August 29, 2018
Bank of Japan

Economic Activity, Prices, and Monetary Policy in Japan

Speech at a Meeting with Business Leaders in Okinawa

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Member of the Policy Board

(English translation based on the Japanese original)

I. Recent Economic and Price Developments

A. Overseas Economies

I would like to begin my speech by talking about overseas economies.

Overseas economies have continued to grow firmly on the whole, although the global business sentiment of manufacturing firms has declined somewhat recently.

As for the U.S. economy, business sentiment has been favorable and private consumption has been on an increasing trend, partly supported by improvements in the employment and income situation, as well as in consumer sentiment. In terms of the outlook, the U.S. economy is expected to continue expanding on the back of a steady improvement in the employment and income situation, supported by expansionary fiscal policy, although moderate policy rate hikes by the Federal Reserve are expected to continue.

As for the European economy, the pace of economic growth decelerated somewhat, due mainly to the appreciation of the euro and weather conditions throughout the January-March quarter of 2018. It decelerated further in the April-June quarter, although production has been increasing as a trend, and the overall economy is expected to continue its recovery.

The Chinese economy has continued to see stable growth on the whole, as evidenced by firm exports and industrial production, although the pace of increase in fixed asset investment has been slowing and the effects of trade friction with the United States have been a matter of concern. As for the outlook, the economy is likely to broadly follow a stable growth path as the authorities conduct fiscal and monetary policy in a timely manner.

Emerging economies other than China and commodity-exporting economies as a whole have been recovering moderately, due mainly to an increase in exports and the effects of economic stimulus measures. Growth rates are likely to increase gradually, due mainly to economic stimulus measures and the spread of the effects of steady growth in advanced economies.

According to the July 2018 *World Economic Outlook* (WEO) *Update* released by the International Monetary Fund (IMF), global growth is projected to be 3.9 percent in 2018, exceeding the result for 2017. The global economy could deviate upward from the baseline scenario depending on developments in fiscal and monetary policies and structural reforms in each country (Chart 1). However, due attention should be paid to the recent gradual heightening of uncertainties that could pose a downside risk to economic activity. Specifically, there is concern that U.S. protectionist trade policy and other countries' retaliatory measures may trigger a decline in world trade volume and have an impact on global financial markets. In addition, close attention should continue to be paid to negotiations on the United Kingdom's exit from the European Union (EU), as well as the political situation in southern Europe, developments in crude oil prices, geopolitical risks, and deceleration in the Chinese economy.

On this point, in emerging economies, while their U.S. dollar-denominated external debt has expanded over the past decade, a number of negative factors have been observed, such as the rise in U.S. interest rates, depreciation of these economies' currencies that would have been used for the repayment of debts, and deceleration of the economy as a result of interest rate hikes aimed at containing inflation and defending the currencies. Although the effect on the global economy seems to be limited at this point, it is important to keep a close eye on developments.

B. Current Situation and Outlook for Japan's Economy

I will now discuss the economic situation in Japan. Japan's economy is expanding moderately, with the output gap maintained in excess demand and a virtuous cycle from income to spending operating (Chart 2). Although the real GDP growth rate for the January-March quarter of 2018 registered a temporary negative figure, due mainly to weather conditions, the preliminary estimate for the April-June quarter showed clear, positive growth mainly on the back of a recovery in private consumption and acceleration in the rate of increase in business fixed investment (Chart 3).

According to the *Regional Economic Report* released by the Bank of Japan in July 2018, out of a total of nine regions across Japan, six regions, including the Kyushu-Okinawa region, reported that their economy had been expanding or expanding moderately (Chart 4). The Kyushu-Okinawa economy in particular has been expanding moderately, with growth gaining a more solid footing, as private consumption has increased. This increase comes on the back of an improvement in the employment and income situation amid high levels of public investment and increasing business fixed investment. In Okinawa Prefecture, inbound tourism consumption and business fixed investment in the private sector, including the construction of new hotels, have been increasing amid the rising trend in the number of domestic and international tourists, despite a temporary fall in the number brought about by typhoons in July. These represent the driving force for the growth of Okinawa's economy.

With Japan's economic expansion, supply-demand conditions in the labor market have tightened steadily. Firms' perception of a labor shortage suggested by the diffusion indexes (DIs) for employment conditions in the June 2018 *Tankan* (Short-Term Economic Survey of Enterprises in Japan) has heightened in a wide range of industries, and the unemployment rate has declined to about 2.5 percent. The overall active job openings-to-applicants ratio has been at its highest level since 1974, while the ratio for full-time workers specifically was the highest recorded since that survey began, in November 2004 (Chart 5).

Against this backdrop, labor-saving investment has increased in a wide range of industries with a view to, for example, using artificial intelligence (AI), robotic process automation (RPA), and other means. As the use of AI and RPA increases, the displacement effect caused by the labor positions of humans being taken over by robots and machines will be an issue of concern. However, I believe the use of AI and RPA could contribute to further overall economic growth, through cost reductions brought about by automation, as well as through the creation of new employment in the production of new goods and services resulting from technological innovation. As Japan has been tackling the challenge of a declining birth rate and an aging population, the contribution of AI and RPA to further economic growth could be a key to solving this challenge. Indeed, there is research that analyzes both positive and negative effects of the use of AI and suggests challenges that the society should work on.[1]

[1] Acemoglu, Daron, and Pascual Restrepo. "Artificial Intelligence, Automation and Work." NBER Working Paper, no. 24196, January 2018.

With regard to the outlook, Japan's economy is likely to continue its moderate expansion.

Through fiscal 2018, it is likely to continue growing at a pace above its potential, mainly against the background of highly accommodative financial conditions and the underpinnings through government spending, with overseas economies continuing to grow firmly. Business fixed investment is likely to continue increasing, supported by firms' heightened growth expectations and increases in Olympic Games-related investment, as well as in labor-saving investment to address labor shortages. Private consumption is also expected to follow a moderate increasing trend as the employment and income situation continues to improve. Moreover, exports are expected to continue their moderate increasing trend on the back of the growth in overseas economies.

Japan's economy is expected to maintain its expanding trend from fiscal 2019 through fiscal 2020, supported in part by the increase in exports. This is despite a likely deceleration in business fixed investment, mainly reflecting cyclical adjustments in capital stock and the peaking out of Olympic Games-related demand, and a likely temporary decline in private consumption after the scheduled consumption tax hike in October 2019.

According to the Bank's July 2018 *Outlook for Economic Activity and Prices* (hereafter the Outlook Report), the medians of the Policy Board members' forecasts of the real GDP growth rate are 1.5 percent for fiscal 2018, and 0.8 percent for both fiscal 2019 and fiscal 2020 (Chart 6). The consumption tax hike is likely to affect Japan's economy through the following two channels: (1) the front-loaded increase in demand prior to the consumption tax hike and the subsequent decline after the hike, and (2) the decline in real income. However, there is a strong possibility that the effect of the consumption tax hike on the economy will be smaller than that in fiscal 2014, when the last consumption tax hike took place. This is mainly because the government is proceeding with efforts to deliberate various measures in order to reduce the burden of the tax hike on households.

C. Recent Price Developments and Concept of Price Stability Target

As for prices, the year-on-year rate of change in the consumer price index (CPI) for all items less fresh food (core CPI) has been picking up somewhat recently, partly supported by a rise in energy prices, although it did decelerate on one occasion after having increased to 1 percent in February 2018 (Chart 7).

Prices reflect the state of the economy. A stable increase in prices within a certain range -- not too high, not too low -- can be a driving force for the economy. To give an example, in an environment where prices rise moderately -- through an increase in the value-added of products and services -- corporate profits are likely to increase. In this case, the wages of people working in firms also would rise, as would household income. With increased household income, people are likely to spend more on products and services, making corporate profits increase even more. I consider it important to ensure that this virtuous cycle can operate.

What, then, is the most favorable state for the economy? The Bank sets what it calls the "price stability target" at 2 percent. There are three reasons for setting the target at 2 percent.

First, the CPI has a statistical tendency, or upward bias, toward indicating a slightly higher inflation rate than the actual one, which means that an appropriate figure for price stability in terms of the CPI is a slightly positive figure.

Second, there is the asymmetry of policy measures. Central banks usually respond to inflation and deflation by raising or lowering policy interest rates. They can more or less raise interest rates to as high a level as they feel necessary; there is basically no ceiling to interest rates. On the other hand, there is a limit to the extent to which interest rates can be lowered. It is therefore prudent to have a buffer to secure a certain "margin" of positive inflation and positive interest rates in advance, so that central banks can take appropriate action through monetary easing if the economy heads toward deflation.

Third, most major advanced economies define price stability as 2 percent, and this is the target shared as a global standard.

In short, the appropriate state for the economy is similar to that of the human body; it is important to maintain the target as the "basal temperature" of the economy, and this is the consensus of the central banks in major advanced economies.

D. Key Factors for Prices and Wages

Now, I would like to explain the developments for prices and wages, taking into account those in the output gap and medium- to long-term inflation expectations.

The first point is developments in the output gap. The output gap has widened within positive territory on the back of the steady tightening of labor market conditions and a rise in capital utilization rates. In theory, an expansion of the output gap should exert upward pressure on prices, which would then increase core CPI, albeit with some time lag. However, in reality, prices have not been increasing as they should. Part of the reason that prices have remained sluggish is households' persistent concern regarding the future amid the declining birth rate and aging population, in addition to the fact that wage increases have been taking time to fully take hold, as I will touch upon later. Frankly speaking, consumers are still keeping their purse strings tight. In other words, households' tolerance of price rises has not been increasing. Indeed, some firms, mainly in the services sector, such as transportation and dining out, have been raising prices since autumn 2017, reflecting increases in the cost of labor and materials. Price rises also have been seen since the beginning of 2018 in goods including beer for consumption in licensed premises and some food items. However, there have not been many cases so far where such efforts have led to an improvement in corporate profits, and many firms appear to be having difficulty with accurately assessing consumer sentiment. These issues seem to be related to firms' cautious price-setting stance. Improving the income situation by raising wages would be the most direct approach to reducing households' concerns regarding the future. However, it is also important to redesign safety nets with which the public can feel more secure, through frameworks such as pensions and other components of the social security system.

Regarding wages, the increase in nominal wages has been sluggish relative to the heightening seriousness of the labor shortage. This may be because regular employees tend to give priority to stability of employment over wage increases, and firms are maintaining their cautious wage-setting stance in consideration of medium- to long-term risks. Amid the intensifying labor shortage, there also has been an increase in the labor force participation of women and seniors, whose wage elasticity of the labor supply is high.

Real wages, which exclude the effects of price developments, also have been sluggish under these circumstances. If prices rise without an increase in wages, a burden might be placed on the national economy. Therefore, the Bank's goal is not necessarily solely to raise prices, but also to continue to closely monitor developments in wages if it is to achieve the price stability target and thereby contribute to the sound development of the economy.

The next point concerns medium- to long-term inflation expectations, which are more or less unchanged recently (Chart 8). Theoretically, inflation expectations are affected by (1) the backward-looking, or adaptive, component that reflects past rates, or the observed inflation rate, and (2) the forward-looking component, which reflects the progress in the Bank's pursuit of monetary easing through its strong commitment to achieving the price stability target. While promoting a rise in the observed inflation rate, given that inflation expectations in Japan tend to be more greatly influenced by the observed inflation rate, it is vital that the Bank maintain its strong commitment to achieving the price stability target. If firms' and households' inflation expectations subsequently rise, albeit gradually, this will feed through into the observed inflation rate, which in turn will bring about a gradual increase in the inflation rate.

Due to a combination of the several factors mentioned so far, prices have continued to show relatively weak developments compared to the improvement in the economic and employment conditions. However, it is also true that the year-on-year rate of change in the core CPI was either more or less flat or increasing for 19 consecutive months up to February 2018.

It is better not to be too optimistic about the outlook, but many of the factors that have been delaying inflation are likely to be resolved gradually as the economy continues on an expanding trend. Firms' moves to raise wages have gradually begun to spread, as suggested by the results of the annual spring labor-management wage negotiations in 2018. Although the effects of technological progress, for example, may strengthen, the increase in wages is expected to become more evident, with tight labor market conditions continuing. Upward pressure on sales prices is thereby likely to increase, as is happening in the services sector, such as dining out, and an increase in distribution costs resulting from labor shortage may ease competition between retailers and online retailers.

Households' tolerance of price rises is also expected to increase as the effects of rises in labor productivity and non-regular employees' wage levels spread to regular employees' wages.

I mentioned earlier that medium- to long-term inflation expectations are more or less unchanged, but results of the *Opinion Survey on the General Public's Views and Behavior* released by the Bank show that the proportion of respondents who answered that prices would go up one year from now has been on an increasing trend -- indicating a change in people's perception of prices (Chart 9).

These points suggest that, while not yet sufficiently firm, the momentum toward achieving the price stability target is itself being maintained, and the year-on-year rate of change in the core CPI is likely to increase gradually toward 2 percent, although it will take more time than expected. Specifically, the medians of the Policy Board members' forecasts for the year-on-year rate of change in the core CPI presented in the July 2018 Outlook Report are 1.1 percent for fiscal 2018, and, excluding the direct effects of the scheduled consumption tax hike, 1.5 percent and 1.6 percent for fiscal 2019 and fiscal 2020, respectively (Chart 6).

II. Conduct of Monetary Policy

A. Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control

Let me now turn to the Bank's monetary policy. Following the introduction of QQE in April 2013, the Bank has been pursuing QQE with Yield Curve Control since September 2016, through which it has strengthened the framework of QQE.

By controlling short- and long-term interest rates -- the so-called yield curve control -- the Bank facilitates the formation of the yield curve, or term structure of interest rates, most appropriate for achieving the price stability target of 2 percent. In theory, economic activity is stimulated by maintaining observed real interest rates, which are obtained by subtracting inflation expectations from the nominal interest rate, at lower levels than the natural rate of interest, which is the real interest rate at which the economy neither accelerates nor decelerates; as the output gap improves, upward pressure on prices is generated. This is the mechanism that the Bank assumes will operate.

There is still some way to go to achieving the price stability target, due to the various factors I mentioned earlier. Let me note, however, that Japan's economy has continued expanding, as the effects of monetary easing have thoroughly demonstrated. In this situation, I believe that the path to a rise in wages and prices is starting to appear. For these developments to take hold, I consider it appropriate to resolutely continue with powerful monetary easing under QQE with Yield Curve Control and sustain the situation where the output gap is in positive territory for as long as possible, as this should lead to achieving the price stability target of 2 percent at the earliest possible time.

B. Challenges to Address in Continuing to Pursue Monetary Easing

There are two important challenges to address in resolutely continuing with the current powerful monetary easing. The first is to maintain public confidence in the Bank's monetary policy, even under prolonged monetary easing, by further clarifying its future policy stance that aims at achieving the price stability target of 2 percent. At the latest Monetary Policy Meeting (MPM) held on July 30 and 31, 2018, the Bank decided to introduce forward guidance for policy rates. Specifically, it has strongly committed itself to the intention of "maintaining the current extremely low levels of short- and long-term interest rates for an extended period of time, taking into account uncertainties regarding economic activity and prices including the effects of the consumption tax hike scheduled to take place in October 2019." I believe this will help strengthen the Bank's commitment to achieving the price stability target.

Second, in a situation where inflation is taking time to rise and the current monetary easing thus needs to be continued, the possible impact of monetary policy on the Japanese government bond (JGB) market and financial institutions must be monitored even more closely. Even the most effective of medicines comes with side effects, and in this sense, a candid assessment of how and in what areas monetary policy is exerting its effects becomes crucial.

(1) Impact of Monetary Policy on JGB and Other Markets

First, Japan's JGB market has indeed regained some stability in response to the Bank's monetary policy decision released on July 31. Nevertheless, some developments have given rise to concerns that market functioning has deteriorated. Specifically, with the decline in the amount of JGB transactions, the number of days when inter-dealer transactions of newly-issued 10-year bonds were not settled has been growing at an unprecedented pace since the beginning of 2018. Moreover, while long-term interest rates are often used as a barometer for economic activity, there have been instances where Japanese long-term interest rates have merely followed the rise in overseas long-term interest rates, including those of the United States. Given these developments, some market participants have voiced concern that the functioning of financial markets may be declining -- in terms of a "fair price formation mechanism" for buyers and sellers, and of "signaling effects" as an economic barometer. Speaking from experience as someone who has worked in the market for a long time, interest rates essentially have been determined by the market. Thus, there is no change in the Bank's stance that, even under the framework of yield curve control, it is through the impact on markets that the Bank will encourage interest rates to approach the target level of yields. However, given that transactions have been carried out within a specific narrow price range over a prolonged period in line with the Bank's target level of 10-year JGB yields, the number of market participants, including a wide range of investors, arbitragers, and speculators, has become limited, and restrictions have been placed on the incentives for transactions. I believe this is one of the factors behind recent developments in the JGB market. At the latest MPM, upon maintaining the target level of 10-year JGB yields at around 0 percent, the Bank made it clear that, under the target, long-term yields "may move upward and downward to some extent mainly depending on developments in economic activity and prices." Movement among long-term yields may be assumed to be about double the range of around plus or minus 0.1 percent since the introduction of yield curve control. This range seems acceptable considering recent developments in 10-year government bond yields in major economies (Chart 10).

Some may argue that the effects of monetary easing could be weakened by even the slightest rise in interest rate levels. At present, however, new loans to individuals and corporations extended by major financial institutions are mostly based on or linked to short-term interest rates, and regarding corporate bond issuance -- a medium- and long-term funding means -- the amount outstanding of domestic straight bonds, including those issued by banks and insurance companies, has been about 60 trillion yen. Therefore, even if long-term yields moved within a wider range and 10-year JGB yields rose somewhat in response to the Bank's recently implemented policy measure, the effect on financial institutions' lending and the corporate bond market is likely to be limited. In fact, this rise is expected to enhance the sustainability of the Bank's monetary easing policy (Chart 11). Let me add that the Bank will purchase JGBs promptly and appropriately in the event of a rapid increase in the yields, as it does not intend the level of yields to rise as a result of its recently implemented measure.

Moreover, the Bank has been purchasing exchange-traded funds (ETFs) and Japan real estate investment trusts (J-REITs) so that their amounts outstanding will increase at annual paces of about 6 trillion yen and about 90 billion yen, respectively. The Bank has worked to enhance the flexibility and sustainability of the current monetary policy framework, stating that it "may increase or decrease the amount of purchases depending on market conditions" with a view to lowering risk premia of asset prices in an appropriate manner (Chart 11).

(2) Impact of Monetary Policy on Financial Institutions

It is important to monitor closely the possible effects of continued low interest rates not only on the JGB and other markets, but also on financial institutions. The net income of some financial institutions has been supported by the realization of gains from the sales of bonds and assets such as stock investment trusts, as well as the reversal of allowance for doubtful accounts. However, financial results for fiscal 2017 indicate that, for all types of financial institutions, net interest income has decreased as domestic lending margins have narrowed, and unrealized gains/losses on holdings of bonds and other debt securities have deteriorated in response to a rise in U.S. long-term interest rates.

Following the lead of major banks, financial institutions have proceeded with efforts to improve their business efficiency through the introduction of various labor-saving technologies, including AI, suggesting that there is still room to increase profitability by cutting costs. Nevertheless, the benefits of these efforts may take time to materialize. It goes without saying that monetary policy is not conducted solely for the sake of financial institutions, but it also must be acknowledged that financial institutions play a key role in passing on the effects of monetary policy to the economy. Therefore, careful attention should continue to be paid to changes in the business conditions of financial institutions, including regional institutions, and how this affects the financial system and the financial intermediation function.

C. Future Conduct of Monetary Policy

Let me now discuss some salient points regarding the future conduct of monetary policy based on the objectives and effects of such policy and the impact on the JGB market and financial institutions that I have outlined so far. Prudence is required when conducting monetary policy; decisions must be made after weighing the medium- to long-term positive effects against the unintended side effects. When policy side effects accumulate over an extended period, the risk is that it may prove difficult or even too late to deal with these unintended consequences once they materialize. That is to say, we must focus not only on the time frame in which monetary policy produces its positive effects, but also on the time frame in which the side effects build up. Conducting monetary policy calls for a multi-faceted approach that takes both these aspects into consideration. At least for now, I believe that financial institutions in Japan as a whole have strong resilience against stress in terms of both capital and liquidity, and stability in the financial system has been maintained. However, in facilitating the formation of an appropriate yield curve, the Bank should take particular account of developments in economic activity and prices as well as financial conditions, as was indicated when QQE with Yield Curve Control was introduced in September 2016.

As the Bank resolutely continues with the current monetary easing policy, it will conduct monetary policy in an appropriate manner so that the momentum toward achieving the price stability target will be maintained, while examining all relevant risks.

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Chart 1

Global Economy

IMF Projections as of July 2018

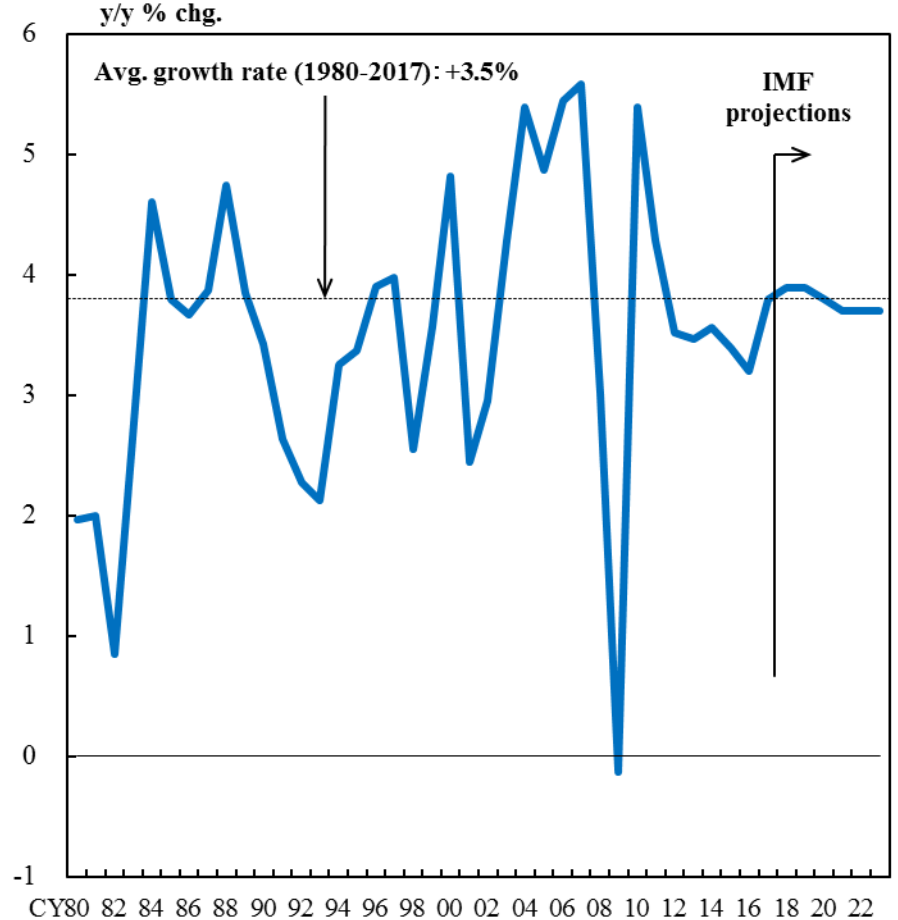
real GDP growth rate, y/y % chg.

CY	2016	2017	2018 projection	2019 projection
World	3.2	3.7	3.9 (0.0)	3.9 (0.0)
Advanced economies	1.7	2.4	2.4 (-0.1)	2.2 (0.0)
United States	1.5	2.3	2.9 (0.0)	2.7 (0.0)
Euro area	1.8	2.4	2.2 (-0.2)	1.9 (-0.1)
United Kingdom	1.8	1.7	1.4 (-0.2)	1.5 (0.0)
Japan	1.0	1.7	1.0 (-0.2)	0.9 (0.0)
Emerging market and developing economies	4.4	4.7	4.9 (0.0)	5.1 (0.0)
Emerging and developing Asia	6.5	6.5	6.5 (0.0)	6.5 (-0.1)
China	6.7	6.9	6.6 (0.0)	6.4 (0.0)
ASEAN	4.9	5.3	5.3 (0.0)	5.3 (-0.1)
Russia	-0.2	1.5	1.7 (0.0)	1.5 (0.0)
Latin America and the Caribbean	-0.6	1.3	1.6 (-0.4)	2.6 (-0.2)

Source: *World Economic Outlook* (WEO), International Monetary Fund (IMF).

Note: Figures in parentheses are the difference from the April 2018 projections.

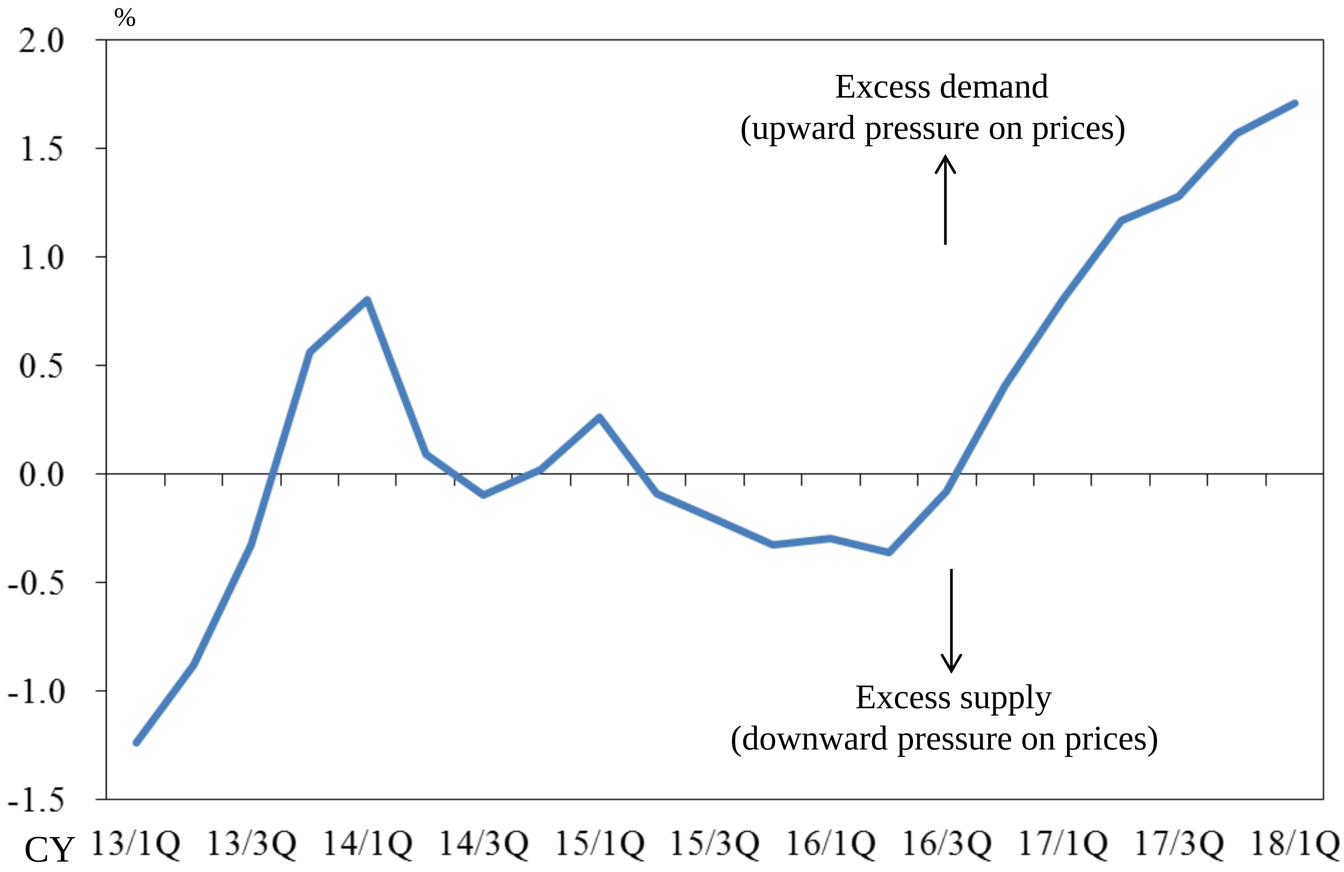
Real GDP Growth Rate of the World Economy



Source: IMF.

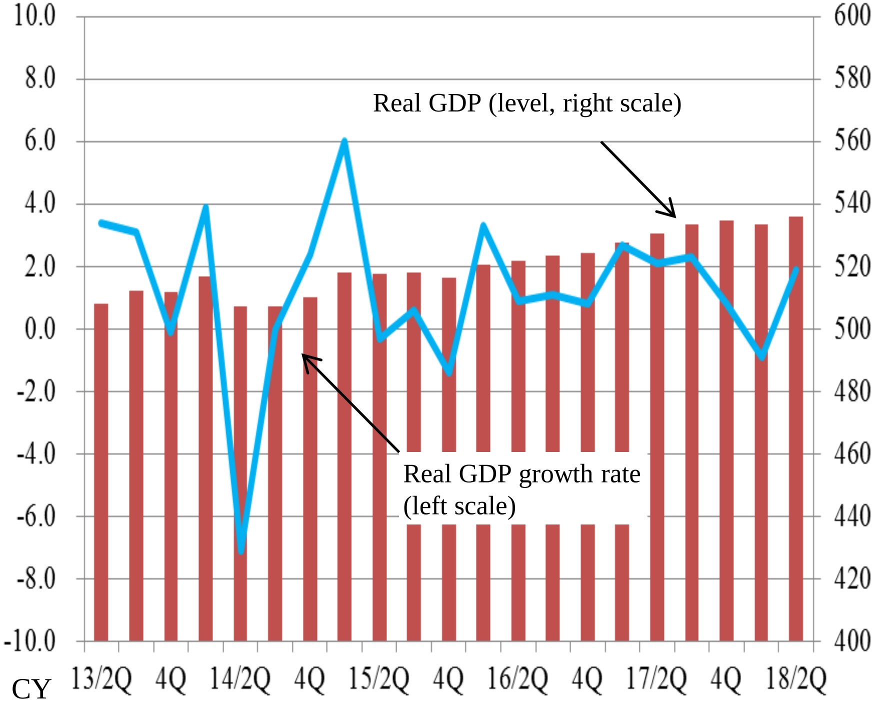
Chart 2

Output Gap



Source: Bank of Japan.
Note: Based on staff estimations.

Japan's Economy: Real GDP



Source: Cabinet Office.

s.a., q/q % chg.

	2017			2018	
	2Q	3Q	4Q	1Q	2Q
Real GDP	0.5	0.6	0.2	-0.2	0.5
[ann., q/q]	[2.1]	[2.3]	[0.8]	[-0.9]	[1.9]
Private Consumption	0.8	-0.7	0.3	-0.2	0.7
Private Non-Resi. Investment	0.5	1.2	0.8	0.5	1.3
Private Residential Investment	1.3	-1.3	-3.0	-2.3	-2.7
Public Demand	1.4	-0.5	-0.1	-0.1	0.2
Exports of Goods & Services	0.2	2.1	2.1	0.6	0.2

Source: Cabinet Office.

Chart 4

Regional Economic Assessments

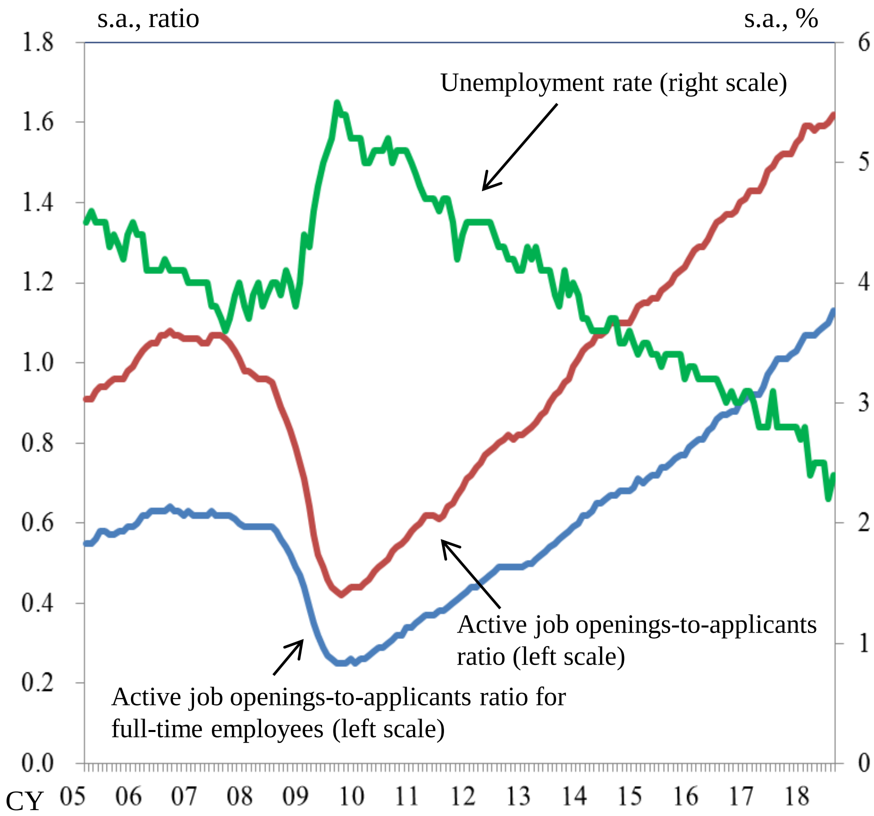
Comparison of Previous and Current Assessments by Region

Region	Assessment in April 2018	Changes from the previous assessment	Assessment in July 2018
Hokkaido	The economy has been recovering moderately.	→	The economy has been recovering moderately.
Tohoku	The economy has continued to recover moderately.	→	The economy has continued to recover moderately.
Hokuriku	The economy has been expanding.	→	The economy has been expanding.
Kanto-Koshinetsu	The economy has been expanding moderately.	→	The economy has been expanding moderately.
Tokai	The economy has been expanding.	→	The economy has been expanding.
Kinki	The economy has been expanding moderately at a steady pace.	→	The economy has been expanding moderately, although effects of the earthquake have been observed in some industries.
Chugoku	The economy has been expanding moderately.	→	The economy has been expanding moderately.
Shikoku	The economy has been recovering.	→	The economy has been recovering.
Kyushu-Okinawa	The economy has been expanding moderately, with its growth gaining a more solid footing.	→	The economy has been expanding moderately, with its growth gaining a more solid footing.

Source: *Regional Economic Report*, Bank of Japan.

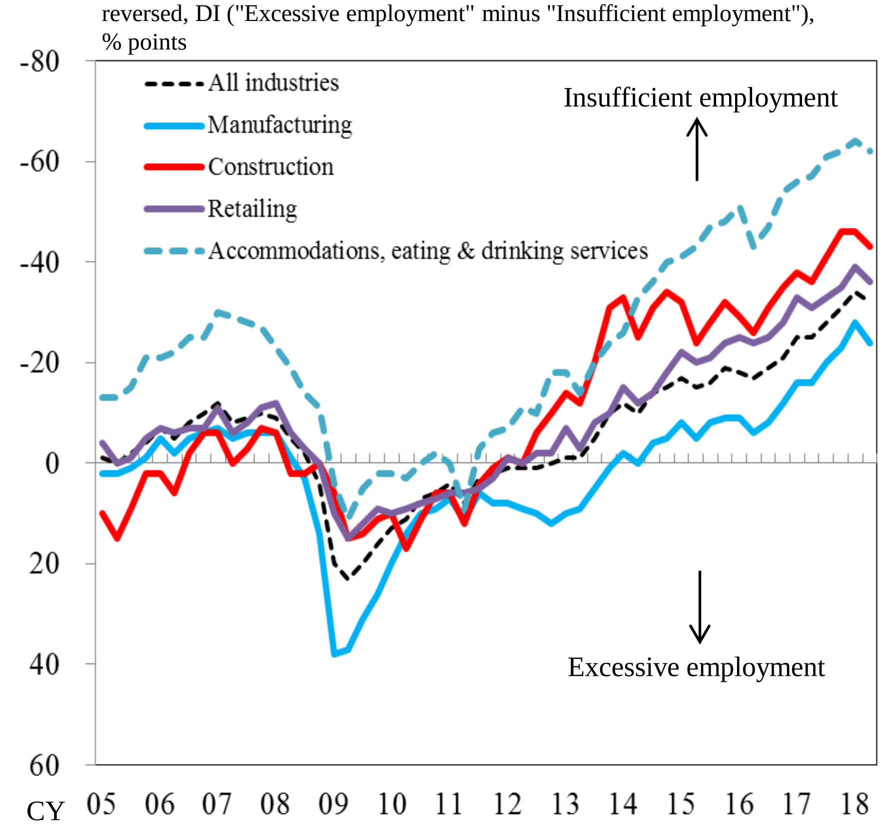
Labor Market Conditions

Unemployment Rate and Active Job Openings-to-Applicants Ratio



Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare.

Diffusion Index of Employment Conditions



Source: *Tankan*, Bank of Japan.

Forecasts of the Majority of Policy Board Members

Outlook for Economic Activity and Prices (July 2018)

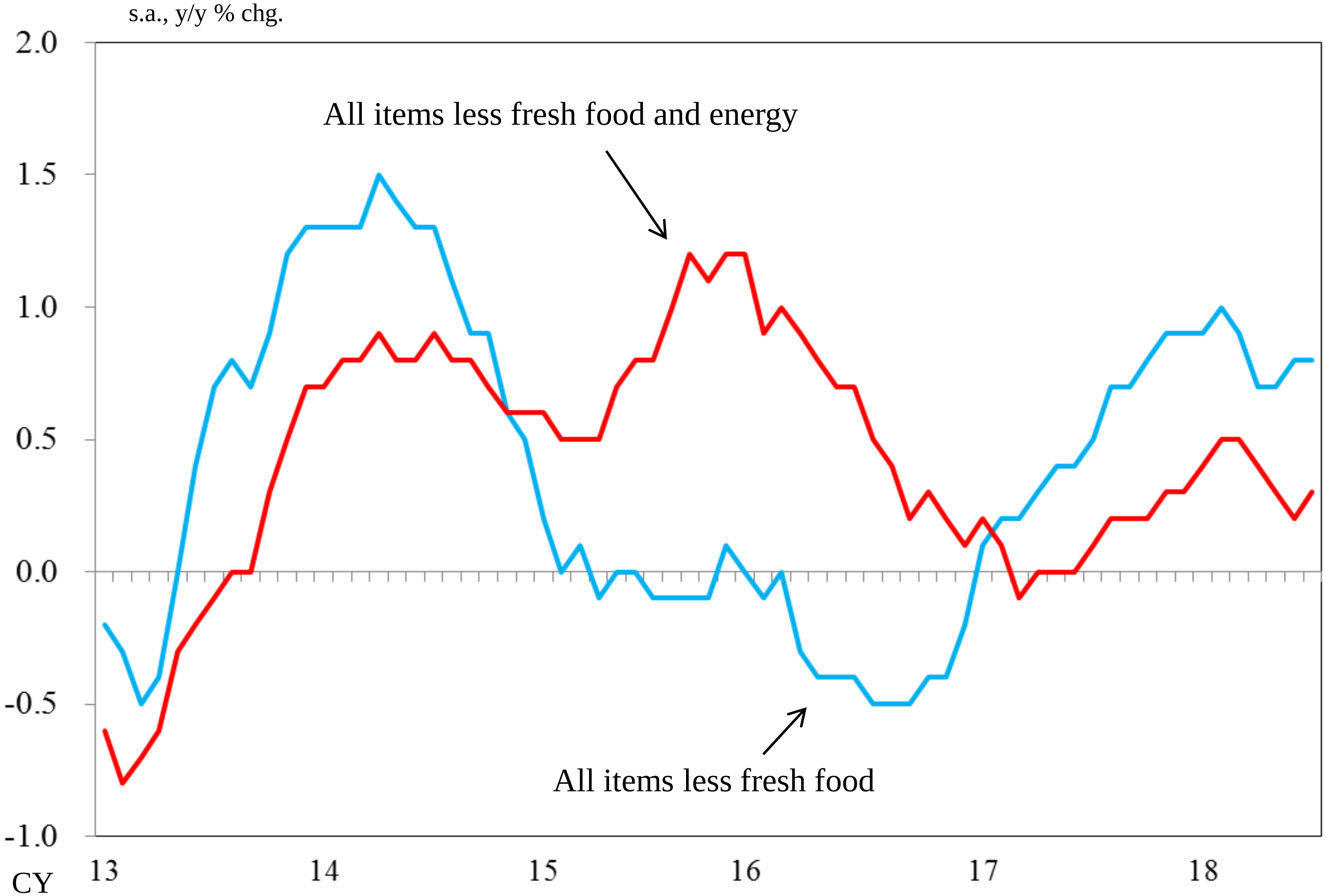
y/y % chg.

	Real GDP	CPI (all items less fresh food)
Fiscal 2018	+1.3 to +1.5 [+1.5]	+1.0 to +1.2 [+1.1]
Forecasts made in April 2018	+1.4 to +1.7 [+1.6]	+1.2 to +1.3 [+1.3]
Fiscal 2019	+0.7 to +0.9 [+0.8]	+1.3 to +1.6 [+1.5]
Forecasts made in April 2018	+0.7 to +0.9 [+0.8]	+1.5 to +1.8 [+1.8]
Fiscal 2020	+0.6 to +0.9 [+0.8]	+1.4 to +1.6 [+1.6]
Forecasts made in April 2018	+0.6 to +1.0 [+0.8]	+1.5 to +1.8 [+1.8]

Source: *Outlook for Economic Activity and Prices*, Bank of Japan.
Notes: Figures for the CPI (all items less fresh food) exclude the direct effects of the consumption tax hike.
Figures in brackets indicate the medians of the Policy Board members' forecasts (point estimates).

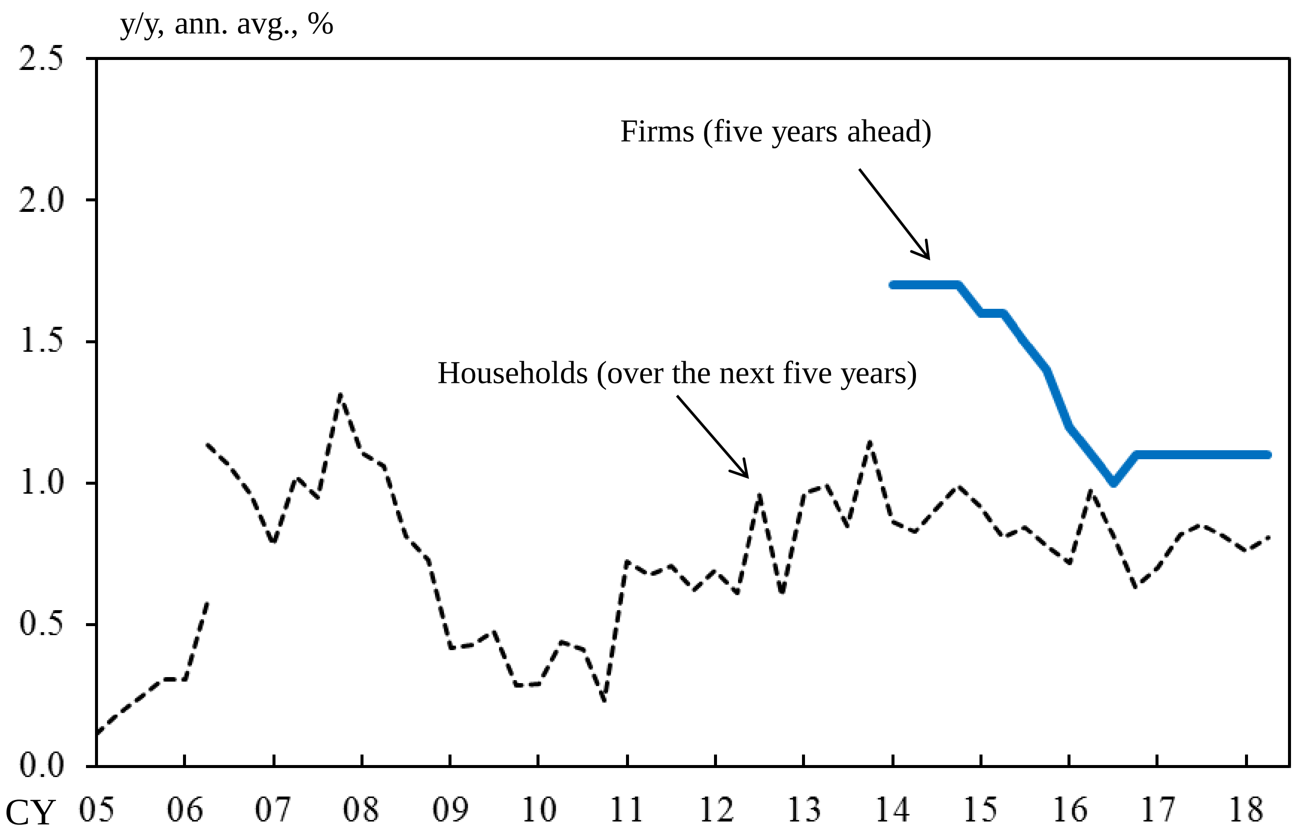
Chart 7

CPI



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

Inflation Expectations



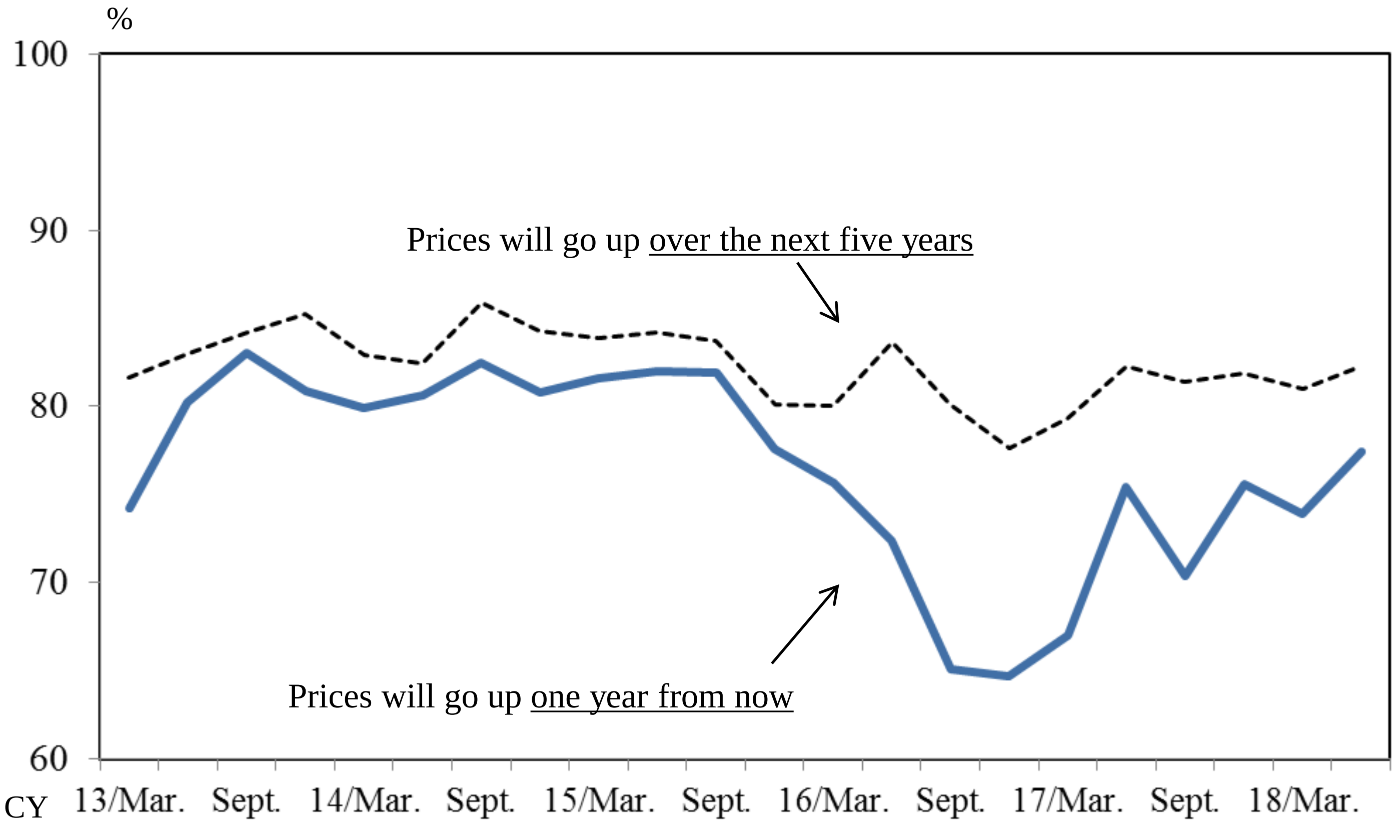
Source: Bank of Japan.

Notes: 1. Figures for households are from the *Opinion Survey on the General Public's Views and Behavior*, estimated using the modified Carlson-Parkin method.

2. Figures for firms are from the *Tankan* (General Prices, summary of "Inflation Outlook of Enterprises," all industries and all enterprises).

Chart 9

Outlook for Price Levels

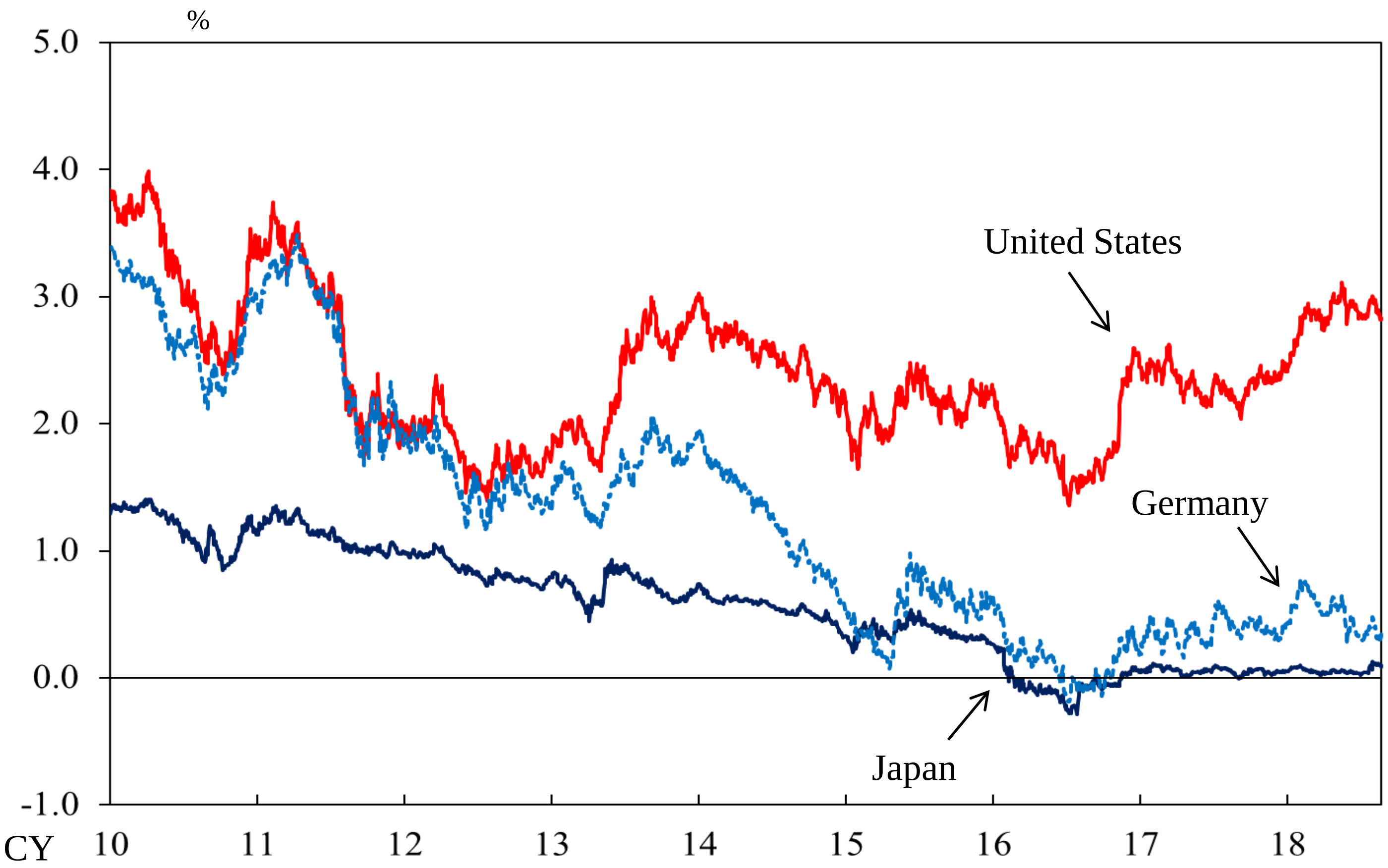


Source: *Opinion Survey on the General Public's Views and Behavior*, Bank of Japan.

Note: Figures for both one year from now and over the next five years comprise the choices "will go up significantly" and "will go up slightly" that are found in the questionnaire.

Chart 10

Comparison of 10-Year Government Bond Yields



Source: Bloomberg.

Strengthening the Framework for Continuous Powerful Monetary Easing

Likely to take more time than expected to achieve the price stability target of 2%

Appropriate to maintain the output gap within positive territory for as long as possible

Persistently Continuing with Powerful Monetary Easing

Forward guidance for policy rates

"The Bank intends to maintain the current extremely low levels of short- and long-term interest rates for an extended period of time, taking into account uncertainties regarding economic activity and prices including the effects of the consumption tax hike scheduled to take place in October 2019."

Yield curve control and ETF purchases

The long-term interest rate: The Bank will purchase JGBs so that 10-year JGB yields will remain at around zero percent. While doing so, the yields may move upward and downward to some extent mainly depending on developments in economic activity and prices.

ETF purchases: The Bank will purchase ETFs so that their amount outstanding will increase at an annual pace of about 6 trillion yen. The Bank may increase or decrease the amount of purchases depending on market conditions.

Achieving the price stability target of 2% at the earliest possible time while securing stability in economic and financial conditions