September 6, 2023

Bank of Japan

Economic Activity, Prices, and Monetary Policy in Japan

Speech at a Meeting with Local Leaders in Yamaguchi

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Member of the Policy Board

(English translation based on the Japanese original)

I. Economic Activity and Prices

A. Current Situation

I will begin my speech by talking about the current situation of economic activity and prices. The pace of recovery in overseas economies has slowed. Chart 1 shows developments in the global economy and the July 2023 *World Economic Outlook* (WEO) *Update* released by the International Monetary Fund (IMF). Taking a detailed look by country and region, the U.S. economy has remained on a slowing trend, reflecting continued policy interest rate hikes, but firmness has continued to be seen in private consumption, particularly for services.

European economies have continued to slow moderately, despite an easing in concern over energy supply compared to a while ago, as they have continued to be affected by the situation surrounding Ukraine. As for the outlook, European economies are likely to remain on a slowing trend, with the continuing impact of policy interest rate hikes.

The pace of pick-up in the Chinese economy has slowed, mainly owing to the effects of a slowdown in external demand and adjustments in the real estate market, although services consumption has been firm as the normalization of economic activity has progressed.

Japan's economy has recovered moderately. Chart 2 shows developments in the real GDP growth rate and the contribution of GDP components such as private final demand, public demand, and external demand (net exports). While private final demand, which includes business fixed investment and private consumption, saw a moderate increase until recently, for the latest April-June quarter, a rise in net exports made a large contribution and real GDP registered an increase of 6 percent on an annualized basis. As shown in Chart 3, Japan's real GDP has exceeded the level in 2019, before the outbreak of COVID-19.

Turning to prices in Japan, the year-on-year rate of increase in the consumer price index (CPI) for all items less fresh food is slower than a while ago, mainly due to the effects of pushing down energy prices from the government's economic measures, but it has been at around 3 percent recently owing to the effects of a pass-through to consumer prices of cost increases led by the past rise in import prices. Chart 4 shows that Japan's inflation rate has been lower relative to that in the United States and Europe, and that it has been mainly led by higher

goods prices due to cost-push factors stemming from a rise in import prices, unlike in the United States and Europe, where the rise in services prices has significantly pushed up overall inflation.

B. Outlook

I would like to explain the Bank of Japan Policy Board members' baseline scenario of the outlook for economic activity and prices in Japan. The economy is likely to continue recovering moderately for the time being, supported by the materialization of pent-up demand, as well as by accommodative financial conditions and the government's economic measures, although it is expected to be under downward pressure stemming from a slowdown in the pace of recovery in overseas economies. Chart 5 shows the forecasts for economic activity and prices presented in the July 2023 *Outlook for Economic Activity and Prices* (Outlook Report). In terms of the median of the members' forecasts, the real GDP growth rate is projected to be 1.3 percent for fiscal 2023, 1.2 percent for fiscal 2024, and 1.0 percent for fiscal 2025.

In terms of the median of the members' forecasts in the July 2023 Outlook Report, the year-on-year rate of increase in the CPI for all items less fresh food is projected to be 2.5 percent for fiscal 2023, 1.9 percent for fiscal 2024, and 1.6 percent for fiscal 2025. Compared to the forecasts made in the April 2023 Outlook Report, the projected rate of increase for fiscal 2023 is significantly higher, mainly due to the fact that cost increases led by the past rise in import prices have been passed on to consumer prices to a greater extent than expected.

C. Risks to the Outlook

So far, I have explained the Policy Board members' baseline scenario of the outlook for economic activity and prices. I would now like to discuss a few points regarding risks to the outlook for economic activity.

The first involves developments in overseas economic activity and prices. There has recently been significant difference between economic cycles in Japan and those abroad, partly reflecting differences in the developments regarding COVID-19 and diverging monetary policy responses. Following the shift to a floating exchange rate system in the 1970s, the

monetary policy stances of advanced economies and their corresponding economic cycles were largely in sync. However, since 2022, while Japan has continued with monetary easing, the United States and Europe have been compelled to pursue aggressive monetary tightening to address the rise in inflation. Japan's economy is expected to continue recovering at a moderate pace, partly owing to the effects of large-scale monetary easing. Nevertheless, if overseas economies experience sharper slowdowns due to the effects of monetary tightening, for example, there is a risk that Japan's economic activity will be under stronger downward pressure.

The second point is the possible effects of macroeconomic policies across countries and regions, especially how asset markets will be affected by global monetary tightening, particularly as conducted in the United States and Europe. Policy interest rate hikes in the United States will also affect emerging economies through capital flows in global financial markets. Also, attention is warranted to the fact that one of the reasons behind the failures among U.S. banks in March was inappropriate risk management under a surge in U.S. interest rates. Furthermore, attention should be paid to whether hidden risks are building up outside the realm of conventional financial institutions, among so-called non-bank financial intermediaries.

In addition to these points, close attention is warranted over how geopolitical risks, such as the situation in Ukraine since 2022, will impact the world economy, global financial markets, and the price of commodities, including grain.

II. Recent Conduct of Monetary Policy

Let me now turn to my views on the Bank's conduct of monetary policy, based on the outlook for economic activity and prices that I have described.

The Bank currently conducts monetary policy under the framework of Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control, aiming to achieve the price stability target of 2 percent.

My own view on the current situation of Japan's economy is that we are finally beginning to see the green shoots of progress toward achieving the 2 percent price stability target. It is possible that Japan has reached an inflection point, where there might be a shift in the deeply-entrenched norm that wages and prices do not rise. Looking ahead, the point at issue will be realizing a virtuous cycle of improvements in corporate profits and continued wage hikes in response to price increases.

In this regard, I consider that signs of a change in firms' price- and wage-setting behavior have recently emerged on the back of a "big push" in two phases, as shown in Chart 6; in other words, there are green shoots of progress toward achieving the 2 percent target. Specifically, in the first big push, firms' pass-through of costs to goods prices proceeded, with cost-push pressures of the hike in raw material prices originating from overseas in the latter half of 2022. As a second big push, there seem to be moves starting to be observed recently to pass on a part of the cost increases of wage hikes due to this spring's labor-management wage negotiations to prices, including services prices. This spring's wage negotiations achieved a wage increase of 3.6 percent, a level not seen since the early 1990s (Chart 7). The pass-through of wage growth to prices tends to be sustained due to the observed high inertia in wage growth.[1] It is also possible that the rate of increase in wages could start to rise in a non-linear fashion, as the tightness in labor market conditions exceeds the threshold on the wage Phillips curve. In particular, a base pay increase is considered an increase in permanent income, rather than a temporary increase in income, and therefore has a larger effect on increasing the propensity to consume, which will likely lead to higher expectations for increased income. Furthermore, in a third phase, signs of change are also beginning to be seen in the underlying rate of inflation, reflecting a rise in inflation expectations, mainly due to an increase in base pay.

In the early 1990s, I was head of the employee union of the bank at which I was working. The union was demanding an increase in base pay from management. In those days, unions

[1] The following paper explains empirically, using Japanese data, that the pass-through to CPI inflation of an increase in wages rises once the increase exceeds a certain threshold, and when the increase is well above the threshold, a large pass-through tends to be sustained.
See Nakajima, J., Sasaki, T., and Yamamoto, H., "Nonlinear Input Cost Pass-through to Consumer Prices: A Threshold Approach," *Bank of Japan Working Paper Series*, no. 23-E-9 (May 2023).

typically negotiated on the basis of a "living wage," or a wage level that is necessary to maintain living standards, asking for an increase in base pay that would offset the previous year's decrease in real income stemming from inflation. Although the idea of a living wage virtually disappeared after the collapse of the bubble economy, this year, for the first time in 30 years, has seen wage increases that take into account rising prices, and it is possible that this will continue into next year and beyond.

In this way, we are finally beginning to see the green shoots of progress toward achieving the 2 percent price stability target, but in view of extremely high uncertainties, I consider it necessary for the Bank to patiently continue with the current large-scale monetary easing for two reasons. At the same time, however, with indications of a positive cycle having emerged, it is also important for the Bank to respond nimbly in preparing for uncertainties, taking into consideration future developments in economic activity and prices.

The first reason I consider it necessary to continue with the current large-scale monetary easing is that, although the CPI inflation rate has recently been above 2 percent, there is still a long way to go for the target to be achieved in a sustainable and stable manner. Firms' recent pass-through of cost increases to selling prices reflects, to a large extent, cost-push factors. However, the year-on-year rate of change in import prices has already turned negative, and such factors are expected to wane gradually.

Looking at the price change distribution by item in the CPI, however, although the peak continues to be at around 0 percent, the distribution has shifted further into positive territory recently, as in the United Sates, indicating that there are more items that are seeing higher prices on the whole (Chart 8). With a view to examining the pass-through of wage increases to prices, I am paying attention to developments in services prices; compared to Europe and the United States, it is evident that the contribution of services prices to the recent rise in the CPI remains small (Chart 4). Of the factors behind the recent rise in the CPI, excluding energy and food, the estimated proportion of services prices in the contribution of goods and services combined, was low in Japan at 44 percent, compared with 96 percent in the United States and 66 percent in the euro area. Nevertheless, I am paying attention to the fact that the year-on-year rate of change in services prices has risen to 2 percent recently from minus 0.3 percent

in April 2022, when the effects of a reduction in mobile phone charges almost dissipated, and the fact that the proportion of services prices rose from being negative to 44 percent in around a year.

The second reason for continuing with monetary easing is a risk of slowdowns in overseas economies. As mentioned earlier, due to policy interest rate hikes in the United States and Europe, there is a risk that Japan's economy will come under stronger downward pressure, if overseas economies experience significant slowdowns.

Considering that there are indications of movement toward achieving the price stability target, it is thus necessary for the Bank to patiently continue with monetary easing. As one factor defining inflation rates, the output gap, after becoming significantly negative at the onset of the pandemic, has since narrowed to just below 0 percent recently, as shown in Chart 9. It is expected to return to positive territory by the end of fiscal 2023 and then continue to expand moderately. In addition, with the low interest rate environment being maintained, short- and long-term real interest rates have continued to decline due to a rise in inflation expectations, as shown in Chart 10, suggesting that the degree of monetary accommodation has strengthened.

In continuing with the framework of QQE with Yield Curve Control, the Bank has conducted monetary policy while constantly reviewing the positive effects and side effects. During that process, to enhance the sustainability of large-scale monetary easing under the current framework, mainly in response to deterioration in market functioning, the Bank decided in December 2022 to modify the conduct of yield curve control. Thereafter, in July 2023, the Bank decided to conduct yield curve control with greater flexibility, as shown in Chart 11. If upward movements in prices and inflation expectations continue, strictly capping 10-year Japanese government bond (JGB) yields at the 0.5 percent level could affect the functioning of bond markets and the volatility in other financial markets. The Bank's measure was aimed at mitigating this situation. Nevertheless, as shown in Chart 10, both short- and long-term real interest rates have been at extremely low levels by historical standards, and the fact that aggressive monetary easing has been maintained remains unchanged. The Bank will continue to pay due attention to the effects and side effects of yield curve control when conducting

monetary policy. In addition, to secure bond market stability, it will maintain a detailed grasp of market conditions through careful monitoring.

III. My Personal View on the Monetary Policy Review from a Broad Perspective

So far, I have talked about the Bank's recent conduct of monetary policy and the rationale behind it. In what follows, I would like to discuss the broad-perspective review of monetary policy that the Bank decided, at the April 2023 Monetary Policy Meeting, to conduct with a planned time frame of around one to one and a half years.

In the review, the Bank will analyze the effects on financial markets and the financial system, including side effects, of the various unconventional monetary policy measures that have been implemented over the past 25 years. Moreover, taking advantage of opportunities to exchange opinions at meetings with local and business leaders like this one today, the Bank aims to deepen its understanding of the background leading up to the review, including how various changes in the economic environment since the 1990s have affected factors such as corporate and household behavior and the formation mechanisms of wages and prices.

Today, before I open the floor to hear your feedback, I would like to share my personal view and understanding of the issues involved, from a historical perspective, in terms of changes in corporate behavior in the wake of the collapse of the bubble economy in Japan, the macroeconomic impact of these developments, and recent signs of change. I would then like to hear your views on issues such as the changes in the behavior of firms and financial institutions.

Post-Bubble Changes in Corporate Behavior and the Entrenchment of Norms

Looking at trends in the growth rate, Japan's economy continued to grow at a high rate through the 1980s, buoyed in part by the aftereffects of its period of rapid growth (Chart 12). From the 1990s, however, with the bursting of the bubble economy, the country fell into prolonged low growth. The growth rate dropped further in the 2000s, exacerbated in part by the effects of the financial crisis in Japan and the global financial crisis. Although economic growth has recovered somewhat since the 2010s, it still lags behind past levels.

Although a variety of factors contributed to the slowdown in growth, I believe one cause was the reaction of firms to post-bubble changes in the economic environment. Specifically, in the context of the significant asset deflation, an increasing number of firms sought to pursue management with minimum assets by paring down assets on the balance sheet and reining in investment, while also engaging in business restructuring to cope with mounting international competition (Chart 13). In response to the changing business conditions, these were rational moves for individual firms. From a macroeconomic perspective, however, this approach caused Japan to fall into a shrinking equilibrium. Such corporate behavior, coupled with firms' restraint on investing in human capital, is considered to have brought down Japan's potential growth rate (Chart 14). Meanwhile, in this deflationary environment, it continued to be rational for households to hold their assets in cash and deposits. Households exhibited a growing preference for cash and deposits and came to avoid holding risk assets. This also led to a shrinking equilibrium on the macroeconomic level by way of asset deflation.

Now, from a historical perspective, I would like to take another look at the asset deflation that prompted firms to pursue management with minimum assets. At its peak in the 1980s, Japan accounted for nearly half of global market capitalization. As Chart 15 shows, however, from the 1990s, while the United States and other economies continued to expand steadily, Japan's economy remained stagnant for many years, out of step with growth in the rest of the world. This stagnation was set off by a drop in asset prices, particularly in stocks and real estate. While the nature of the post-bubble crisis in Japan is often described as "deflation," a fall in the general price level, the more fundamental problem was a drop in asset prices, or asset deflation. Land prices in major cities in Japan plummeted by about 70 to 80 percent from their peak, causing serious damage to the financial system. Meanwhile, as mentioned, an increasing number of firms pursued management with minimum assets on the balance sheet while also reducing interest-bearing debt. As a result, as Chart 16 suggests, the capital adequacy ratios of Japanese firms continued to increase. In addition, Japanese firms became more inclined to hoard cash and deposits as a precautionary measure.

Next, I would like to consider the international competitive conditions that led to the business restructuring of Japanese firms. The world economy became increasingly globalized after the fall of the Berlin Wall in 1989. Through the 1980s, as its economic presence grew, Japan saw

mounting trade friction and a rapid appreciation of the yen (Chart 17). In this situation, Japanese firms across a wide range of sectors, including automakers, shifted their production sites overseas. The semiconductor sector was also compelled to curtail its share of production. Moreover, to maintain competitiveness in international markets, Japanese firms established a policy of not raising the wages of their employees in Japan. In this regard, as Chart 18 shows, wage increases trailed the inflation rate for many years from the late 1990s, in what was deemed a period of deflation. Firms curbed wage hikes and refrained from passing on higher costs to selling prices probably on the understanding that they would lose competitiveness if they raised wages and prices. Once firms took for granted the fundamental practice of leaving selling prices and wages unchanged, they did not pass on higher costs to selling prices even if the price of raw materials increased, seeking instead to absorb such increases by cutting costs. In fact, as Chart 19 indicates, recent research has shown that for nearly two decades after the collapse of the bubble economy, Japanese firms secured profits by keeping wages down by increasing wage markdowns, which are thought to reflect firms' monopsony power in the labor market, amid a declining trend in price markups, which are seen to reflect firms' market power in the product market where they sell their products.[2] In other words, I think we can say that Japan overall was engaging in a kind of ongoing war of attrition.

For firms, coping with changes in the post-bubble environment was a painful and traumatic experience, and responding through management with minimum assets and business restructuring led to a shrinking equilibrium. The norm that wages and prices do not rise subsequently became entrenched for nearly a quarter of a century. Empirical research has shown that the formation of inflation expectations in Japan is strongly influenced by the course of past events and is highly adaptive. This can be largely attributed to the negative post-bubble experience of a shrinking equilibrium, which made such expectations fairly resistant to change.

Recent Signs of Change

However, there has already been a significant shift in the factors that guided firms' behavior in post-bubble Japan. First, the asset deflation that led firms to pursue management with

[2] See Aoki, K., Hogen, Y., and Takatomi, K., "Price Markups and Wage Setting Behavior of Japanese Firms," *Bank of Japan Working Paper Series*, no. 23-E-5 (April 2023).

minimum assets has improved significantly over the past decade. Asset prices have risen steadily since the beginning of the 2010s, mainly in the stock and real estate markets. The Nikkei 225 Stock Average has already returned to its highest level since 1990. As for the international competitive conditions that led to the business restructuring of Japanese firms, trade friction is now a thing of the past. The situation described as the six headwinds facing firms has also changed.[3] Moreover, changes in the external environment, including from the perspective of economic security, appear to be giving rise to a major shift by historical standards -- such as the shoring up of domestic production of semiconductors and other goods.

The Assessment for Further Effective and Sustainable Monetary Easing, conducted by the Bank in March 2021, showed that, in addition to the lower funding costs transmission channel, the financial and capital markets channel (stock prices and foreign exchange rates) had also been significantly effective in translating the benefits of lower interest rates into improvement in the output gap (Chart 20). These findings suggest the likelihood that the Bank's monetary easing has contributed somewhat to the shift away from the asset deflation and six headwinds that prompted the changes in corporate behavior in the post-bubble economy. One reason why the Bank has patiently continued with monetary easing for many years is that it has taken time for norms to change. At the same time, I consider that the Bank's patient continuation of monetary easing has also been contributing to stability in Japan's financial market.

Furthermore, expectations have recently been emerging of a historic shift away from the post-bubble corporate behavior marked by management with minimum assets and business restructuring. Namely, there seems to be a shift from the perceived need to lower prices, even

[3] It has been said that, following the Great East Japan Earthquake and to around 2012, firms faced six headwinds: the yen's appreciation; delayed negotiations on economic partnership agreements; high corporate tax rates; rigidity in the labor market; environmental regulations; and high electricity costs. This situation is judged to have improved on the whole, and could contribute to strengthening the attractiveness of Japan as a business location. For details, see Cabinet Office, *Annual Report on the Japanese Economy and Public Finance 2021 -- Towards a resilient Japanese economy: Accelerating innovation towards an economic society with strength and flexibility*, September 2021, https://www5.cao.go.jp/keizai3/2021/0924wp-keizai/setsumei_e2021.pdf; Cabinet Office, *Annual Report on the Japanese Economy and Public Finance 2017: New Growth Promoted by Technological Innovation and Work Style Reform*, July 2017, https://www5.cao.go.jp/keizai3/whitepaper-e/archives/wp2017-e.html. These reports are summaries of the Japanese originals.

slightly, to a mentality of raising prices for items of quality, and from restraining to expanding investment, in both people and things. The question of whether these developments will continue remains highly uncertain, not to mention whether we will see a change in the norm that wages and prices do not rise. In terms of the outlook, however, I would like to highlight three recent positive signs of change in the economic environment.

The first sign is a possible shift, sparked by Japan's first major inflation shock in 40 years, in the way firms perceive the practice of keeping sales prices and wages unchanged as an unquestioned norm. As explained earlier, although this inflation shock has been brought about by cost-push pressures originating from overseas, it has acted as a so-called big push in two phases seen from 2022 to 2023, as shown in Chart 6. I take the highest level of wage hikes since the first half of the 1990s, referred to earlier, as an indication of a change in the war of attrition that continued after the bubble's collapse, involving wage cuts and a decline in price markups. As a result, it is also possible that the Phillips curve, which shifted downward during the post-bubble deflationary period, has begun to shift upward again due to the two phases of the big push and the subsequent growth in inflation expectations, together with the many years of monetary easing (Chart 21). We will only achieve sustained inflation once these inflation expectations rise and the Phillips curve shifts upward (Chart 22). Moreover, as Chart 23 indicates, there has been a noteworthy increase recently in nominal GDP growth and the expansion of economic activity on a nominal basis. Since corporate activity, including sales, profits, and wages, is based on nominal terms, such an expansion of economic activity has great significance. In this context, we can expect to see a virtuous cycle initiated by firms, as they rid themselves of the fixed notion of keeping prices unchanged and embrace a new mentality of securing a certain margin.

The second sign of change involves a structural aspect of society, in terms of a growing willingness to invest in the transformation to a new society, including moves toward digital transformation and global efforts toward achieving carbon neutrality. It is expected that these developments will prompt a rethinking of the restrained stance toward investment that led to the shrinking equilibrium in Japan, as shown in Chart 13. Moreover, various initiatives have been launched in the labor market, including the introduction of new working styles. These

changes could boost Japan's potential growth rate by means of capital accumulation, higher labor market mobility, and productivity growth.

The third sign of change, which is related to the other two, is the rise of a younger generation that never experienced the post-bubble shrinking equilibrium. Having lived through 10 years of ongoing improvements in asset deflation and in international competitiveness, this generation -- also known as Generation Z in a global context -- is not haunted by past trauma, and their presence in Japan's economic activities has gradually expanded. This generation has the potential to drive a rethinking of the practices that have to date been so widespread in Japan.

For Japan's economy to achieve the price stability target of 2 percent in a sustainable and stable manner, it is important to discern whether change is indeed occurring in the attitudes and norms of firms and households that emerged during the shrinking equilibrium in the post-bubble economy. Today, however, given even the possibility that the norms are changing and that Japan has perhaps reached an inflection point, my hope is that the economy will reach a "true dawn" of achieving sustainable growth.[4]

I would be interested in hearing your thoughts, as we carefully consider whether the signs of shifting norms that we are finally seeing will translate into actual change.

Thank you.

[4] Nakaso, H., "Japan's Way toward Strong, Sustainable, and Balanced Growth: Assessment of the potential of the Japanese economy suggests the sun also rises," speech at a meeting hosted by the Japan Society and the City of London Corporation in London, October 5, 2017, https://www.boj.or.jp/en/about/press/koen_2017/ko171005a.htm.

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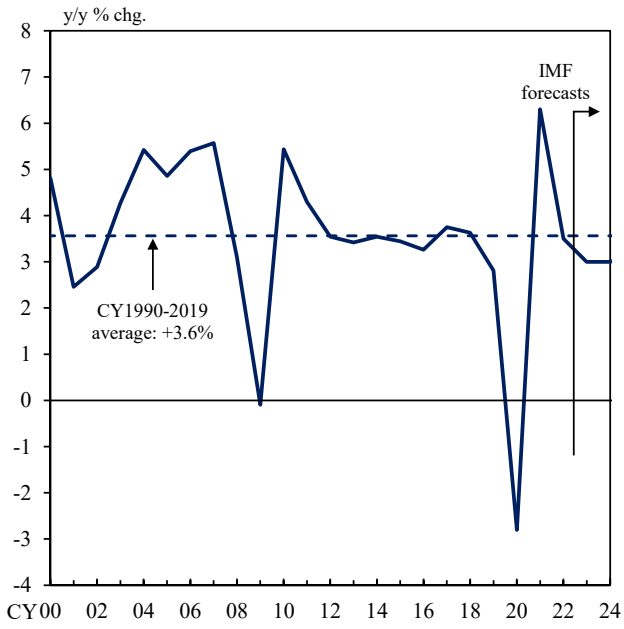
TAKATA Hajime
Member of the Policy Board
Bank of Japan

Chart 1

Developments in Overseas Economies (IMF's July 2023 WEO *Update*)

Global Growth Rate



Major Economies' Growth Rates

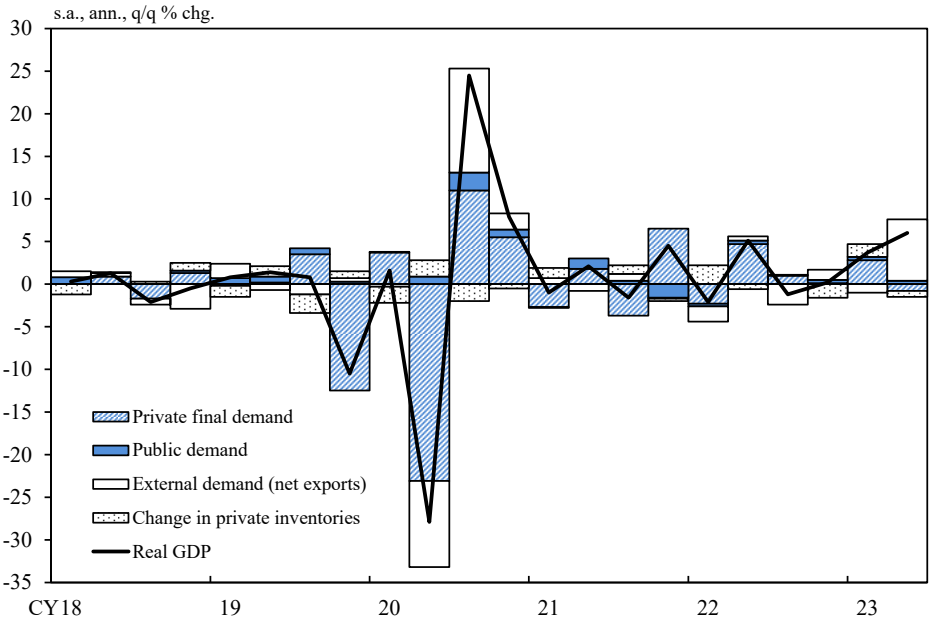
y/y % chg., % points

	CY 2022	CY 2023 [Forecast]	CY 2024 [Forecast]
World	3.5	3.0 (0.2)	3.0 (0.0)
Advanced economies	2.7	1.5 (0.2)	1.4 (0.0)
United States	2.1	1.8 (0.2)	1.0 (-0.1)
Euro area	3.5	0.9 (0.1)	1.5 (0.1)
United Kingdom	4.1	0.4 (0.7)	1.0 (0.0)
Japan	1.0	1.4 (0.1)	1.0 (0.0)
Emerging market and developing economies	4.0	4.0 (0.1)	4.1 (-0.1)
China	3.0	5.2 (0.0)	4.5 (0.0)
India	7.2	6.1 (0.2)	6.3 (0.0)
ASEAN-5	5.5	4.6 (0.1)	4.5 (-0.1)

Note: In the table, figures in brackets are the differences from the forecasts in the April 2023 *World Economic Outlook* (WEO).
ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.
Source: IMF.

Chart 2

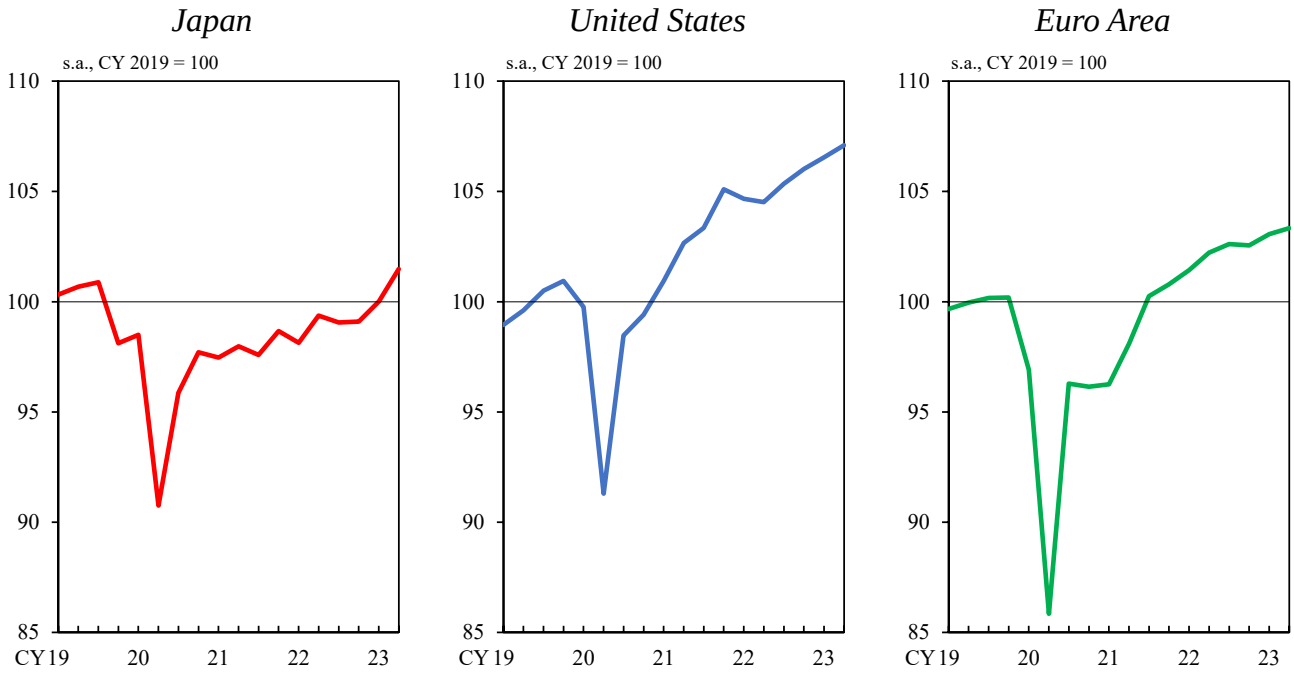
Real GDP Growth Rate



Note: Private final demand = Private demand - Change in private inventories
Source: Cabinet Office.

Chart 3

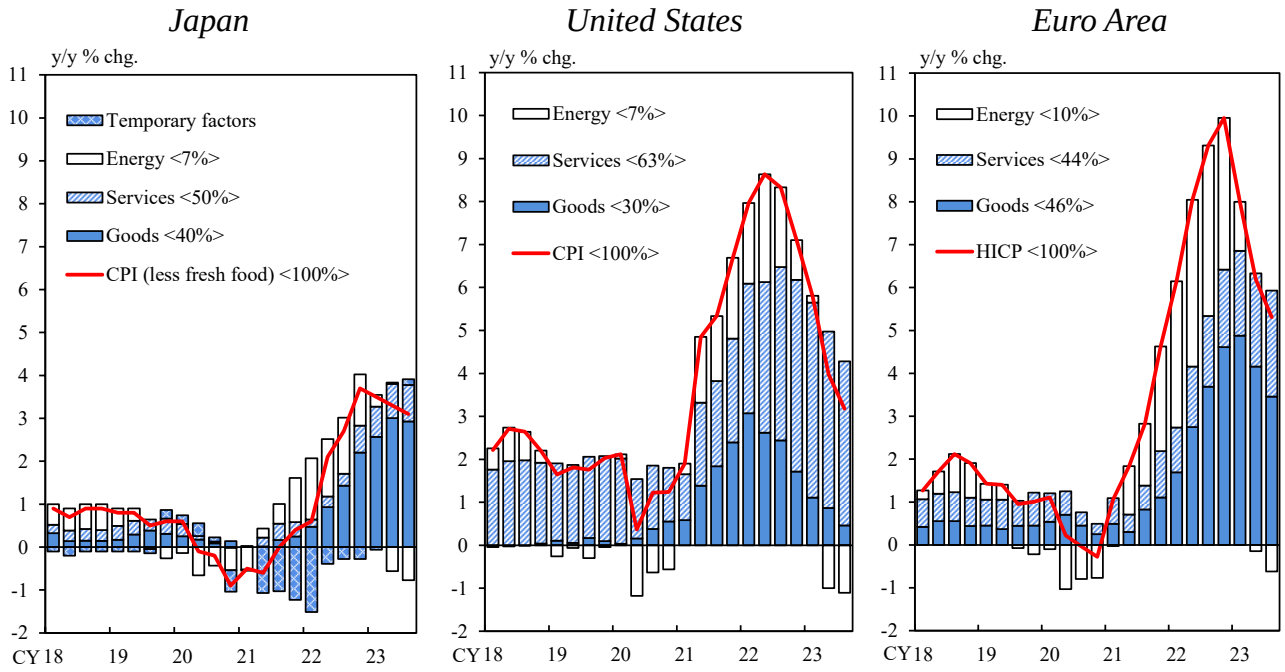
Real GDP



Sources: Cabinet Office; Eurostat; U.S. Bureau of Economic Analysis.

Chart 4

Consumer Prices



Notes: 1. Figures for temporary factors for Japan are Bank staff estimates and consist of the effects of the reduction in mobile phone charges, the consumption tax hike, free education policies, and travel subsidy programs.
2. Figures in angular brackets show the share of each component. Figures for 2023/Q3 are those for July.
Sources: Haver; Ministry of Internal Affairs and Communications.

Chart 5

Forecasts of the Majority of the Policy Board Members (July 2023 Outlook Report)

y/y % chg.

	Real GDP	CPI (all items less fresh food)	(Reference) CPI (all items less fresh food and energy)
Fiscal 2023	+1.2 to +1.5 [+1.3]	+2.4 to +2.7 [+2.5]	+3.1 to +3.3 [+3.2]
Forecasts made in April 2023	+1.1 to +1.5 [+1.4]	+1.7 to +2.0 [+1.8]	+2.5 to +2.7 [+2.5]
Fiscal 2024	+1.0 to +1.3 [+1.2]	+1.8 to +2.2 [+1.9]	+ 1.5 to +2.0 [+1.7]
Forecasts made in April 2023	+1.0 to +1.3 [+1.2]	+1.8 to +2.1 [+2.0]	+1.5 to +1.8 [+1.7]
Fiscal 2025	+1.0 to +1.2 [+1.0]	+1.6 to +2.0 [+1.6]	+1.8 to +2.2 [+1.8]
Forecasts made in April 2023	+1.0 to +1.1 [+1.0]	+1.6 to +1.9 [+1.6]	+1.8 to +2.0 [+1.8]

Notes: 1. Figures in brackets indicate the medians of the Policy Board members' forecasts (point estimates).
2. The forecasts of the majority of the Policy Board members are constructed as follows: each Policy Board member's forecast takes the form of a point estimate -- namely, the figure to which they attach the highest probability of realization. These forecasts are then shown as a range, with the highest figure and the lowest figure excluded. The range does not indicate the forecast errors.
3. Each Policy Board member makes their forecasts taking into account the effects of past policy decisions and with reference to views incorporated in financial markets regarding the future conduct of policy.
Source: Bank of Japan.

Chart 6

Correlation between Wages and Prices

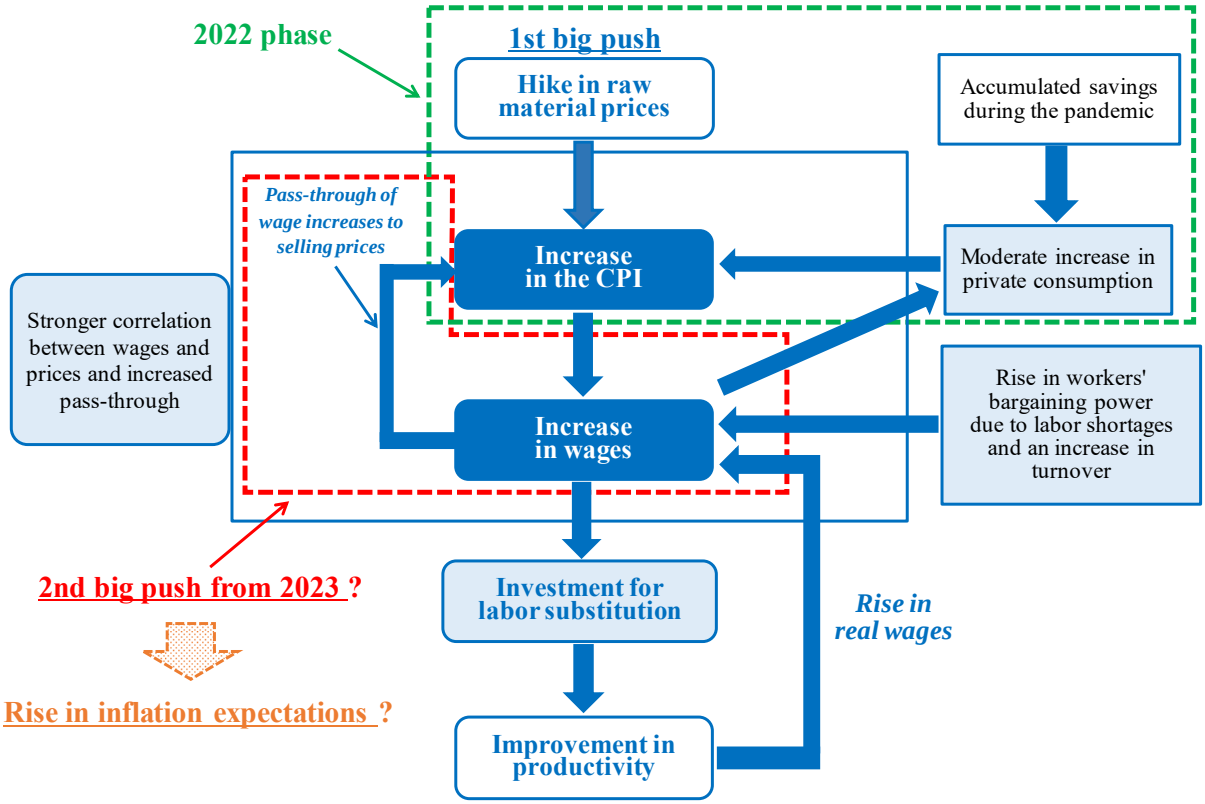
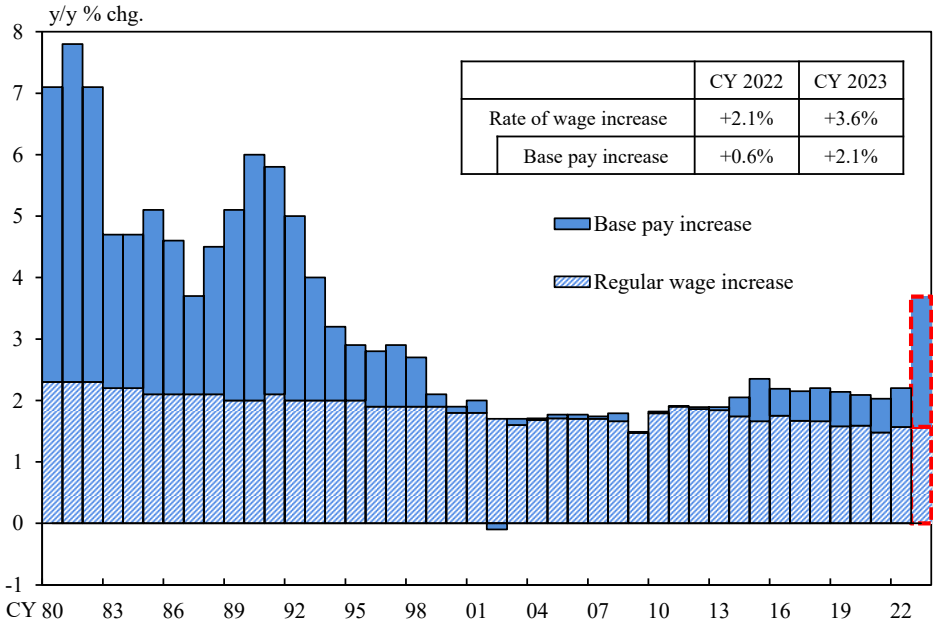


Chart 7

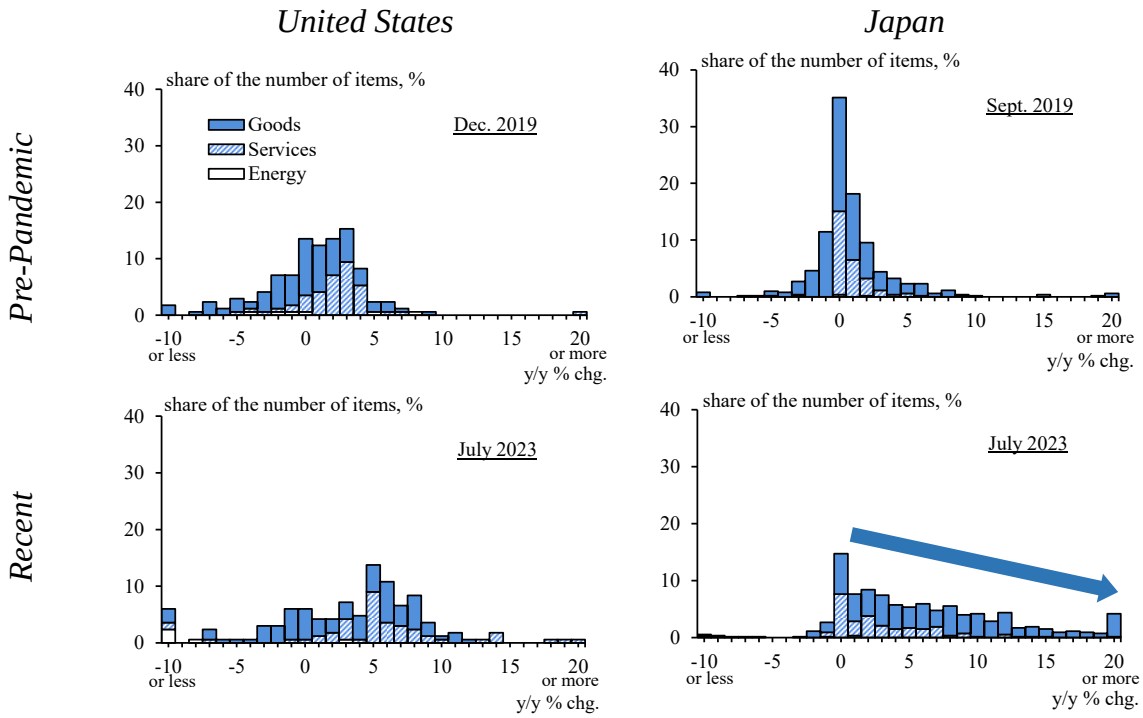
Wage Growth Rate



Note: Figures from 1980 to 2014 are those published by the Central Labour Relations Commission, while those from 2015 to 2023 are figures released by Rengo.
Sources: Central Labour Relations Commission; Japanese Trade Union Confederation (Rengo).

Chart 8

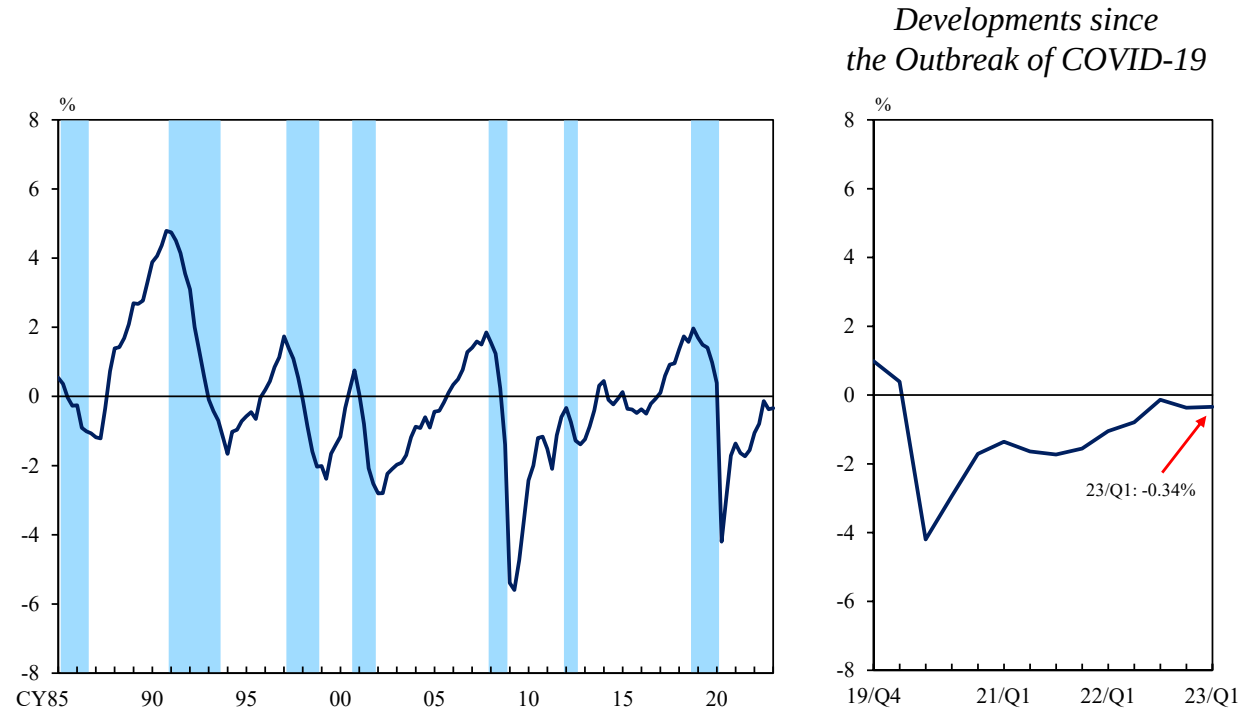
Prices Change Distributions



Note: Figures for the United States are for the CPI for all items, while those for Japan are for the CPI for all items excluding fresh food. The pre-pandemic distribution for Japan is based on data for September 2019, which was before the CPI developments were affected by the consumption tax hike.
Sources: Ministry of Internal Affairs and Communications; U.S. Bureau of Labor Statistics.

Chart 9

Output Gap

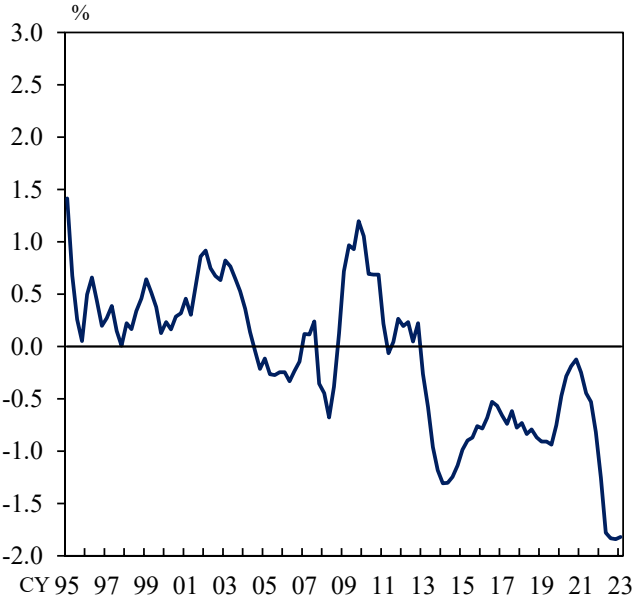


Notes: 1. Figures are Bank staff estimates.
2. Shaded areas denote recession periods.
Source: Bank of Japan.

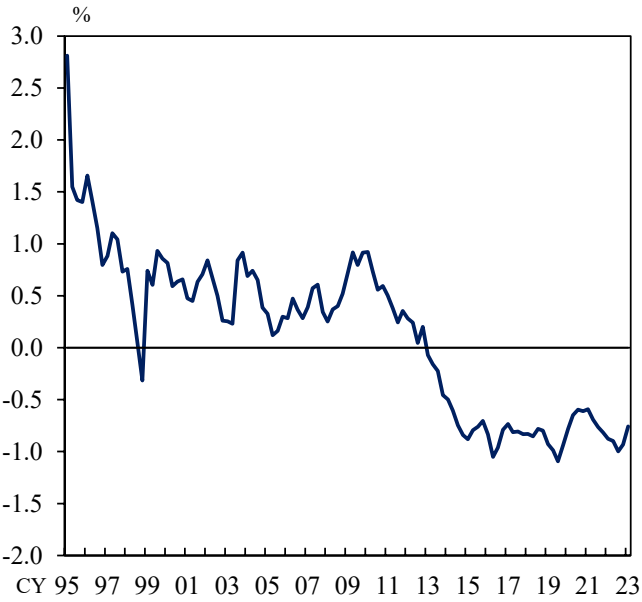
Chart 10

Real Interest Rates

Short-term
(1-year real JGB yield)



Long-term
(10-year real JGB yield)



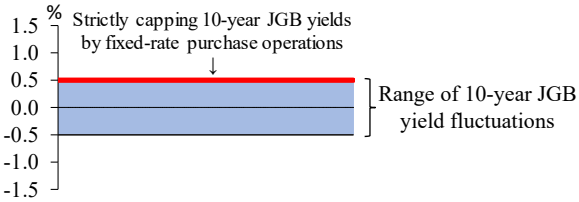
Notes: 1. Real interest rate = Nominal JGB yield – Survey-based inflation expectation
2. Survey-based inflation expectation is the average of the "QUICK Survey," the "Consensus Forecasts," and the inflation swap rate.
Sources: Bloomberg; Consensus Economics Inc., "Consensus Forecasts"; QUICK, "QUICK Monthly Market Survey <Bonds>."

Chart 11

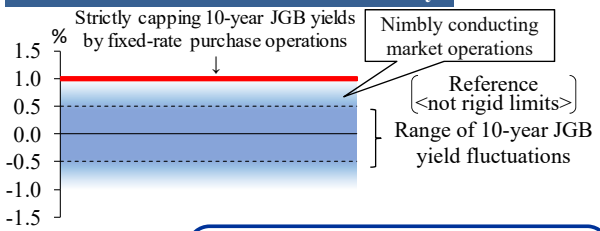
Conducting Yield Curve Control (YCC) with Greater Flexibility

- The Bank judges that sustainable and stable achievement of the price stability target of 2 percent has not yet come in sight, and thus patiently continues with monetary easing.
- With extremely high uncertainties for economic activity and prices, the Bank enhances the sustainability of monetary easing by conducting YCC with greater flexibility.

Previous Conduct of YCC



Conduct of YCC with Greater Flexibility



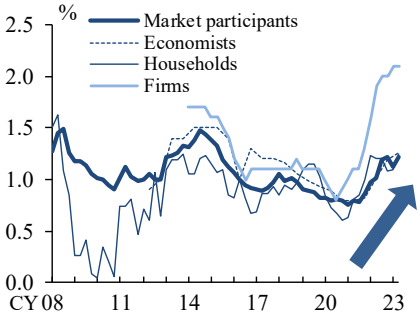
Outlook for Prices

y/y % chg.

	CPI (all items less fresh food)	(Reference) CPI (all items less fresh food and energy)
Fiscal 2023	+2.5	+3.2
Forecasts made in Apr. 2023	+1.8	+2.5
Fiscal 2024	+1.9	+1.7
Forecasts made in Apr. 2023	+2.0	+1.7
Fiscal 2025	+1.6	+1.8
Forecasts made in Apr. 2023	+1.6	+1.8

Note: Figures indicate the medians of the Policy Board members' forecasts (point estimates).

Inflation Expectations



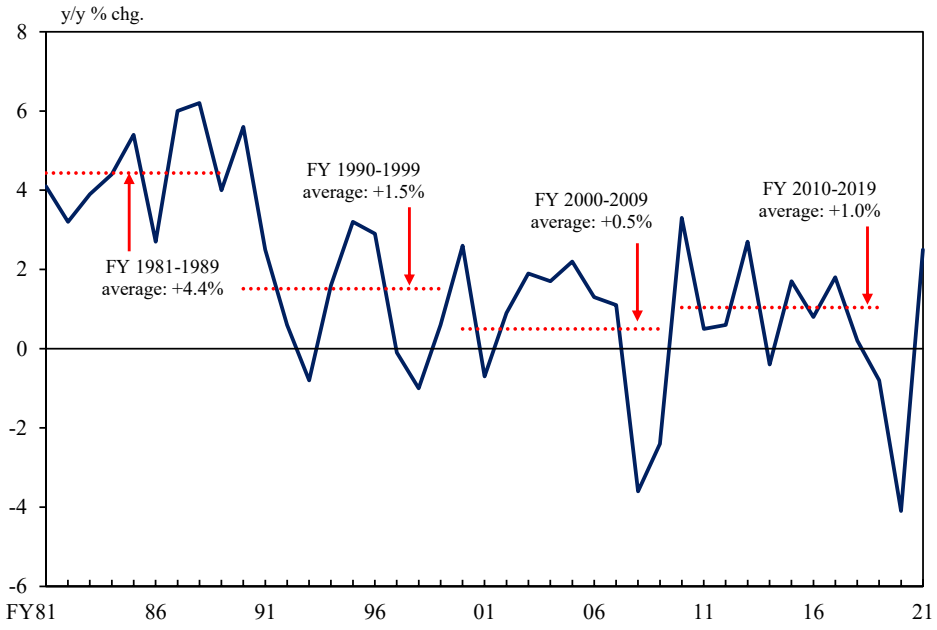
Note: Figures for market participants, economists, households, and firms are from "QUICK Monthly Market Survey," "ESP Forecast," "Opinion Survey on the General Public's Views and Behavior," and "Tankan," respectively.

Enhancing the sustainability of monetary easing by conducting YCC with greater flexibility

- If upside risks to Japan's economic activity and prices materialize
  - Decline in real interest rates
  - Mitigating the effects on the functioning of bond markets, etc.
- If downside risks to Japan's economic activity and prices materialize
  - Decline in long-term interest rates

Chart 12

Long-Term Developments in Real GDP Growth Rate



Note: Figures from fiscal 1981 to 1994 are based on simplified retroactive adjustments.
Source: Cabinet Office.

Chart 13

My View on Firm's Behavior in the Post-Bubble Era

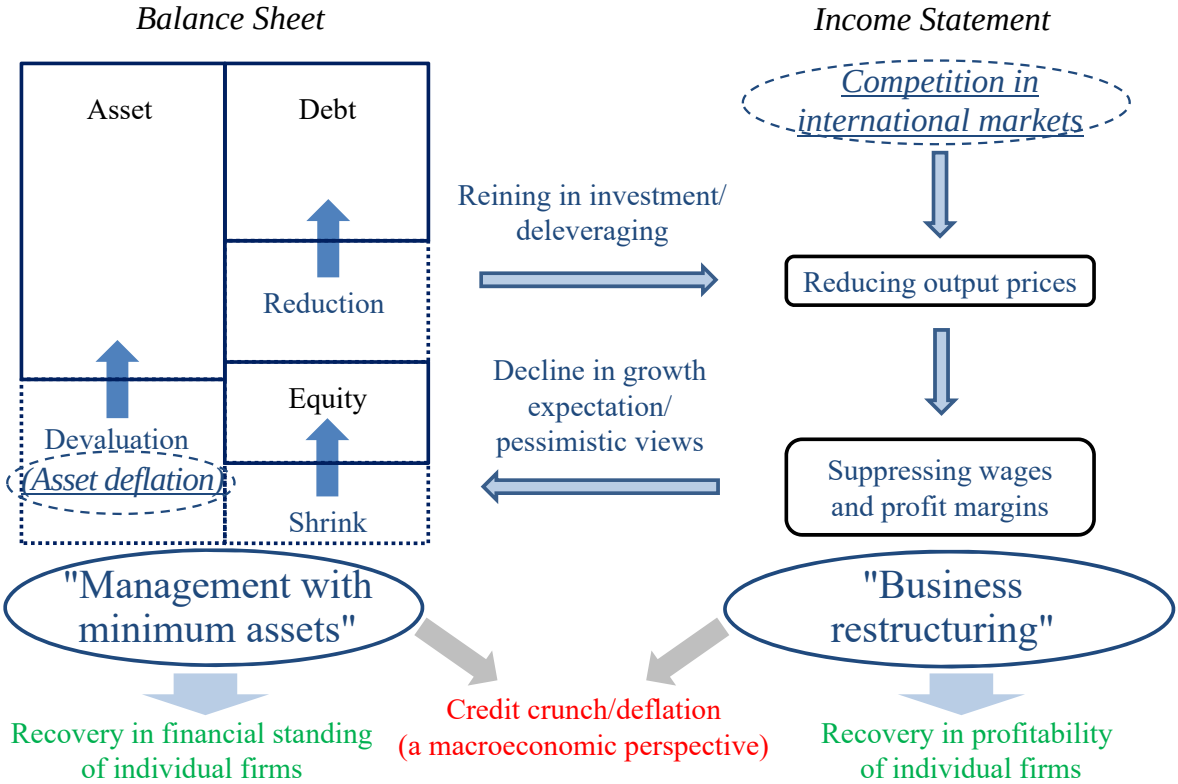
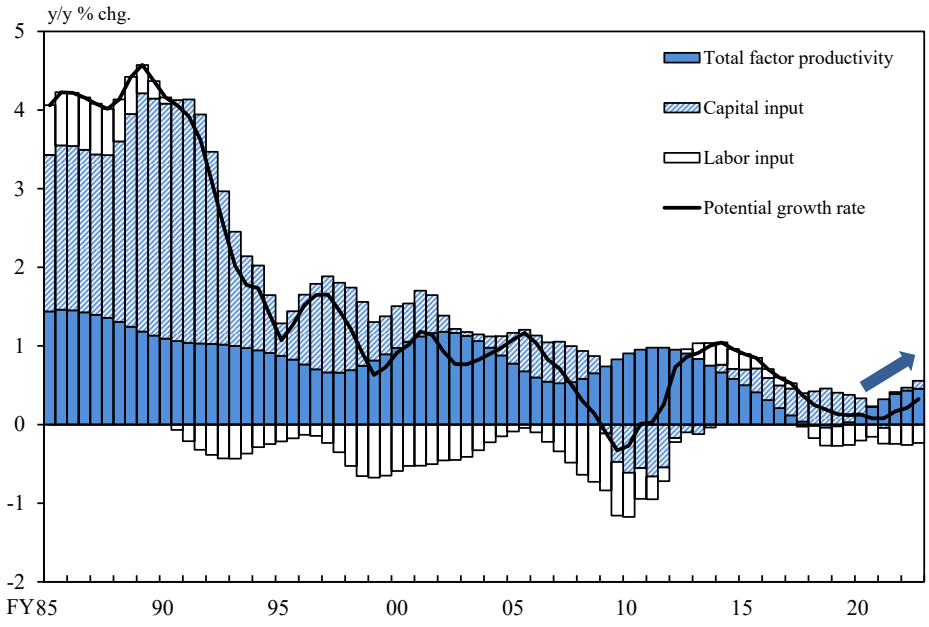


Chart 14

Potential Growth Rate

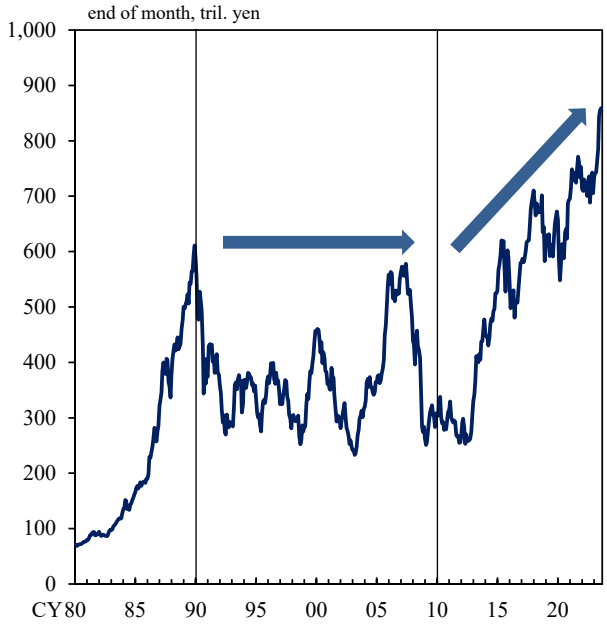


Note: Figures are Bank staff estimates.
Source: Bank of Japan.

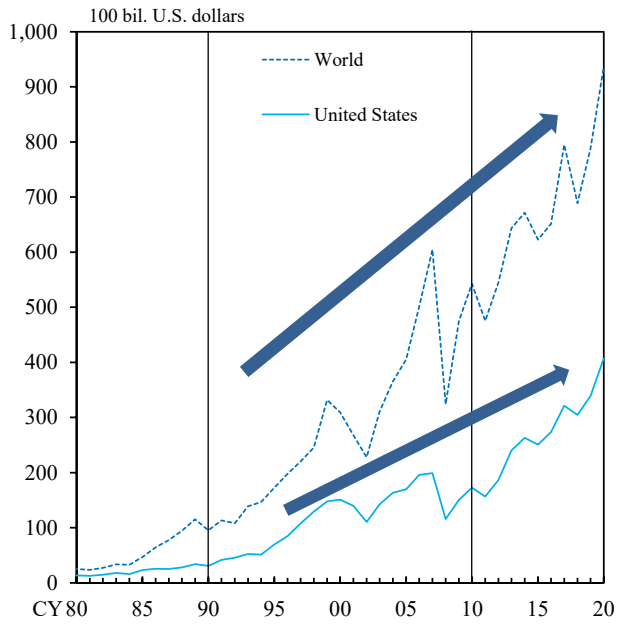
Chart 15

Stock Market Capitalization

Japan (Tokyo Stock Exchange)



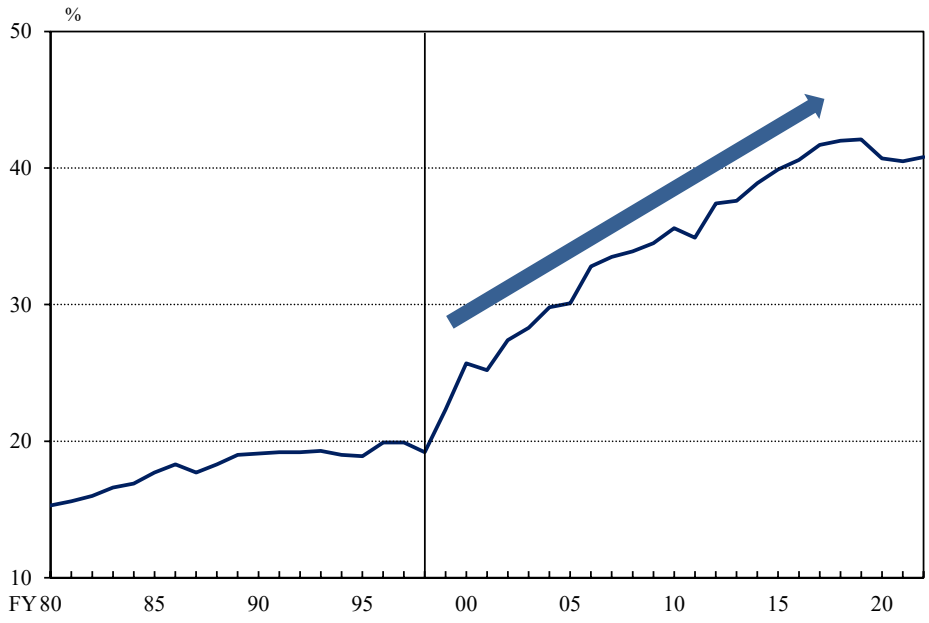
Global



Note: In the right panel, figures are the market capitalization of listed domestic companies (current US$) from the World Development Indicators.
Sources: Japan Exchange Group; World Bank.

Chart 16

Capital Adequacy Ratio of Firms



Note: Based on the *Financial Statements Statistics of Corporations by Industry, Annually*. Excluding "finance and insurance."
Source: Ministry of Finance.

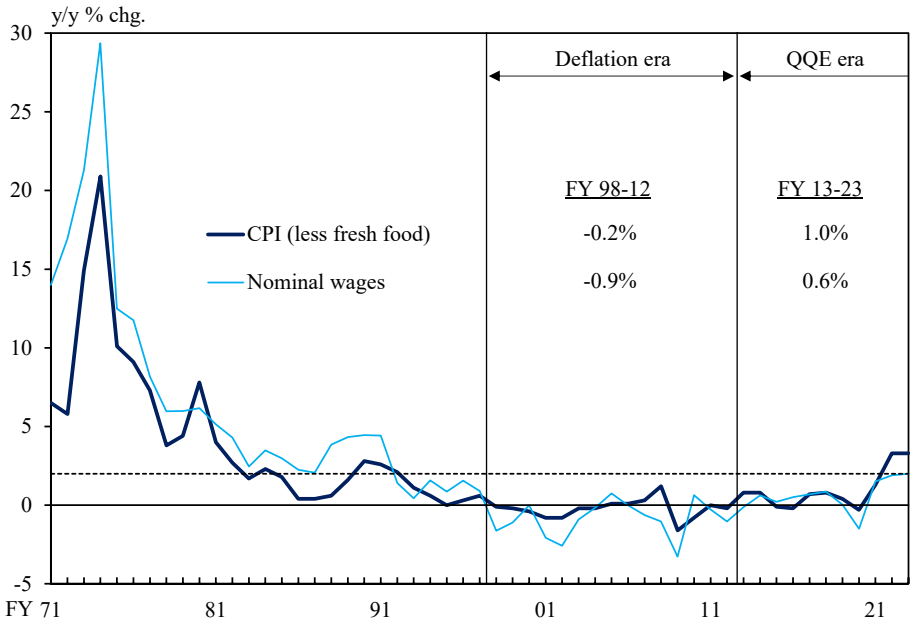
Chart 17

U.S. Dollar/Yen

Source: Bank of Japan.

Chart 18

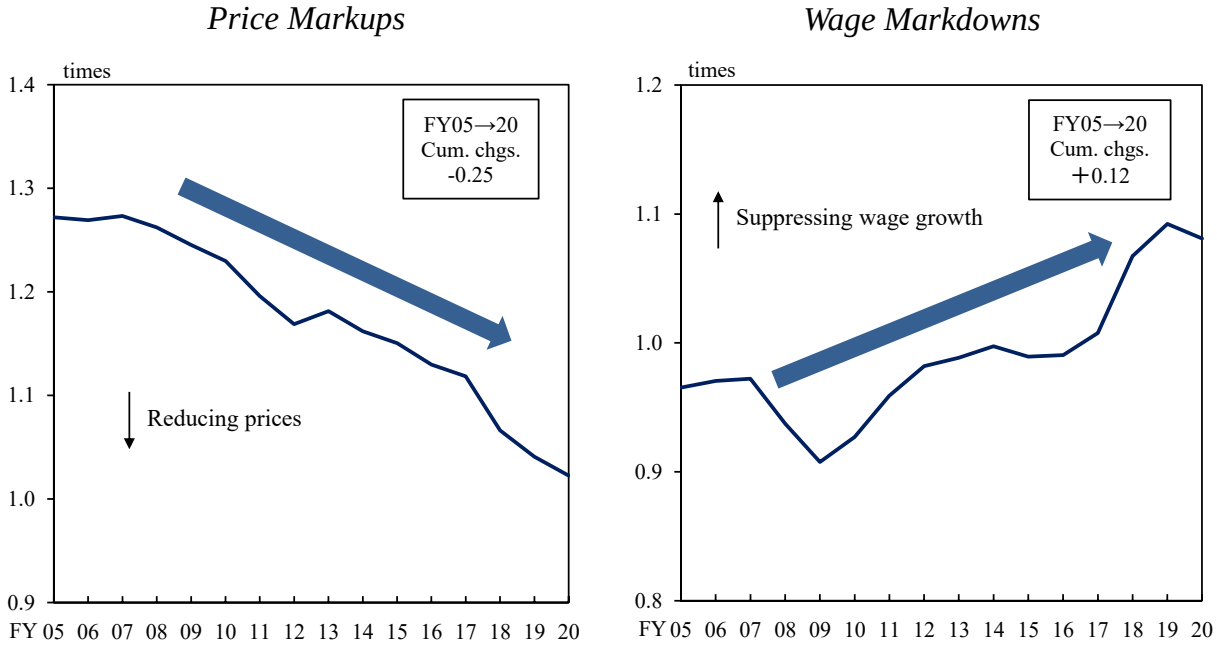
Prices and Wages



Notes: 1. The CPI figures are staff estimates and exclude temporary factors, which consist of the effects of the reduction in mobile phone charges, consumption tax hikes, free education policies, and travel subsidy programs. The figure for FY2023 is the April-July average.
2. Figures for nominal wages are for establishments with 30 or more employees up through fiscal 1990, and with 5 or more employees from fiscal 1991 onward. The figure for FY2023 is the April-June average.
Sources: Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications.

Chart 19

Price Markups and Wage Markdowns

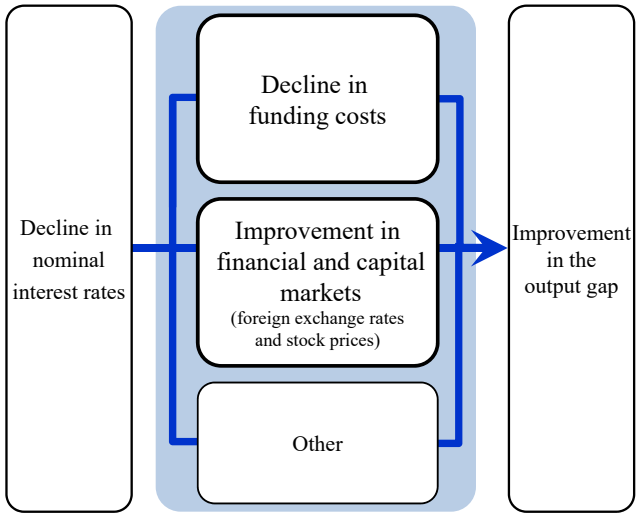


Note: Based on all firm sizes and all industries. See Aoki, K., Hogen, Y., and Takatomi, K., "Price Markups and Wage Setting Behavior of Japanese Firms," Bank of Japan Working Paper Series, no. 23-E-5.
Sources: Cabinet Office; CRD Association; Development Bank of Japan; Ministry of Economy, Trade and Industry; Ministry of Health, Labour and Welfare.

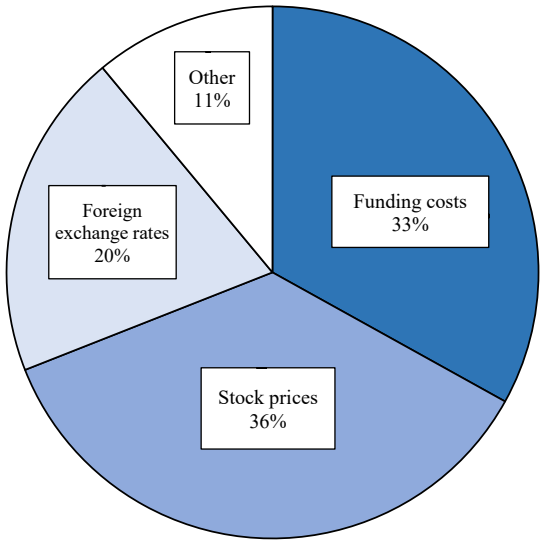
Chart 20

Transmission Channels of Lower Interest Rates

Overview



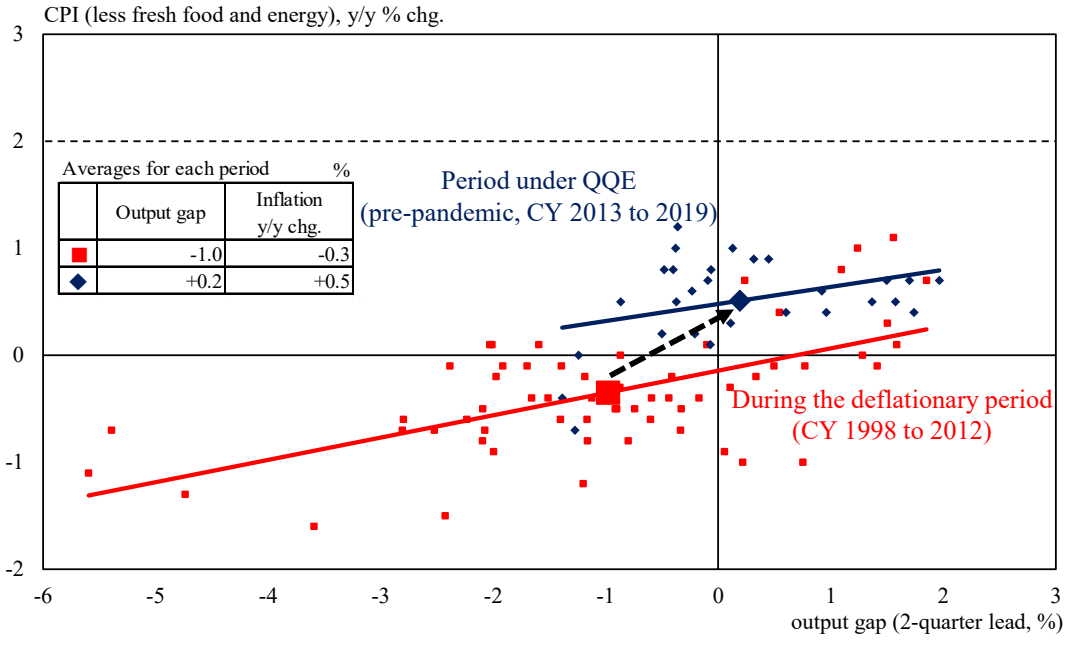
Improvement in the Output Gap (Breakdown by Channel)



Notes: 1. Based on a VAR model with coefficient restrictions using eight variables: output gap, interest rates (3-month), interest rate spreads (2-year minus 3-month, 5-year minus 2-year, 10-year minus 5-year), aggregate funding costs, nominal effective exchange rates of the yen, and stock prices.
2. Aggregate funding costs are the weighted average of bank lending rates and issuance yields for CP and corporate bonds.
3. In the right chart, figures show the 5-year cumulative effects.
Sources: Bloomberg; Bank of Japan, etc.

Chart 21

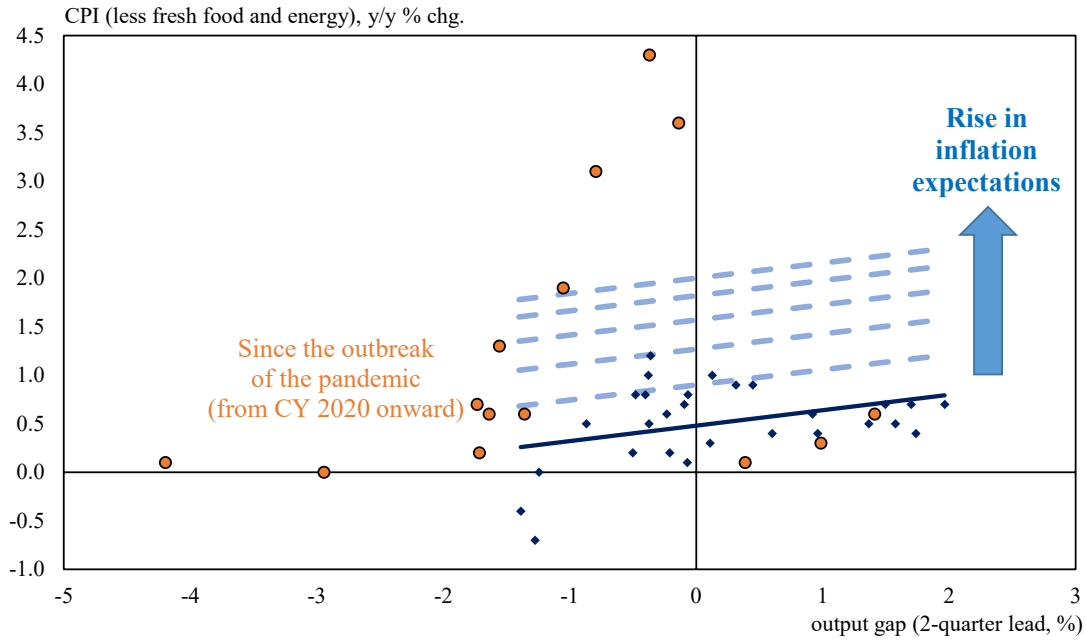
Phillips Curve before and after the Introduction of QQE



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

Chart 22

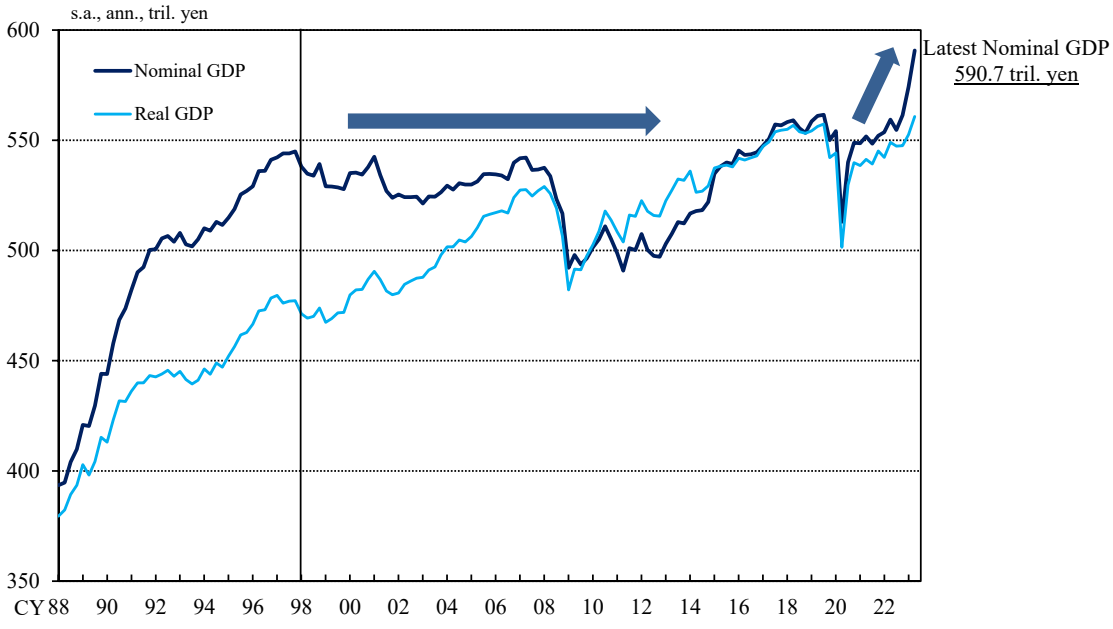
Phillips Curve before and after the Pandemic



Note: Figures for the CPI (less fresh food and energy) exclude temporary factors (see note in Chart 21).
Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

Chart 23

Nominal and Real GDP



Note: Figures before 1995 are based on simplified retroactive adjustments.
Source: Cabinet Office.