficulties of the past 15 years, we need to let Japan's economy overcome deflation at the earliest possible time and prevent, by any means, the economy from falling back into deflation again. To that end, it is critical to preempt deflation with a conduct of monetary policy that aims at a *2 percent* price stability target. And, so as not to lose the effective measure of interest rate control, I believe that it is critical to secure room for an interest rate reduction through achieving around 2 percent inflation in a stable manner and allowing an economic activity-neutral interest rate to be formed at a somewhat high level.

D. Global standard

So far, I have explained the reasons to aim at 2 percent inflation from two viewpoints: due to a feature of the CPI, and to secure room for an interest rate reduction. These views are not special ones that only the Bank is adopting. Based on similar lines of thinking, many central banks overseas have already been implementing policies aiming at 2 percent inflation.

For example, central banks in the United Kingdom, Canada, and New Zealand have set an inflation target of 2 percent, and in the United States, the Federal Reserve has set its longer-run goal for inflation at 2 percent. In the euro area, the European Central Bank (ECB) has presented a numerical definition of price stability, which is below, but close to, 2 percent (Chart 9). While there are various ways of expression, conducting monetary policy aiming at around 2 percent of inflation has become a global standard.

If talking only about the buffer – namely, securing room for an interest rate reduction – the higher the inflation rate, the better. However, what monetary policy is aiming at is to achieve price stability. An issue will be the balance between the two. Based on past experience in a variety of economies, it has become a general view globally that around 2 percent would be

desirable. In other words, the global standard of 2 percent inflation has become established through past experiences rather than based on theoretical analyses.

Amid long-term stagnation since the Lehman crisis, the inflation rate has recently been declining globally, mainly in the euro area. As the International Monetary Fund Managing Director Christine Lagarde said in a speech, "with inflation running below many central banks' targets, we see rising risks of deflation," and thus a risk of deflation has become an important topic globally. The world thoroughly understands how Japan has been suffering long-term stagnation amid deflation, and there is a strong recognition of the need to avoid being like Japan in this particular regard.

In fact, the CPIs in the United States, the euro area, and the United Kingdom have recently been on a downtrend (Chart 10). That said, the year-on-year rate of change in the CPI even in the euro area, where a risk of deflation has been most discussed, is plus 0.7 percent. That is still at a sufficiently high level compared with Japan's CPI inflation rate of the past ten years or so. Nevertheless, at the press conference following each meeting of the Governing Council of the ECB, President Mario Draghi has been repeatedly questioned of late about the risk of deflation. While noting that having low inflation for a protracted period of time is a risk in itself and that he would not ignore such a risk, he also emphasized that medium- to long-term inflation expectations are well-anchored at a level of "below, but close to, 2 percent," a level that the ECB defines as price stability. Coupled with the prospects that economic activity in the euro area will continue to pick up moderately, it is unlikely that the euro area will fall into deflation. Nevertheless, these developments in the euro area indicate that the importance of aiming at 2 percent and, on the other side of the coin, the danger of falling into deflation, have been strongly recognized in the area.

III. Wages and prices: prices viewed from the perspective of households

As I have explained, aiming at a 2 percent price stability target in terms of the year-on-year rate of change in the CPI is appropriate in terms of macroeconomic policy management, conceptually and as a global standard. Nevertheless, an opinion that there will be a negative impact if taken from the viewpoint of households is naturally heard. Therefore, let me next talk about prices viewed from the side of households, focusing on the relationship between wages and prices.

From households' perspective, it is quite natural to think that price increases are not desirable. According to the latest *Opinion Survey on the General Public's Views and Behavior* the Bank conducts on households, about 80 percent of respondents who have felt that prices "have gone up" have described the price rise as "rather unfavorable." This is not surprising. If asked only about prices, respondents will respond on the assumption that other conditions, including wages, are unchanged. If wages were not to change, price declines ought to be desirable.

However, it does not normally happen that prices rise without being accompanied by wage increases. If corporate sales grow and corporate profits increase due to a rise in prices of goods and services, wages paid to employees tend to increase accordingly. As employees will demand that the portion of an increase in a firm's profits to which they contributed be paid as wages, on a macro basis, the rate of increase in nominal wages will be the sum of the inflation rate and the rate of increase in labor productivity. Otherwise, the ratio of labor income to total income, which is the employees' share, will continue to decline with a price rise. Such a thing might happen temporarily, but would not continue in a sustainable manner.

In fact, this is underpinned by past data. Comparing developments in the rate of increase in wages per hour and that in the CPI in phases in which prices were rising, the rate of increase in wages has been exceeding that in the CPI on most occasions. There have been only two periods since 1971 when things did not go that way and the rate of increase in the CPI was higher than that of wages – the second oil shock in 1980 and a surge in international commodity prices during 2007 and 2008 (Chart 11). Both episodes occurred when the

inflation rate surged temporarily due to a supply shock; namely, to external factors other than domestic demand.

Therefore, the real options we are faced with are whether to aim at a world in which both wages and prices rise moderately, or to aim at a world in which wages and prices decline, as has been the case over the past 15 years. The choice is obvious.

In the situation the Bank aims at, in which a 2 percent inflation rate continues stably, wages and prices would rise moderately in the normal course of things. This is the kind of economy in which each economic entity acts on the assumption that prices will rise by about 2 percent annually, even when the economy is in a normal state. In such a society, a 2 percent price increase will be factored into wage setting. In this regard, in Japan, an increase in base pay – a scheme that was lost amid protracted deflation – has gradually been restored recently. This can be regarded as a step toward transferring to a new social economic system in which a 2 percent price increase is built in as a social norm, and this deserves focused attention.

The extent to which nominal wages will increase in excess of inflation, or in other words, the extent to which real wages will increase, will hinge over time on the extent to which labor productivity – the amount of goods and services produced by an input of one unit of labor – will increase. An increase in real wages, which is a critical challenge, will ultimately be attained through an improvement in productivity. In this regard, in addition to efforts by individual firms, it is important to prepare an environment in which to improve productivity through various growth strategies and deregulation. The government has demonstrated that measures to raise the growth potential of the economy will be accelerated and reinforced through implementation of its Japan Revitalization Strategy. It is expected that further improvement in productivity will be achieved through such initiatives.

For firms, especially small and medium-sized firms, there might be a concern that they cannot mark up output prices to the extent input prices have risen. In a situation in which prices rise upon escaping from deflation, as I've just explained, it will become easier for firms to pass an increase in input prices on to output prices.

I said earlier that, under deflation, a vicious cycle of a decline in prices, a fall in sales and profits, restraint in wages, stagnation in consumption, and further decline in prices has continued. In such a situation, it was not easy to pass an increase in input prices on to output prices. In fact, according to the *Tankan* survey, over the past 15 years compared with previous years, the diffusion index for input prices – obtained by subtracting the proportion of firms responding that their input prices were falling from that of firms responding that input prices were rising – has been substantially exceeding the diffusion index for output prices (Chart 12).

By contrast, in an economy and society in which 2 percent inflation continues stably, a cycle just the opposite of the vicious cycle under deflation will be achieved. Starting from a moderate increase in prices, a virtuous cycle of the economy of an increase in sales and profits, an increase in wages, rejuvenated consumption, and a moderate increase in prices will be achieved and become entrenched. In a situation in which an economic virtuous cycle continues and firm demand is maintained, it will become easier for firms to pass on an increase in input prices on to output prices.

IV. Consumption tax hike and inflation

Let me next talk about the consumption tax hike and its implications for inflation.

From next month, the consumption tax rate will be raised to 8 percent from the current 5 percent. As items in the CPI include those that are tax-free or exempted from taxation, the year-on-year rate of change in the CPI will be pushed upward by about 2 percent in association with the 3 percent consumption tax hike. In relation to this, let me point out two things.

First, any increase in the year-on-year rate of change in the CPI by the consumption tax hike will be a temporary one. With the consumption tax hike next month, it is estimated that the year-on-year rate of change in the CPI excluding fresh food will be pushed upward on the surface by about 2 percent during fiscal 2014, but that this will disappear in fiscal 2015. As a specific example, let us look at developments that occurred in the year-on-year rate of change in the CPI when the consumption tax was raised in April 1997 to 5 percent from 3 percent. It was plus 0.5 percent in March 1997 prior to the tax hike, and after the hike went to around plus 2 percent for one year, from April 1997 to March 1998. The rate of increase was pushed up by about 1.4 percent. However, in April 1998, one year after the tax hike, the rate of increase dropped to plus 0.2 percent and the effect of the tax hike disappeared (Chart 13). Needless to say, the Bank aims at maintaining the 2 percent price stability target in a sustainable manner. Therefore, in assessing the price situation in pursuing monetary policy, we believe that it would be appropriate to make assessments by excluding the short-term variation factor on prices brought about by the consumption tax hike.

The second thing is a negative impact on real income due to the consumption tax hike. Given that consumption tax is tax revenue for the government, it is unavoidable that the consumption tax hike will have such a negative effect. The increase in the year-on-year rate of change in the CPI does not represent a rise in the value of goods and services themselves, but rather is the result of adding a tax that would be paid at the time of consumption to the prices of goods and services. The impact of the consumption tax hike should be discussed in a context that includes taxation, public finance, and the social security system, and it is necessary to clearly distinguish this from ordinary discussions on inflation.

In sum, we believe that an increase in the CPI due to a consumption tax hike needs to be considered separately from the price increase as a trend. The Bank aims at achieving the 2 percent price stability target on a trend basis that excludes the direct impact of the consumption tax hike.

I should note that, for some fees for public services, the old tax rate of 5 percent will be applied as a transitional measure for a certain period after entering April. Such a measure will be reflected in compiling the CPI. Therefore, the year-on-year rate of change in the CPI excluding fresh food that will be pushed upward due to the consumption tax hike will remain at about 1.7 percent in April and will become about 2 percent from May onward. The Bank will also take this point into account in assessing the price situation from next month onward.

V. Future monetary policy

Let me conclude my speech by briefly mentioning monetary policy for the near future. As I have indicated today, we believe it is necessary to achieve the 2 percent price stability target as swiftly as possible in order to overcome 15 years of deflation and prevent a recurrence of deflation.

As the state of deflation has continued for many years, in the process of transitioning to the 2 percent target, various changes might occur in the economic and social system. However, if comparing the economy in which good and expanding equilibrium has been achieved under the 2 percent price stability target with that of deflationary equilibrium during these 15 years, there will be no room for denying that the former is desirable. What is important is not to fear changes but to look for a style of business and living that suits the economy after overcoming deflation.

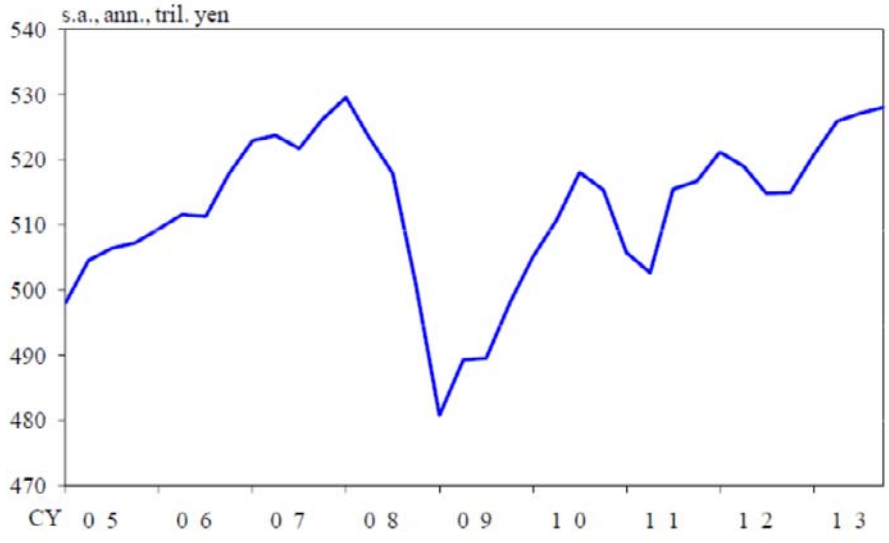
The QQE has been steadily exerting its intended effects and Japan's economy has been following a path toward achieving the 2 percent price stability target as expected. The Bank will continue with the QQE, aiming to achieve the 2 percent price stability target, as long as it is necessary for maintaining that target in a stable manner. It will thoroughly examine both upside and downside risks to economic activity and prices, and make adjustments as appropriate. If, in the future, the outlook will change due to the manifestation of some risk

factors and adjustments become necessary in order to achieve the 2 percent price stability target, the Bank will make them without hesitation. With such monetary policy, we look to overcome deflation at the earliest possible time.

Thank you.

Chart 1

Real GDP

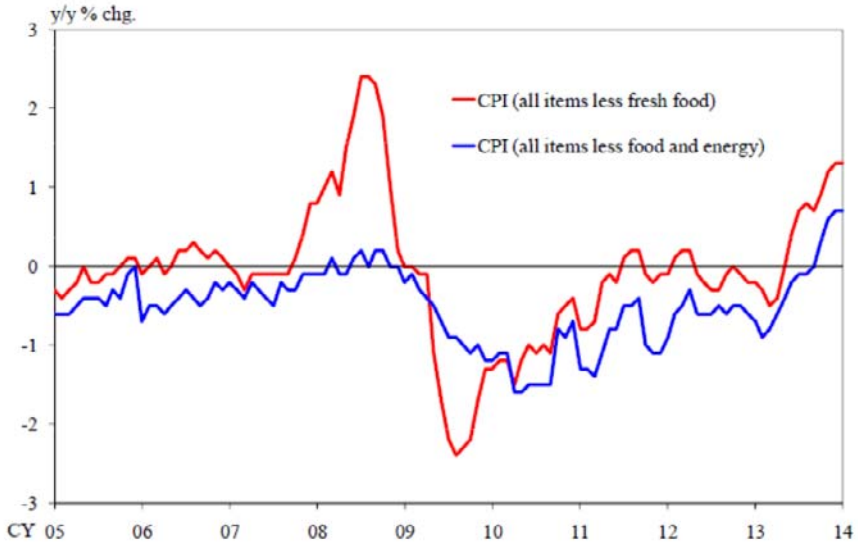


Source: Cabinet Office.

1

Chart 2

Consumer Prices



Source: Ministry of Internal Affairs and Communications.

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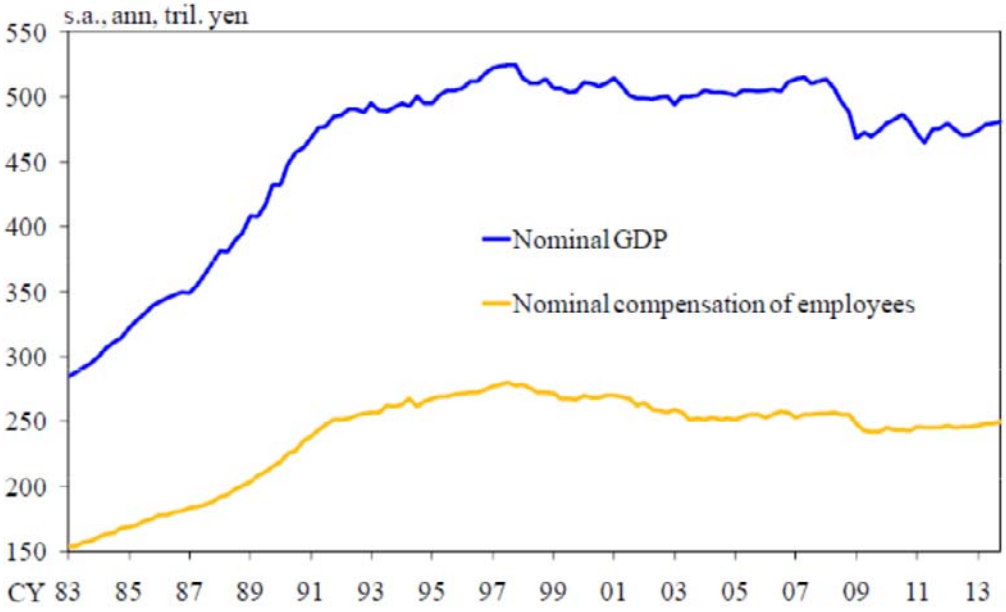
Chart 3

GDP and Employee Income (Nominal)



Source: Cabinet Office.

3

Chart 4

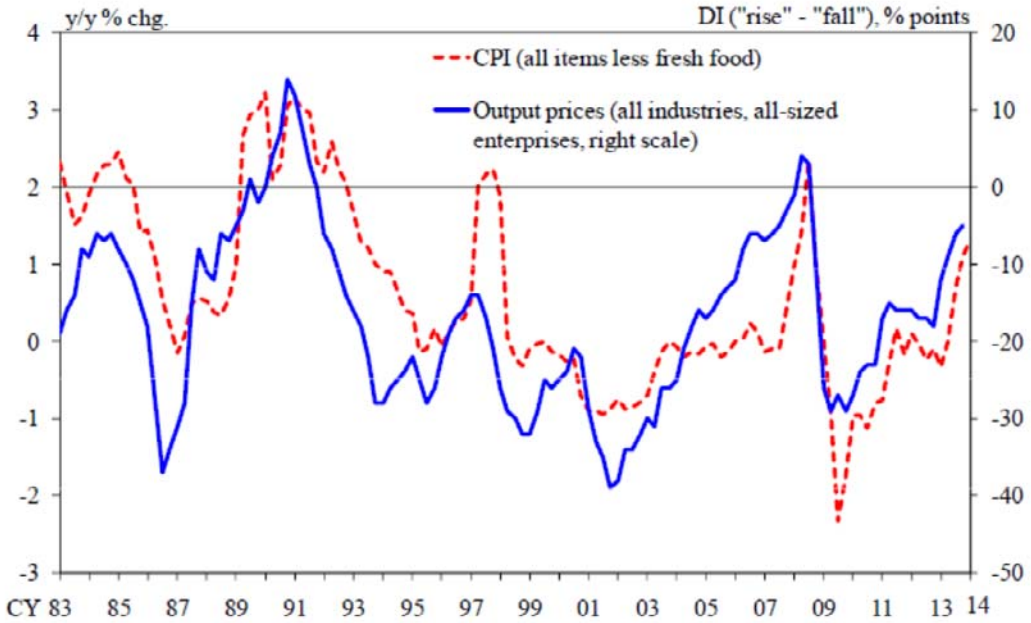
Consumer Prices (All Items Less Fresh Food) under Deflation

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

4

Chart 5

Change in Output Prices and Consumer Prices



Note: The CPI for 2014/Q1 is that of January.
Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

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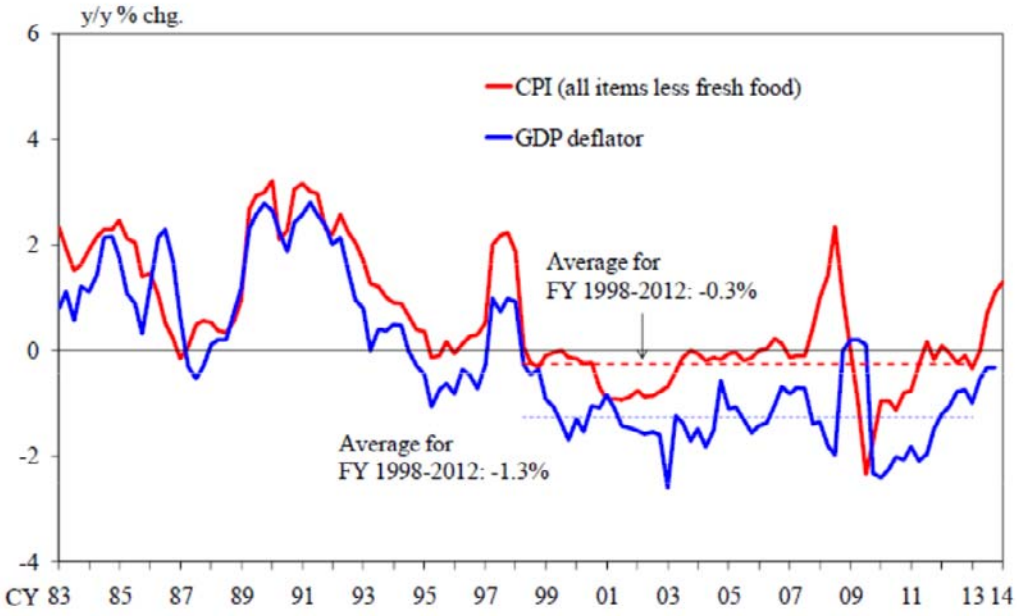
Chart 6

Reasons for Aiming at *2 Percent* Inflation

- Upward bias in the CPI
- Ensuring room to reduce interest rates: the so-called buffer
- *2 percent* as a global standard

Chart 7

Consumer Prices and GDP Deflator



Note: The CPI for 2014/Q1 is that of January.
Sources: Cabinet Office; Ministry of Internal Affairs and Communications.

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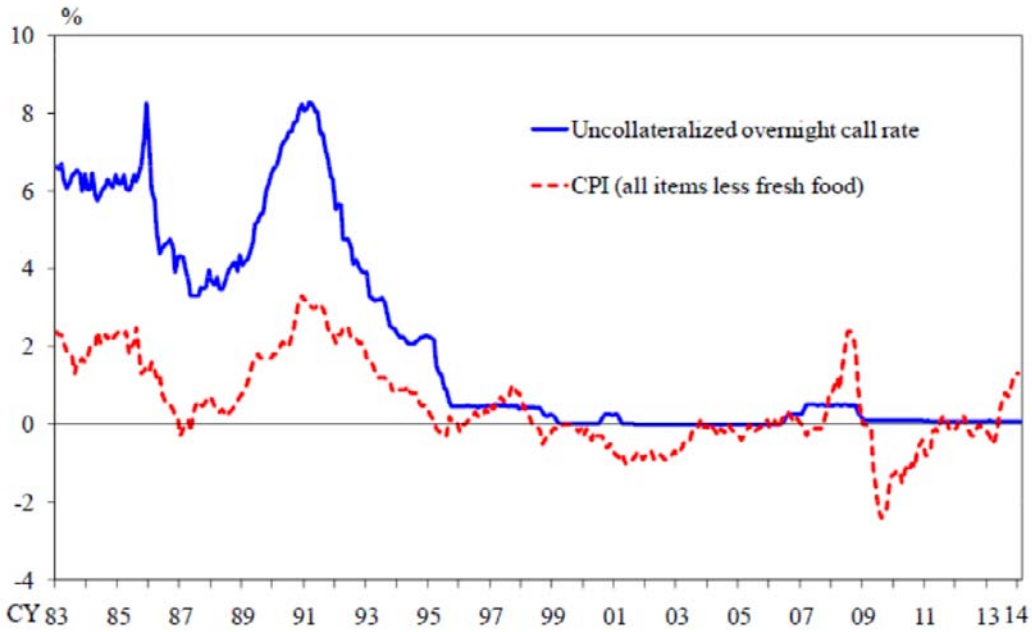
Chart 8

Money Market Rates and Consumer Prices



Notes: 1. Figures for the CPI are adjusted to exclude the effects of changes in the consumption tax rate.
2. The uncollateralized overnight call rate is substituted by the collateralized overnight call rate for figures until June 1985.
Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

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Chart 9

Price Stability in Various Economies

Country/Region	Chosen term	Reference indicator	Numerical expression
Japan	Price stability target	CPI	2%
United States	Longer-run goal	PCE inflation	2%
Euro area	Quantitative definition	HICP	Below, but close to, 2%
United Kingdom	Target	CPI	2%
Canada	Target	CPI	2% (midpoint of 1-3%)
Australia	Target	CPI	2-3%
New Zealand	Target	CPI	Near 2% (midpoint of 1-3%)
Sweden	Target	CPI	2%
Switzerland	Definition	CPI	Less than 2%

Notes: 1. Reference indicators refer to CPI, PCE inflation, and HICP for all items.
2. "PCE" stands for Personal Consumption Expenditures, and "HICP" stands for Harmonized Index of Consumer Prices.

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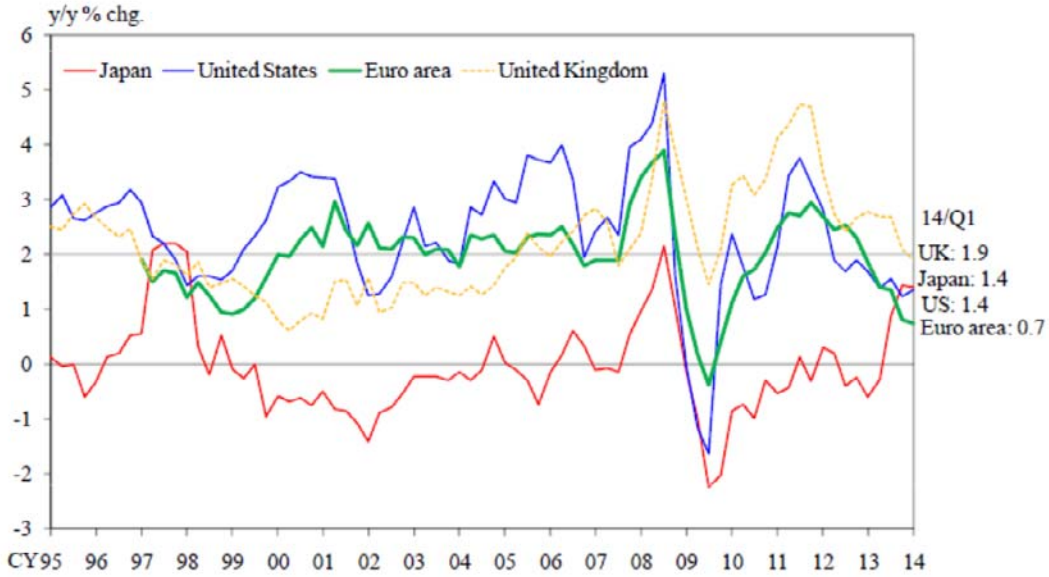
Chart 10

Consumer Prices (All Items)



Note: Figures for Japan and the United Kingdom for 2014/Q1 are those of January. Figures for the United States and the euro area for 2014/Q1 are January-February averages.
Sources: Ministry of Internal Affairs and Communications; Bureau of Labor Statistics; Eurostat; Office for National Statistics.

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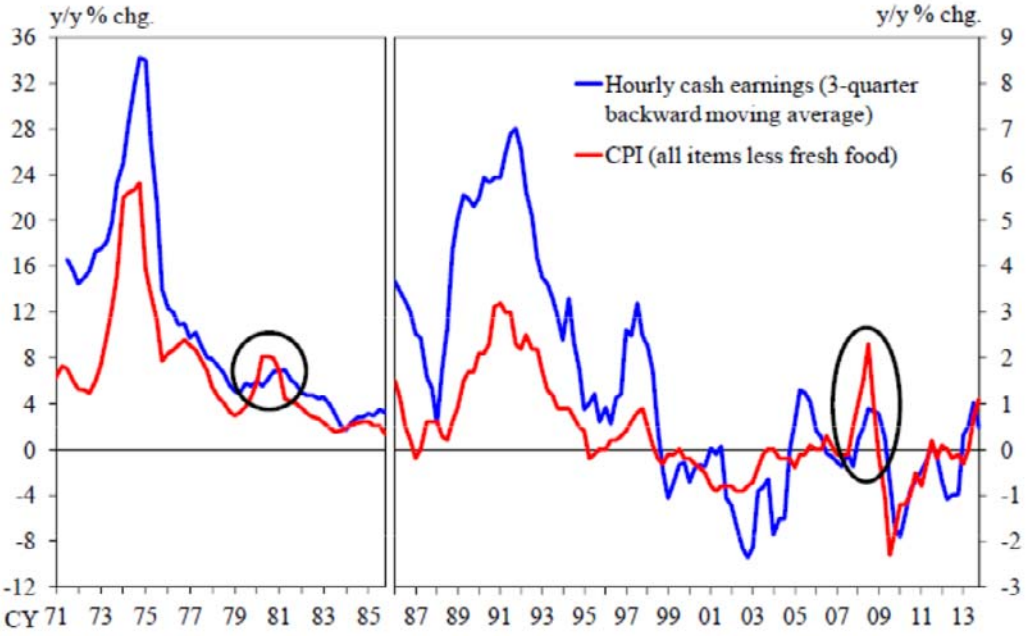
Chart 11

Wages and Consumer Prices



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

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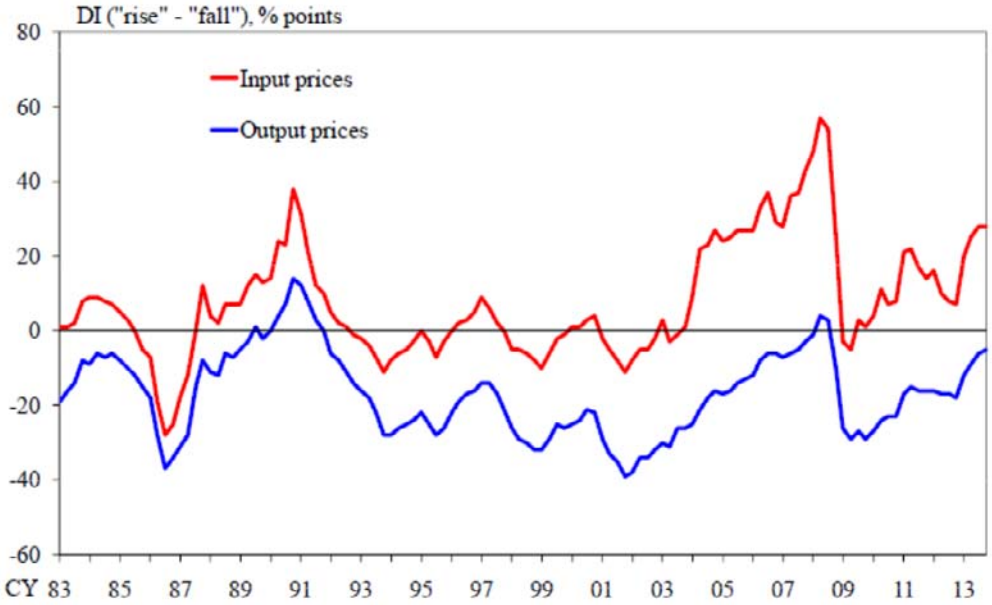
Chart 12

Changes in Output and Input Prices
(*Tankan*, All Industries and All-Sized Enterprises)



Source: Bank of Japan.

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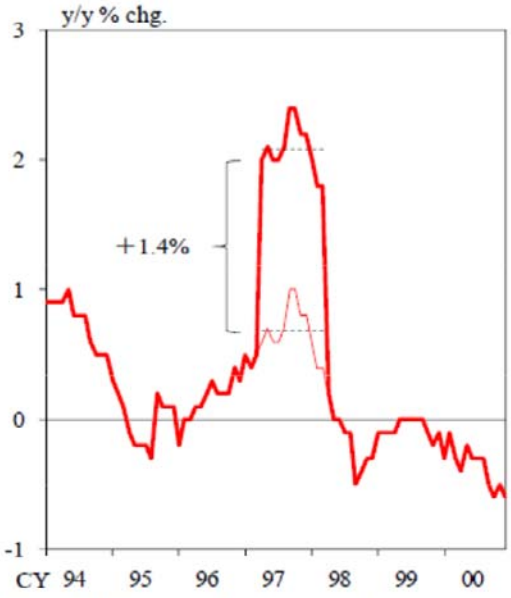
Chart 13

Effects of the Consumption Tax Hike on the CPI
-The case of the tax hike in 1997-



	y/y % chg.		
	(A) CPI (including the effects of the consumption tax hike)	(B) CPI (excluding the effects of the consumption tax hike)	(A) - (B)
Jan-97	0.5	0.5	
Feb	0.4	0.4	0.0
Mar	0.5	0.5	
Apr	2.0	0.6	
May	2.1	0.7	
Jun	2.0	0.6	
Jul	2.0	0.6	
Aug	2.1	0.7	
Sep	2.4	1.0	+1.4
Oct	2.4	1.0	
Nov	2.2	0.8	
Dec	2.2	0.8	
Jan-98	2.0	0.6	
Feb	1.8	0.4	
Mar	1.8	0.4	
Apr	0.2	0.2	
May	0.0	0.0	0.0
Jun	0.0	0.0	

Notes: 1. "CPI" refers to CPI for all items less fresh food.
2. The contribution to prices from the tax hike is computed on the assumption that the tax increase was fully passed on for all taxable items.

Source: Ministry of Internal Affairs and Communications.

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