

May 19, 2023

Bank of Japan

## **Basic Thinking on Monetary Policy and the Outlook for Economic Activity and Prices**

Speech at a Meeting Held by the Naigai Josei Chosa Kai (Research Institute of Japan)

> **UEDA Kazuo** *Governor of the Bank of Japan*

(English translation based on the Japanese original)

#### Introduction

It is my great pleasure to have the opportunity to address you today at the Naigai Josei Chosa Kai.

This is my first speech since assuming office as Governor of the Bank of Japan. As I fulfill my duties as governor over the next five years, one of the things I will endeavor to do is to make logical decisions and provide explanations as clearly as possible. Monetary policy exerts its intended effects by working on financial markets and people's behavior at large. Therefore, it is important for the Bank to gain the public's understanding of the thinking underlying the Bank's policy conduct and the background to its policy decisions. Since the economy is driven by a complex interplay of a variety of factors and monetary policy involves specialized and technical aspects, I will try to provide clear and detailed explanations, unraveling the complexities one by one.

I have been an economist for nearly 50 years. Academics focus on a particular aspect of what is actually happening and construct theories designed for that aspect. In contrast, central bank policymakers are confronted with the actual complexities of the economy and need to make timely and appropriate decisions, so the perspectives of the two groups naturally differ. However, economic theory provides a useful perspective for understanding economic phenomena, and conversely, insights gained from the policy field can lead to the development of new theories. Economic theory and policy practice evolve in a closely interrelated manner, and I am committed to implementing the practice of monetary policy responsibly, while keeping the theoretical basis in mind.

Today, as a first step, I would like to share with you the Bank's basic thinking on monetary policy, including the course of policy conduct to date. I will also talk about the Bank's current conduct of monetary policy, referring to the *Outlook for Economic Activity and Prices* (Outlook Report) released at the end of April.

### I. The Basic Thinking on Monetary Policy

The Bank is currently conducting large-scale monetary easing, with the aim of achieving the price stability target of 2 percent. The last time I was involved in the Bank's monetary

policy conduct was from 1998 to 2005 as a Policy Board member. 1998 was the year that the new Bank of Japan Act came into effect and monetary policy was implemented under a new framework, including the Monetary Policy Meetings; it was also the year when deflation began. It is no exaggeration to say that the 25 years since then have been marked by a battle toward achieving price stability. In the following, I would like to explain the Bank's basic thinking on monetary policy, while also referring to this history.

### Transmission Mechanisms of Monetary Policy

Let me start with the mechanisms through which monetary policy affects prices. Today, I will explain a somewhat simplified version of the main mechanisms, focusing on two (Chart 1).

The first mechanism concerns the relationship between interest rates and economic activity. The starting point for monetary policy is interest rates. The Bank raises or lowers interest rates to influence economic activity. For example, when the Bank lowers interest rates, the borrowing rates at which firms make business fixed investment and households purchase homes also decline, thereby stimulating demand. This creates employment and boosts economic activity. Conversely, an increase in interest rates works in the direction of reducing demand and suppressing economic activity and employment.

The second mechanism concerns the relationship between economic activity and prices. Prices are thought to be determined by the balance between supply of and demand for goods and services in the economy as a whole, or the output gap. When the economy is booming and demand is high, there is a higher probability of a rise in the inflation rate. Conversely, when the economy is sluggish and demand is weak, the inflation rate falls. This relationship between the inflation rate and the output gap is known as the "Phillips curve" in economics. It is named after the New Zealand economist William Phillips, who first discovered the relationship between the nominal wage growth rate and the unemployment rate in the late 1950s. Since then, it has become an important framework for explaining the relationship between prices and economic activity. Once the position and shape of the Phillips curve are identified, it becomes clear how monetary policy should be conducted. To adjust the output gap to a level that corresponds to the inflation target, monetary policy should be tightened if the inflation rate is above the target, and conversely should be eased if it is below the target. This is the simple yet most fundamental principle of monetary policy.

Of course, monetary policy in practice is not that straightforward. This is partly because the position of the Phillips curve can change and the inflation rate can temporarily deviate from the curve (Chart 2).

I will explain two factors behind these developments here: inflation expectations and temporary supply shocks. Inflation expectations refer to people's expectations about the future rate of inflation. When firms set prices for goods and services, they consider not only supply and demand at that point in time, but also their expectations for prices in the future. For example, when setting the price of ramen noodles, firms make their outlooks for the price of ingredients and the wages of part-time workers and add an appropriate profit margin to determine the price. Since frequent price changes may confuse customers, prices are not revised that frequently. Therefore, if raw material prices and part-time wages are expected to rise, firms will set correspondingly higher prices in advance. In other words, for a given current supply and demand environment, higher inflation expectations will lead to higher inflation, and vice versa. Applying this to the Phillips curve, changes in inflation expectations will cause the curve itself to shift up or down.

What about the other factor, temporary supply shocks? A typical example is a sharp rise in crude oil prices, such as that seen last year due to supply concerns associated with the situation surrounding Ukraine. International commodity prices such as crude oil prices are determined regardless of the domestic output gap in Japan. However, since crude oil is widely used as an energy source and raw material, a rise in the price of crude oil will not only increase the price of gasoline, but also the prices of various goods and services, including dining-out. If such developments are not sustained and instead are temporary, the observed inflation rate will rise briefly to a greater extent than what can be explained by the output gap and thereafter move back to somewhere on the original Phillips curve again as

the effects of the supply shock fade away. Needless to say, if inflation expectations rise due to a supply shock, this could shift the Phillips curve upward, and thus the two factors are interrelated. The rise in inflation brought through these developments is known as the second-round effects of the supply shock.

So far, I have talked about the basic framework of monetary policy. Next, I would like to explain in detail changes in the environment surrounding prices over the past 25 years and the Bank's policy responses, using the framework of the Phillips curve.

### The "Two Challenges" since the Bursting of the Bubble Economy

Let me turn the clock back to the 1990s. Monetary policy faced major challenges in the two mechanisms I mentioned earlier; namely, the relationship between interest rates and economic activity and that between economic activity and prices (Chart 3). First, in terms of interest rates and economic activity, monetary policy faced the lower bound on interest rates. As a result of a series of policy rate cuts following the bursting of the bubble economy, short-term interest rates fell to almost zero percent by the late 1990s. This meant that it was no longer possible to stimulate the economy by lowering interest rates further. Second, in terms of economic activity and prices, as wage growth and the rate of inflation declined, a mindset and behavior based on the assumption that wages and prices will not rise have taken hold in Japan. In terms of inflation expectations, this corresponds to a situation where these have become entrenched at a low level.

How did the actual Phillips curve change during this period (Chart 4)? Two developments can be noted here. First, the economy deteriorated substantially following the bursting of the bubble economy. Since there was little room to lower interest rates, monetary easing measures lacked sufficient power to boost the economy. As a result, the output gap deteriorated, moving down to the left along the Phillips curve, which put downward pressure on the inflation rate. Second, the Phillips curve itself shifted downward as a result of a decline in people's inflation expectations, meaning that the inflation rate that could be achieved with the same output gap was lower. Due to these two developments, a situation where the economy and prices stagnate for a prolonged period took hold.

#### Unconventional Monetary Policy as a Means of Overcoming the Two Challenges

Faced with this situation, the Bank devised a variety of measures, which later were to be called "unconventional monetary policy" (Chart 5).

First, in 1999, the Bank made a commitment to continue with monetary easing so as to generate the policy duration effect and thereby influence longer-term interest rates. While short-term interest rates, the conventional monetary policy tool, were already at zero percent, the Bank committed to maintaining short-term interest rates at zero percent "until deflationary concern is dispelled." The policy duration effect exerted through this commitment was intended to create the expectation that short-term interest rates would remain at zero percent into the future. The idea was that longer-term interest rates, which reflect expectations for future short-term interest rates, would also decline, thus providing additional economic stimulus. This approach has since been widely adopted by other central banks and has come to be called "forward guidance."

Next, in 2001, as a further easing measure, the Bank introduced quantitative easing, which increased the amount of funds supplied to financial institutions. Since there were concerns over financial instability at that time, supplying large amounts of funds to the market had the effect of supporting the economy through improving banks' liquidity and reducing the negative impact from the financial side. However, because this policy was simply the exchange of assets that were economically similar in nature -- that is, the purchase of treasury bills to supply current account deposits at the Bank -- my understanding is that it had only a limited stimulative effect on the economy in this regard.

Subsequently, in the aftermath of the Global Financial Crisis in 2008, the Federal Reserve introduced a policy of large-scale purchases of long-term bonds, such as government bonds and mortgage-backed securities. The large-scale purchases of government bonds and mortgage-backed securities, which are risk assets, were intended to have a positive impact on the economy -- the former by pushing down even longer-term interest rates than forward guidance and the latter by reducing risk premiums. Since then, quantitative easing has come to mainly refer to policies that directly lower long-term interest rates by purchasing long-term government bonds, rather than those that simply supply a large amount of funds.

Furthermore, in 2013, the Bank introduced quantitative and qualitative monetary easing (QQE). This policy incorporated to the greatest extent possible the unconventional monetary policy experience gained until then both at home and abroad, such as making clear the Bank's stance on the future policy conduct, pushing down long-term interest rates through large-scale purchases of government bonds, and strengthening the impact of lowering risk premiums in stock markets through an increase in purchases of exchange traded funds (ETFs). This, together with measures by the government, had been effective in pushing up economic activity and prices even under the first challenge -- the lower bound on interest rates -- and Japan's economy achieved a situation where it was no longer in deflation, in the sense of a sustained decline in prices (Chart 6). There have also been changes in inflation expectations and wage growth, as seen in the fact that base pay, which virtually stopped rising during the deflationary period, has started to increase again since 2014. However, I must add that it gradually became clear that the second challenge -- the entrenched mindset that prices and wages were unlikely to rise -- would take more time to overcome.

### Review of Monetary Policy over the Past 25 Years from a Broad Perspective

As described, the Bank has devised various monetary policy measures, with Japan's economy facing the challenge of deflation and the need to transform the mindset and behavior based on the assumption of low inflation, as the aftereffect of deflation. However, since the conduct of these measures had no precedent, practice may have preceded theory in some respects. In this sense, there remains some room for further analysis regarding, for example, the positive effects and side effects of the measures. Furthermore, although I spoke earlier about macroeconomic developments during the past 25 years in a very simplified manner, in practice, the various factors are intricately intertwined, such as problems in the financial system after the bursting of the bubble economy, rapid advances in deregulation and globalization, and demographic changes. Moreover, the series of monetary easing measures has been implemented in response to such developments in economic activity, prices, and financial conditions. Therefore, the positive effects and side effects of the easing measures should be understood and examined in the context of interaction with these developments.

Based on these considerations, the Bank decided at its Monetary Policy Meeting last month to conduct a review of its monetary policy over the past 25 years from a broad perspective (Chart 7). The purpose of the review is to further deepen the Bank's understanding of the interaction between monetary policy, economic activity, and various other factors, and to gain insights that will be useful for future policy conduct. The Bank intends to steadily work on this project and spend a sufficient amount of time of around one to one and a half years, drawing on the knowledge it has gained from its experience to date and the research that has accumulated in the academic community in Japan and abroad.

### II. Outlook for Economic Activity and Prices and the Conduct of Monetary Policy

So far, I have described the basic thinking on and history of monetary policy. I would now like to change the subject and talk about the outlook for economic activity and prices and the conduct of monetary policy for the time being. I will begin with an overview of developments in economic activity and prices in Japan, based on the Outlook Report that was just published at the end of April.

### **Outlook for Economic Activity and Prices**

Japan's economy has picked up (Chart 8). Currently, what is driving the economy is pent-up demand; that is, the materialization of demand that had been suppressed during the pandemic. This consists mainly of demand for services, including inbound tourism, and business fixed investment. The economy is expected to continue recovering moderately until around the middle of fiscal 2023, mainly due to such materialization of pent-up demand.

Thereafter, the main driver of improvement in the economy is expected to shift from pent-up demand to a more sustainable factor of a virtuous cycle from income to spending. The rate of wage increases in this year's annual spring labor-management wage negotiations appears to be significantly higher than that of last year. This is likely to boost private consumption through improvement in household incomes. Moreover, it is expected that the impact of past high commodity prices will wane and overseas economies will pick up again. Under these circumstances, corporate profits are likely to improve and business fixed investment to increase further. The increase in demand at home and abroad is projected to lead to further increases in wages and corporate profits, creating a virtuous cycle. As a result, the output gap, one of the factors that determine prices, which is currently slightly negative, is expected to turn positive around the middle of fiscal 2023 and expand moderately thereafter.

Next, let me turn to prices. The year-on-year rate of change in the consumer price index (CPI) for all items less fresh food has been at 3.4 percent, owing to the effects of a pass-through to consumer prices of cost increases led by a rise in import prices (Chart 9). The main reason why the rate has come down from a peak of around 4 percent in January is that the government's economic measures have pushed down energy prices. Looking ahead, it is expected that the effects of the pass-through will wane and the CPI inflation rate will decelerate to a level below 2 percent toward the middle of fiscal 2023. In fact, the year-on-year rate of change in the import price index has turned negative recently. It is expected that, after running below 2 percent, the rate of increase in the CPI will accelerate again moderately, albeit with fluctuations, as the output gap improves and as medium- to long-term inflation expectations and wage growth rise, accompanied by changes in factors such as firms' price- and wage-setting behavior. However, the uncertainties surrounding this outlook are extremely high.

I would like to raise two key points regarding the economic and price outlooks. The first concerns overseas economies (Chart 10). The main scenario is that overseas economies will pick up again as global inflationary pressures, which increased significantly last year, decline. However, there are persistent concerns in the market over whether it will be possible to contain inflation and maintain economic growth simultaneously. Although central banks in the United States and Europe have been raising interest rates rapidly since last year, there is still a high level of concern about the risk of inflation rates remaining high through wage increases. Since early spring, there have been phases when market participants' risk sentiment deteriorated, mainly due to the effects of issues surrounding some financial institutions in the United States and Europe. Attention needs to be paid to the risk that global financial conditions will tighten further, mainly through adjustments in asset prices, fluctuations in foreign exchange markets, changes in financial institutions' lending

positions, and capital outflows from emerging economies, leading overseas economies to deviate downward from the baseline scenario.

The second point concerns wage increases (Chart 11). The base pay increase following this year's annual spring labor-management wage negotiations is expected to mark its highest level in three decades. This is the result of a combination of various factors, including widespread moves to reflect higher prices in wages that were partly due to calls from the government and various sectors, efforts by firms facing labor shortages to recruit and retain employees, and the fact that an overall favorable environment surrounding corporate profits has allowed firms to secure the resources to raise wages. With regard to the outlook, labor market conditions are more likely to tighten further as it becomes difficult for the labor force participation of women and seniors, which has supported labor supply to date, to see an additional increase. On the other hand, wage developments also depend on various factors, including the future course of overseas economies and the domestic economy, as well as developments in moves to pass on higher labor costs to selling prices. The Bank will carefully examine whether the wage increases will be sustained and whether they will take hold.

### Conduct of Monetary Policy for the Time Being and the Bank's Thinking

At the Monetary Policy Meeting held at the end of April, the Bank decided to continue with its existing monetary easing in the form of QQE with Yield Curve Control. I would like to explain the Bank's thinking behind this decision in response to questions that are often asked.

## (1) Why continue with monetary easing even though the inflation rate is above the 2 percent <u>target?</u>

Since last year, a question that is often asked is why the Bank continues to pursue monetary easing when CPI inflation is above 2 percent. The answer to this question is that the Bank aims to achieve price stability in a sustainable and stable manner. The main reason prices are currently rising at a rate above 3 percent is not strength of demand, but cost-push factors originating from overseas. In terms of the Phillips curve I mentioned earlier, this can be interpreted as a temporary upward deviation (Chart 12). Since cost-push inflation puts

downward pressure on real income and corporate profits, it places a burden on households and firms. However, tightening monetary policy in an attempt to rein in such inflation will worsen the economic and employment situations. As a result, households and firms will have to shoulder a different kind of burden and the inflation rate will be even lower once the cost-push factors have abated. The Bank aims to achieve the price stability target of 2 percent in a sustainable and stable manner, accompanied by wage increases. To this end, it is necessary for the Bank to support economic activity by continuing with monetary easing.

### (2) How is an underlying inflation trend assessed?

The second question is how an underlying inflation trend is assessed. One way, for example, is to construct indicators that make it easier to gauge the trend in prices by excluding items with large short-term price fluctuations or by performing certain statistical processing. However, in a situation such as the current one, where the price of a wide range of items fluctuates due to the impact of rising import prices, such an impact cannot be completely eliminated. As much as policymakers and economists struggle with this problem, there is unfortunately no "ideal indicator" that can be used on its own to assess the underlying inflation trend. Therefore, what is required is to make a comprehensive assessment, not only by taking the various price indicators and their individual characteristics into account, but also by examining factors that shape prices, such as the output gap, inflation expectations, and wage growth, as well as considering anecdotal information from firms.

(3) Given that base pay is expected to increase substantially and inflation is projected to approach 2 percent, can't it be said that there is an increasing possibility that the target will be achieved?

There is no doubt that this year's large increase in base pay is a tailwind for achieving the 2 percent target. The Outlook Report also shows that the underlying rate of inflation is expected to near 2 percent through fiscal 2025. Therefore, the third question is, if this is the case, isn't the possibility of achieving the price stability target getting higher?

Regarding developments in wages, it is necessary to examine whether wage increases will be sustained and whether they will take hold, including the extent to which they spread to small and medium-sized firms. Moreover, although the underlying rate of inflation is expected to gradually increase toward the price stability target, it is likely to take some more time. Furthermore, this outlook is based on the assumption that the output gap will improve and that medium- to long-term inflation expectations and wage growth will rise. In order to achieve the price stability target of 2 percent, it is necessary for inflation expectations to rise and the Phillips curve to shift upward (Chart 13). The Bank aims to achieve this situation amid a virtuous cycle where both wages and prices increase. Although it projects in its Outlook Report that Japan's price developments will gradually approach this situation, the uncertainties surrounding the outlook for prices are high, as mentioned earlier, as risks to economic activity are considered to be skewed to the downside for the time being, especially with regard to overseas economies. The Bank therefore judges that, at this point in time, achieving the price stability target of 2 percent in a sustainable and stable manner has not yet come in sight.

### (4) How are side effects evaluated?

Needless to say, it is necessary to pay close attention not only to the positive effects but also to the side effects of conducting monetary easing over a long period. The fourth question therefore is: what are the Bank's thoughts on this point?

One of the side effects often pointed out is that conducting monetary easing over a long period undermines the functioning of financial intermediation. In this context, the Bank's assessment is that Japan's financial institutions are well capitalized and have ample liquidity, and that financial intermediation has continued to function smoothly. In fact, lending by financial institutions has recently seen a year-on-year rate increase of more than 3 percent. Moreover, financial institutions' lending attitudes as perceived by firms have remained accommodative. In regard to the impact on the functioning of the bond market, various data and surveys suggest that market functioning has deteriorated to a certain extent. However, in addition to taking measures such as expanding the range of 10-year Japanese government bond (JGB) yield fluctuations last December, the Bank has deliberated on the specifics of daily market operations, such as temporary lending of JGBs. On top of this, overseas interest rates have declined, and the Bank's assessment therefore is that some improvement in the market functioning has been observed recently, such as the relatively smooth shape of the yield curve.

In any case, it is important not to focus on and evaluate the side effects of monetary easing only, but to consider the balance with its positive effects on economic activity and prices, such as whether and to what extent the side effects offset or outweigh the positive effects.

### The Bank's Thinking on the Future Conduct of Monetary Policy

As mentioned, it is necessary for the Bank to firmly continue with monetary easing at this stage. In this regard, the Bank decided at its Monetary Policy Meeting last month to clearly express its basic stance that, with the extremely high uncertainties surrounding economies and financial markets at home and abroad, it would patiently continue with monetary easing while nimbly responding to developments in economic activity and prices as well as financial conditions, and that by doing so, it would aim to achieve the price stability target of 2 percent in a sustainable and stable manner, accompanied by wage increases (Chart 7).

In addition to expressing its basic stance, the Bank, based on changes in the assessment of risks associated with the pandemic and other factors, has reexamined and clarified its stance on the future conduct of monetary policy. The expression regarding its stance on the policy rates related to the pandemic was deleted because it became unsuitable in view of the reclassification of COVID-19 under the Infectious Disease Control Law and a decline in the risk of COVID-19 affecting economies and financial markets at home and abroad. Although risks associated with the pandemic have decreased, the uncertainties surrounding economies and financial markets at home and abroad are extremely high. The Bank's stance of patiently continuing with monetary easing therefore is unchanged. Under these circumstances, the Bank will continue to maintain the stability of financing, mainly of firms, and financial markets, and will not hesitate to take additional easing measures if necessary.

The Bank will continue with large-scale monetary easing under yield curve control. Conduct of monetary policy can be viewed as the process of identifying realistic options and selecting the most appropriate one in the face of various constraints and uncertainties regarding developments in economic activity and prices, as well as financial conditions. On this point, when conducting monetary policy, there is an approach that places importance on the social welfare implications of each of the various future paths of the economy, based on the assumption that the economy entails uncertainties. This approach is known as the risk management approach, which was advocated by former Federal Reserve Chairman Alan Greenspan. Applying this to the current situation in Japan, the cost of impeding the nascent developments toward achieving the 2 percent price stability target, which are finally in sight, by making hasty policy changes would likely be extremely high. While there is an opposite risk that inflation will remain above 2 percent if a change in policy falls behind the curve, the cost of waiting for underlying inflation to rise until it can be judged that 2 percent inflation has fully taken hold is not as large as the cost of making hasty policy changes. In this sense, it is appropriate to take time to decide on adjustments to monetary easing toward a future exit. The Bank will carefully support these nascent developments to mature and aim to achieve the price stability target of 2 percent in a sustainable and stable manner, accompanied by wage increases.

Thank you very much for your attention.

## Basic Thinking on Monetary Policy and the Outlook for Economic Activity and Prices

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May 19, 2023

UEDA Kazuo Governor of the Bank of Japan

Introduction

- I. The Basic Thinking on Monetary Policy
- II. Outlook for Economic Activity and Prices and the Conduct of Monetary Policy

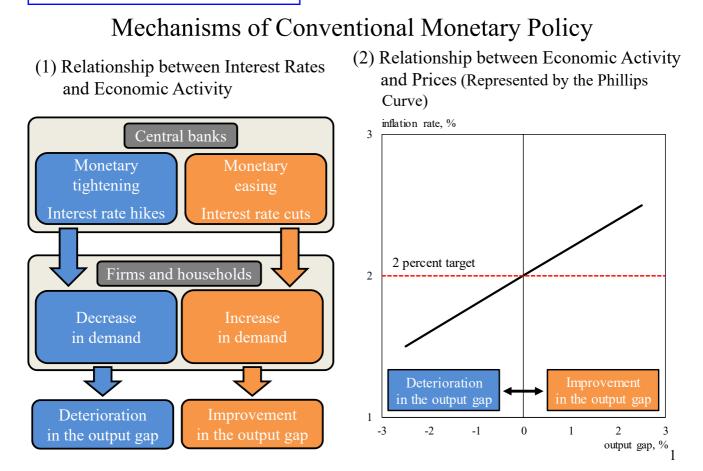


Chart 2

## Determinants of Inflation Other than the Output Gap and Their Effects

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1

-3

-2

-1

0

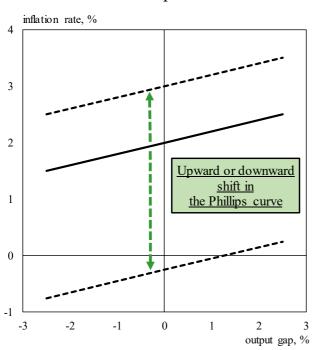
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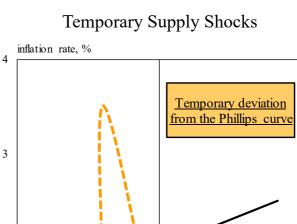
2

output gap, %

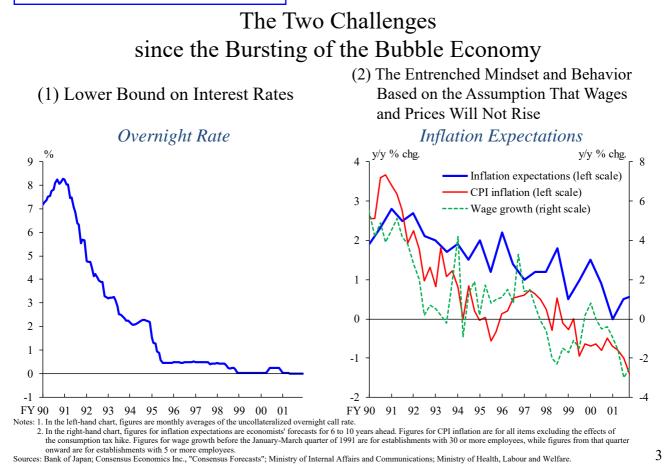
Inflation Expectations

I. The Basic Thinking on Monetary Policy





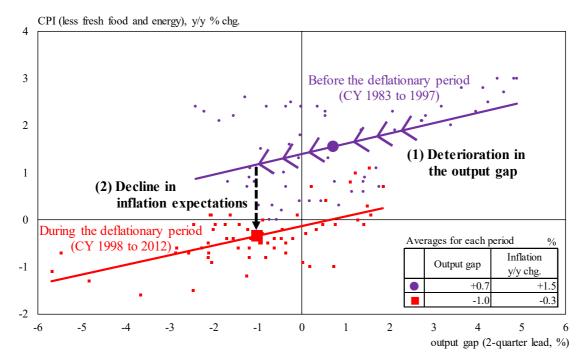
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### I. The Basic Thinking on Monetary Policy

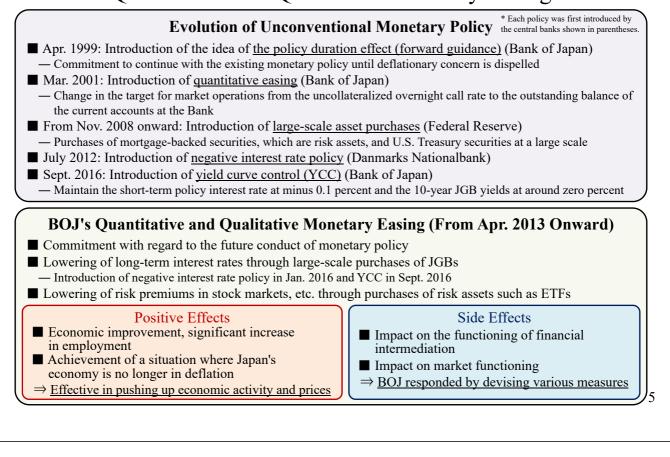
Chart 4

## Changes in the Phillips Curve through the Deflationary Period



Note: The CPI figures exclude fresh food and energy, for which prices are volatile. They also exclude temporary factors, which consist of mobile phone charges and the effects of the consumption tax hikes, policies concerning the provision of free education, and travel subsidy programs. These Phillips curves are based on statistical estimates and should be interpreted with some latitude (the same applies to Charts 6 and 12).
Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

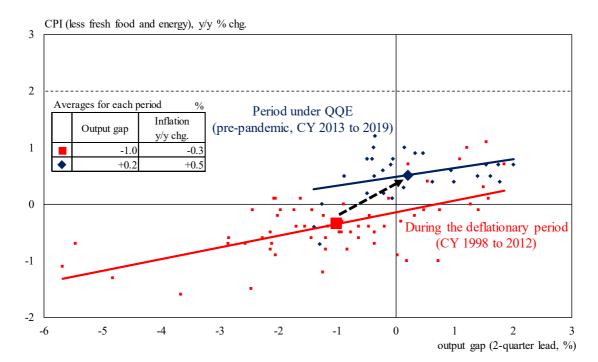
## Evolution of Unconventional Monetary Policy and Quantitative and Qualitative Monetary Easing



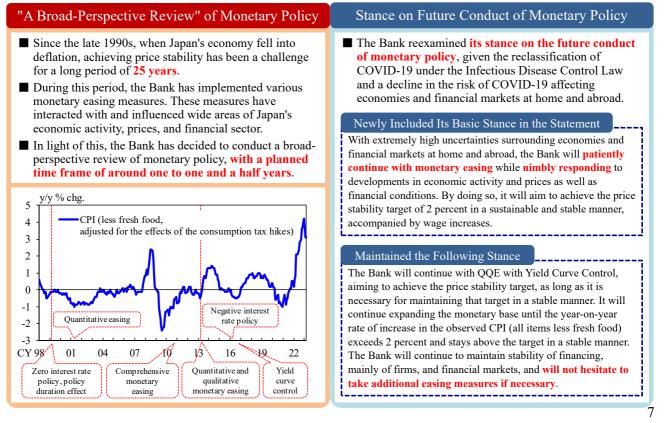
### I. The Basic Thinking on Monetary Policy

Chart 6

# Changes in the Phillips Curve since the Introduction of QQE



Note: Figures for the CPI (less fresh food and energy) exclude temporary factors (see note in Chart 4). Sources: Ministry of Internal Affairs and Communications; Bank of Japan.



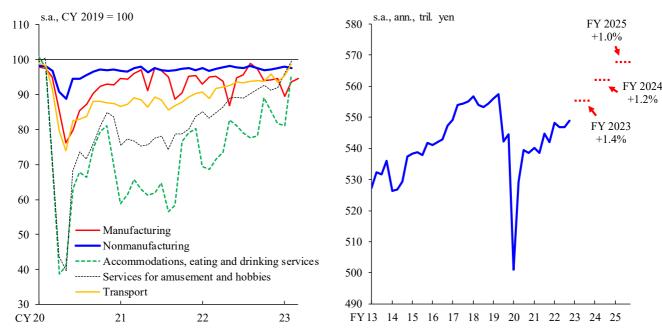
II. Outlook for Economic Activity and Prices and the Conduct of Monetary Policy

Chart 8

### Japan's Economy



### The BOJ's Forecasts for Real GDP



 Notes: 1. In the left-hand chart, figures for manufacturing are from the Indices of Industrial Production, while those for the other sectors are from the Indices of Tertiary Industry Activity. Figures for nonmanufacturing exclude accommodations, eating and drinking services, services for amusement and hobbies, and transport.
 In the right-hand chart, the forecasts presented are the medians of the Policy Board members' forecasts in the April 2023 Outlook for Economic Activity and Prices (Outlook Report).

2. In the right-hand chart, the forecasts presented are the medians of the Policy Board members' forecasts in the April 2023 Outlook for Economic Activity and Prices (Outlook Report). The values of real GDP for fiscal 2023 onward are calculated by multiplying the actual figure for fiscal 2022 by all successive projected growth rates for each year. Sources: Ministry of Economy, Trade and Industry; Cabinet Office; Bank of Japan.

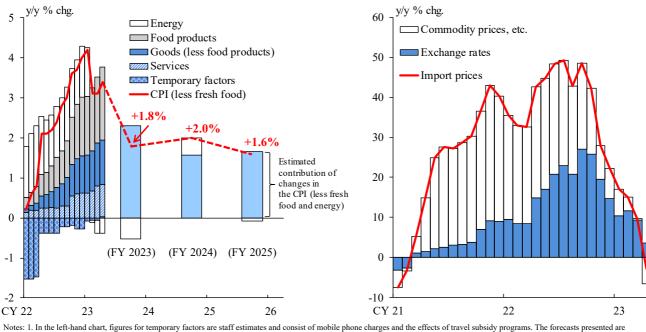
### Chart 9

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### Prices

### The BOJ's Forecasts for the CPI





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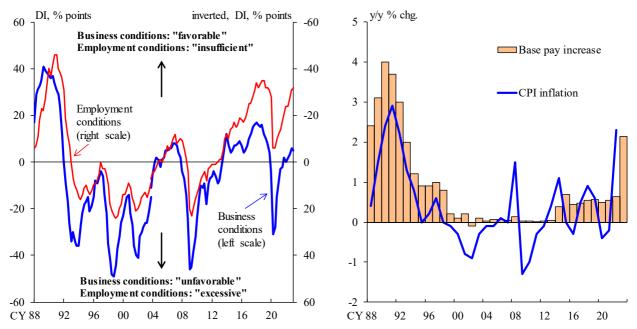
2. In the right-hand chart, the contribution of changes in commodity prices, etc. is calculated using changes in the import price index on a contract currency basis. The contribution of changes in exchange rates is calculated using the difference between the index on a yen basis and that on a contract currency basis Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

Chart 10 II. Outlook for Economic Activity and Prices and the Conduct of Monetary Policy **Overseas Economies** Inflation **Policy Interest Rates** y/y % chg 16 10 United States United States 9 14 Germany 8 12 Euro area --- France 7 10 6 8 5 6 4 4 3 2 2 0 1 -2 0 -4 -1 CY 80 90 95 00 05 10 15 20 85 90 95 00 05 10 15 20 CY 85

Notes: 1. In the left-hand chart, figures are based on national statistics compiled by the OECD.
 2. In the right-hand chart, figures for the United States are the federal funds target rate or the medians of the target ranges. Those prior to July 1995 are monthly averages of the effective federal funds rate. Figures for the euro area are the rates on the deposit facility.
 Sources: Haver, Bloomberg.

### Wages Business and Employment Conditions in the Tankan

### Inflation and Base Pay Increase



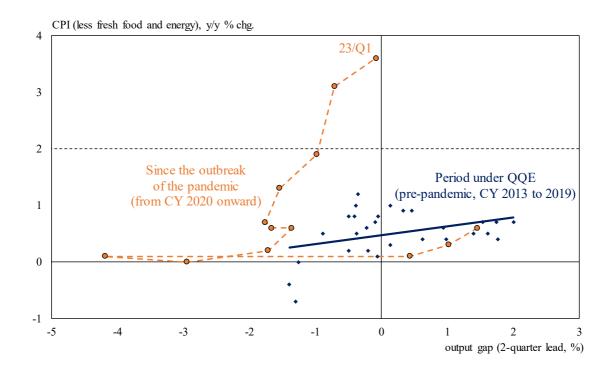
Notes: 1. In the left-hand chart, figures are for all industries and enterprises. There is a discontinuity in the data for December 2003 due to a change in the survey framework. 2. In the right-hand chart, figures for CPI inflation are for all items less fresh food, excluding the effects of the consumption tax hikes, etc. The figure for base pay increase for 2023 is from Rengo's fifth aggregation.

Sources: Bank of Japan; Ministry of Internal Affairs and Communications; Japanese Trade Union Confederation (Rengo); Central Labour Relations Commission; Institute of Labour Administration.

### II. Outlook for Economic Activity and Prices and the Conduct of Monetary Policy

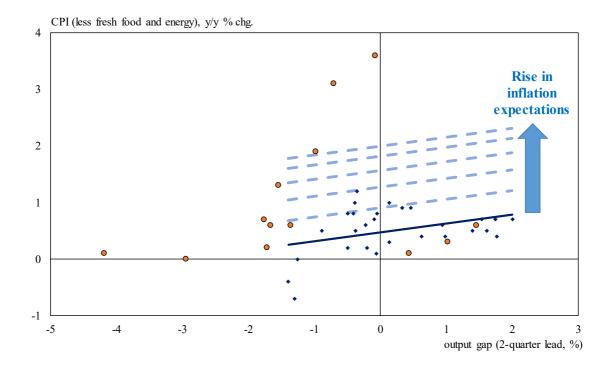
Chart 12

## Phillips Curve before and after the Pandemic



Note: Figures for the CPI (less fresh food and energy) exclude temporary factors (see note in Chart 4). Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

## Upward Shift in the Phillips Curve



Note: Figures for the CPI (less fresh food and energy) exclude temporary factors (see note in Chart 4). Sources: Ministry of Internal Affairs and Communications; Bank of Japan.