December 7, 2017

Bank of Japan

Japan's Economy and Monetary Policy

Speech at the Kisaragi-kai Meeting in Tokyo

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(English translation based on the Japanese original)

Introduction

It is my great pleasure to have the opportunity today to speak at the Kisaragi-kai meeting.

The last time I gave a speech at the Kisaragi-kai meeting was early September last year. Two weeks after that, the Bank of Japan conducted a comprehensive assessment of the developments in economic activity and prices as well as of the policy effects under quantitative and qualitative monetary easing (QQE), and decided to introduce a new framework for strengthening monetary easing -- "QQE with Yield Curve Control." While more than a year has passed since then, highly accommodative financial conditions have been maintained in Japan under this framework, and the economy has continued to improve. Today, I would like to first explain the Bank's view on the recent economic and price developments in Japan, and then talk about its thinking behind the conduct of monetary policy.

I. The Current Situation of Economic Activity and Its Outlook

Overseas Economies

Let me start by talking about economic developments. I will first touch on developments in overseas economies.

Overseas economies have continued to improve steadily since mid-2016. By region, the U.S. economy has continued to recover firmly, mainly in household spending, owing to improvement in the employment and income situation. The real GDP registered relatively high growth of 3 percent on an annualized quarter-on-quarter basis for the last two quarters, suggesting that the major hurricanes that hit the southern United States in summer only had short-term effects. As for the European economy, although continued attention needs to be paid to negotiations on the United Kingdom's exit from the European Union (EU) and the European debt problem, including the financial sector, the uncertainties surrounding these factors have abated. Under such circumstances, the European economy has continued to recover steadily, and the divergence in growth rates among the euro area economies clearly has become smaller recently. Emerging and commodity-exporting economies have followed their recovery trends. Specifically, the Chinese economy has continued to see stable growth on the whole, partly due to the effects of authorities' measures to support economic activity;

commodity-exporting economies such as Brazil and Russia -- which had been stagnant -- have picked up, particularly reflecting the bottoming out of commodity prices and monetary easing effects. At the International Monetary Fund's (IMF's) Annual Meeting this October, which I participated in, IMF Managing Director Christine Lagarde assessed the recent global economy as showing "the broadest-based recovery in the last 10 years."

With regard to the outlook for the global economy, both the advanced and emerging economies are projected to continue growing in a well-balanced manner. According to the latest World Economic Outlook (WEO) released by the IMF, the global economy is expected to maintain its firm growth, with the annual real GDP growth rate registering 3.2 percent in 2016, 3.6 percent in 2017, and 3.7 percent in 2018 (Chart 1).

The Current Situation of Japan's Economic Activity and Its Outlook

Next, I will talk about Japan's economy. It has continued to grow in a well-balanced manner, similar to the case I just mentioned for the global economy. Japan's economy is expanding moderately, with a virtuous cycle from income to spending operating. The real GDP growth rate for the July-September quarter was 1.4 percent on an annualized basis, representing positive growth for the seventh consecutive quarter. This was observed for the first time in 16 years, since 2001. The output gap that shows the utilization of capital and labor exceeded the long-term average of 0 percent in the second half of 2016, and has widened further in positive territory recently (Chart 2).

This is the third time in the past 20 years that Japan's output gap turned positive. The past two cases occurred during the so-called dot-com bubble period in the early 2000s and the global credit bubble period from 2006 through 2008. Both of these recovery phases depended on external demand. By contrast, in the current recovery phase, both the external and domestic demand are strong drivers for Japan's economic growth. As for external demand, Japan's exports have increased -- mainly led by IT-related goods exported to Asia -- on the back of the growth in overseas economies. In addition, domestic demand has been on an increasing trend. Specifically, business fixed investment has been on a moderate increasing trend, while corporate profits have improved, marking record high levels (Chart 3). Private consumption has increased its resilience, supported by steady improvement in

the employment and income situation as well as replacement demand for durable goods. Public investment also has been increasing due to the implementation of the government's stimulus measures formulated in fiscal 2016. As these developments show, Japan's current economy is supported by multiple factors -- namely, external demand, domestic private demand, and domestic public demand -- in a well-balanced manner. For this reason, it is possible to assess the economy as having resilience to exogenous shocks.

Another notable feature of Japan's economy recently is that the effects of its expansion have been spreading to a wide range of economic entities. The diffusion index (DI) for business conditions in the *Tankan* (Short-Term Economic Survey of Enterprises in Japan) has continued to be positive, not only in large enterprises and manufacturers but also in small enterprises and nonmanufacturers. This is clearly different from the recovery phases in the early and mid-2000s, which were led by external demand (Chart 4). Looking at developments by region, the DI has been positive for all regions since the December 2013 survey. Labor market conditions have tightened nationwide, as seen in the active job openings-to-applicants ratios in many regions having risen to levels comparable to those in major metropolitan areas (Chart 5).

Let me turn to the economic outlook. Going forward, Japan's economy is expected to continue expanding moderately. The Bank makes projections for Japan's economic activity and releases them quarterly in the *Outlook for Economic Activity and Prices* (Outlook Report); in the latest Outlook Report released at end-October, the medians of the Policy Board members' forecasts of the real GDP growth rates for fiscal 2017 and 2018 are 1.9 percent and 1.4 percent, respectively. These figures are above Japan's potential growth rate, which is estimated to be in the range of 0.5-1.0 percent. In fiscal 2019, although the growth pace is projected to decelerate, the economy is expected to continue expanding, underpinned by the increase in exports on the back of the growth in overseas economies, and the median of the forecasts of the real GDP growth rate is 0.7 percent.

The economic activity could, of course, deviate either upward or downward from these projections. The biggest risk factor is developments in overseas economies. As I mentioned earlier, the baseline scenario is that overseas economies are expected to continue growing at

a moderate pace, and it is no longer the case that risks are likely to be skewed to the downside. That being said, the U.S. economic policies and their impact on global financial markets warrant attention, and geopolitical risks also could exert downward pressure on economic activity. The Bank will continue to pay close attention to both upside and downside risks.

II. Price Developments and Their Outlook

Price Developments

Now, I will move on to price developments. Prices in Japan have been increasing gradually, mainly on the back of a rise in energy prices. The year-on-year rate of increase in the consumer price index (CPI) excluding fresh food has accelerated to 0.8 percent this October, rising by more than 1 percentage point in a year from the rate of change of minus 0.4 percent registered in October last year (Chart 6). Excluding the effects of energy prices, however, the rate of change in the CPI has remained slightly positive. Thus, price developments in Japan are still relatively weak despite continuing economic expansion and the tightened labor market conditions.

Somewhat strong economic activity and relatively weak prices, which seem contrary to each other at first glance, are coexisting in Japan. This situation is also observed in other advanced economies recently. The inflation rates in the United States and the euro area have remained below the central banks' target levels despite the firm improvement in the global economy that I mentioned at the outset.

Federal Reserve Chair Janet Yellen described the recent sluggish price developments in the United States as a "mystery," while referring to the possibility that such developments are mainly due to transitory factors such as a decline in telecommunication service prices. The chair pointed out that the outlook is subject to considerable uncertainty from multiple sources. Specifically, in addition to uncertainties regarding the supply capacity in the labor market and medium- to long-term inflation expectations, the chair mentioned the possibility that factors such as increasing competition with emerging economies, reflecting globalization, and a rapid spread of the use of online shopping backed by advances in technology could affect price developments. It may be very beneficial for Japan as well to

consider these points when analyzing its price developments. However, it also should be kept in mind that the inflation rates in the United States and the euro area have been at around 1.5 percent despite being regarded as somewhat weak, and that such situation is somewhat different from that in Japan. Therefore, it is natural to think that low inflation in Japan also is attributable to factors that are unique to Japan.

The Background to Relatively Weak Price Developments and Their Outlook

I will elaborate on the relationship between economic activity and prices in Japan. Taking into account that firms' wage- and price-setting stance exerts a large impact on prices, weakness in price developments in Japan can be explained by the following two steps.

The first is a moderate improvement in wages despite the tightness in labor market conditions. In particular, it is noticeable that wage increases for full-time employees are sluggish, compared to those for part-time employees (Chart 7). Since scheduled cash earnings of full-time employees account for almost 70 percent of the total employee income, their impact is not small. On this issue, some point to the fact that, since both labor and management in Japan place priority on the long-term stability of employment and wages over wage increases, the following has been observed: employment adjustment and wage reductions of full-time employees had been conducted only marginally in an economic downturn, and wages barely rise even if the economy recovers and labor market conditions tighten. It also can be said that past downward rigidity in wages has led to the present upward rigidity.

The second is that, even though wage increases have been taking place, albeit at a moderate pace, the pass-through of wage costs to sales prices has not been observed yet widely. This reflects firms' efforts to absorb increased wage costs through, for example, labor-saving investment that makes use of information technology, as evident in software investment increasing remarkably of late in industries where labor shortage is particularly acute, such as restaurants, retail, and construction (Chart 8). While these efforts are based on individual firms' reasonable business strategy with a view to raising productivity, they would reduce the upward pressure on prices in the economy as a whole.

However, I believe that this situation is changing gradually.

First of all, we will see a change in wages. Given that the labor market conditions have been so tight, it is no wonder that this leads to an increase in wages for full-time employees. It also is an important fact that a base pay rise, which did not take place under deflation, has continued for four consecutive years since 2014. In order to create a virtuous cycle between a moderate rise in prices and increases in corporate profits and income, it should be widely recognized in society that wages rise continuously under a sound economy. The Bank expects that efforts by both labor and management to realize the virtuous cycle will become widespread by taking advantage of tailwinds of the current favorable economic environment.

In addition, firms' stance is likely to gradually shift toward raising prices. With hourly scheduled cash earnings of part-time employees remaining on an uptrend, the upward pressure of the rise in firms' costs on prices has been increasing, supported also by a rise in input prices due to the past depreciation of the yen. It seems that consumers are gradually accepting price rises on the back of the employment and income situation having been improving.

Although, for the time being, it is likely that some firms will decide on a price rise while others will remain hesitant, firms' bullish stance to raise prices is expected to become predominant eventually. However, it is not easy to clearly point to the timing of when this will happen beforehand, because the specific timing at which each firm's stance shifts toward raising prices is likely to vary, depending on developments in demand that each firm and industry faces, or on the cost structure. The CPI, which reflects these developments, is likely to increase moderately going forward.

III. QQE and Its Effects

Basic Mechanism of Monetary Easing

So far, I have explained developments in Japan's economic activity and prices. In what follows, I will talk about the Bank's conduct of monetary policy.

In textbook theory, the basic mechanism of monetary policy is to stimulate or contain economic activity by driving the actual real interest rates to levels below or above the natural rate of interest, which I will explain shortly. Real interest rates are rates adjusted to exclude future price fluctuations by subtracting inflation expectations from the nominal interest rates that we usually come across. The natural rate of interest is the real interest rate at which the economy neither accelerates nor decelerates, and is likely to be close to the potential growth rate under normal conditions. The lower the actual real interest rates than the natural rate of interest, the greater the level of monetary accommodation. The economic growth will accelerate as low interest rates stimulate economic activities such as business fixed investment, leading to an improvement in the output gap. This improvement will finally bring about a rise in the inflation rate.

QQE, which the Bank introduced in April 2013, aims to substantially lower Japan's real interest rates in order to overcome deflation that lasted for the past 15 years. In September last year, the Bank introduced a new framework -- "QQE with Yield Curve Control" -- thereby further strengthening monetary easing. This framework consists of two components that aim at lowering real interest rates (Chart 9).

The first is an inflation-overshooting commitment. This is a strong commitment that the Bank will continue expanding the monetary base until the year-on-year rate of increase in the actual CPI exceeds 2 percent and stays above that level in a stable manner. It aims to raise people's inflation expectations in a more forceful manner.

The second component is yield curve control. The Bank conducts large-scale purchases of Japanese government bonds (JGBs) to facilitate the formation of the yield curve that is considered most appropriate for achieving the price stability target of 2 percent at the earliest possible time. Specifically, in the guideline for market operations, the Bank sets the short-term policy interest rate at minus 0.1 percent and the target level of the 10-year JGB yields at around zero percent, and the observed yield curve has been formed smoothly in a manner consistent with this guideline. If the Bank maintains nominal interest rates at sufficiently low levels through yield curve control and raises people's inflation expectations

through the inflation-overshooting commitment, real interest rates -- calculated by subtracting inflation expectations from nominal interest rates -- will decline significantly.

Yield Curve Control

Now, I would like to provide a little more explanation concerning the second component, yield curve control.

Before introducing this framework in September last year, the Bank set a quantitative target -- increasing the outstanding amount of JGBs held by the Bank at an annual pace of about 80 trillion yen -- and was purchasing JGBs in line with the target. There are commonalities and differences between the previous approach and the current yield curve control approach. First, these two approaches are the same in terms of the basic transmission mechanism of monetary easing: lowering nominal interest rates through large-scale JGB purchases and thereby reducing real interest rates. However, under the previous approach, which fixed the purchase amount of JGBs at a certain level, the level of interest rates could decline either excessively or insufficiently, reflecting the economic and price developments as well as the conditions in the JGB market. As a result, the yield curve could deviate either upward or downward from the one that the Bank deemed appropriate. This problem does not arise in principle under the current yield curve control because it sets the short- and long-term interest rates themselves as operating targets. Indeed, as I mentioned earlier, the yield curve in Japan has been formed smoothly in a manner consistent with the guideline for market operations in the past one year.

There are several points to make in conducting yield curve control.

The first point is how to determine the most appropriate shape of the yield curve to achieve the price stability target of 2 percent. Under conventional monetary policy, determining one optimal short-term policy interest rate -- the uncollateralized overnight call rate, for example -- was sufficient in conducting monetary policy. However, under the current framework, we naturally must extend the scope to the entire yield curve. It is necessary to analyze the status of inflation expectations and the natural rate of interest for each maturity and find the shape of the yield curve that produces the most appropriate level of monetary

accommodation. Although this process involves difficult analysis in practice, the basic concept is clear. As we explained in the Comprehensive Assessment, in order to form an appropriate yield curve, the Bank makes decisions in consideration of the possible spillover effects on bank lending rates and issuance rates for corporate bonds, the impact on the economy, and the impact on the functioning of financial intermediation, among other factors. The Bank has maintained this stance ever since introducing yield curve control in September last year.

The second point is the sustainability of yield curve control. I am aware of concerns among some market participants that, as the Bank continues to purchase JGBs on such a large scale, the supply of JGBs circulating in the market may dry up sooner or later, making it difficult to control the long-term interest rate.

In this respect, the Bank's JGB purchases have been conducted in a smooth manner thus far and the Bank expects that the risk of having a problem in terms of continuing with its JGB purchases will be small for the time being.

Of course, controlling the long-term interest rate itself is a challenging initiative that is unprecedented in global terms. To keep the long-term interest rate under control, it is necessary to have a firm understanding of what factors affect the interest rate for each maturity. Analysis on this point has been conducted not only by the Bank of Japan but also by the Federal Reserve and the European Central Bank (ECB), which have also implemented large-scale asset purchase programs. Although there are various approaches to analyzing what factor affects the long-term interest rate, the prevailing view appears to be that what has a strong impact in the long run is not the purchase amount of government bonds by a central bank in each market operation on a flow basis. Rather, the long-term interest rate is largely influenced by the amount outstanding of government bonds purchased by the central bank on a stock basis, which represents the cumulative net purchase amount of government bonds, or the ratio of the amount outstanding of the central bank's holdings of government bonds to the overall amount issued. The Bank assesses that the main reason it has been able to maintain the 10-year JGB yields at around 0 percent since the introduction of yield curve control is stock effects -- or the cumulative effects of

JGB purchases that have continued since before its introduction -- which have been working well.

With stock effects working firmly, if the supply-demand conditions in the JGB market tighten in the future, the impact of a unit amount of the Bank's JGB purchases on long-term yields accordingly should become more significant, with all else being equal. Put differently, the Bank can have the same degree of effect in lowering interest rates with a smaller amount of JGB purchases. Therefore, I would like to reemphasize that yield curve control is designed to be highly sustainable.

Accommodative Financial Conditions

Lastly, I will discuss the actual effects of the Bank's monetary easing measures on Japan's economy. Through the introduction of QQE, the Bank has succeeded in lowering Japan's real interest rates well below the potential growth rate by conducting large-scale JGB purchases and raising inflation expectations (Chart 10). This was the first such achievement to be made in the fight against prolonged deflation since the end of the 1990s.

As a consequence, the economic activities of firms and households have been activated, leading to a steady improvement in the output gap. According to the government, the current recovery phase, which started in December 2012, is highly likely to have lasted for 58 consecutive months by September this year. The duration of the current recovery has thus surpassed that of the *Izanagi Boom* in the second half of the 1960s. In light of this situation, coupled with the fact that the period of the current recovery mostly overlaps the period of QQE, it appears that this policy has contributed to the long-lasting recovery, which is the second longest in the post-war era. On the price front, too, annual CPI inflation excluding fresh food and energy has been positive as a trend for about four years. Under QQE, Japan is no longer in deflation, which is generally defined as a sustained decline in prices.

It seems that the monetary easing has exerted positive effects on individual firms in the form of improvement in funding conditions. In line with the decline in JGB yields, which are the base interest rates, firms' funding costs -- namely, bank lending rates and issuance

rates for CP and corporate bonds -- have declined firmly. For example, bank lending rates on new loans recently have been around historical low levels, in the range of 0.5-1.0 percent. The real bank lending rates -- the nominal bank lending rates minus the inflation rates -- on new loans have declined to around 0 percent (Chart 11). In other words, the average firm can borrow new loans with hardly any interest payment if the inflation rates are taken into consideration. Also, with respect to the availability of funds, many firms have the growing sense that financial conditions have become highly accommodative. From the viewpoint of either large or small enterprises, the lending attitudes of financial institutions have become very proactive. In terms of the DI in the Bank's *Tankan* for lending attitudes, that for small enterprises in particular has been at a high level last seen at the end of the 1980s (Chart 12). The Bank will continue to provide maximum support for corporate activities in Japan by maintaining such accommodative financial conditions.

Conclusion

Today, I have explained the recent economic and price developments and the Bank's thinking behind the conduct of monetary policy that takes account of such developments.

Although it is true that there is still a long way to go to achieve the price stability target of 2 percent, it is clear from the results so far achieved that QQE has been effective in drastically improving Japan's economy. Going forward, in line with the steady improvement in the economy, firms' stance is likely to gradually shift toward raising wages and prices. Moreover, people's medium- to long-term inflation expectations are projected to rise steadily as further price rises come to be observed widely. In order to ensure that such positive developments will be long-lasting and that Japan's economy will become a well-balanced one in which economic improvement and price stability are simultaneously achieved, the Bank will continue to persistently pursue powerful monetary easing under the current framework of "QQE with Yield Curve Control" with a view to achieving the price stability target of 2 percent.

Thank you very much for your attention.

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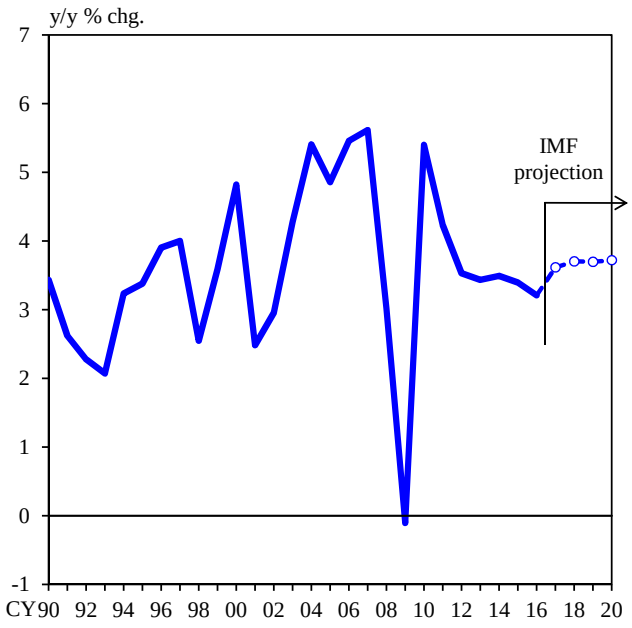
Chart 1

Global Economy

Global Real GDP Growth



Projections of Real GDP Growth by Major Economies (as of October 2017)

y/y % chg.

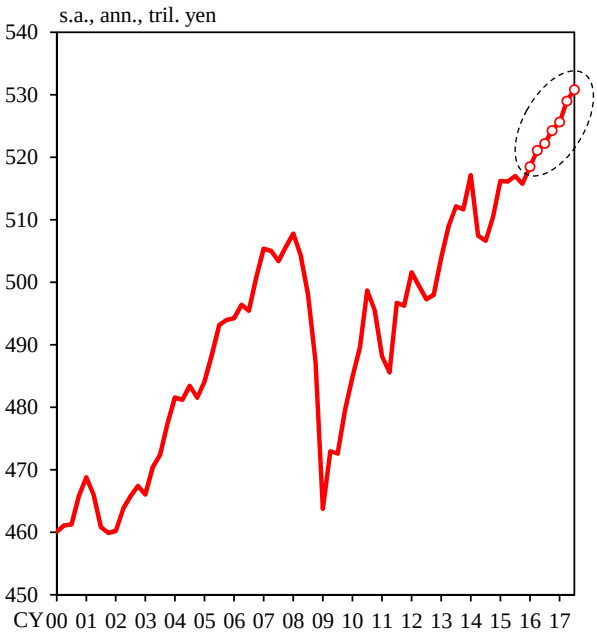
	2015	2016	2017 [Projection]	2018 [Projection]
World	3.4	3.2	3.6 (+0.1)	3.7 (+0.1)
Advanced economies	2.2	1.7	2.2 (+0.2)	2.0 (+0.1)
United States	2.9	1.5	2.2 (+0.1)	2.3 (+0.2)
Euro area	2.0	1.8	2.1 (+0.2)	1.9 (+0.2)
Japan	1.1	1.0	1.5 (+0.2)	0.7 (+0.1)
Emerging market and developing economies	4.3	4.3	4.6 (0.0)	4.9 (+0.1)
China	6.9	6.7	6.8 (+0.1)	6.5 (+0.1)
ASEAN 5	4.9	4.9	5.2 (+0.1)	5.2 (0.0)

Note: Figures in parentheses in the right figure show differences from the projections as of July 2017 (% points).
Source: IMF.

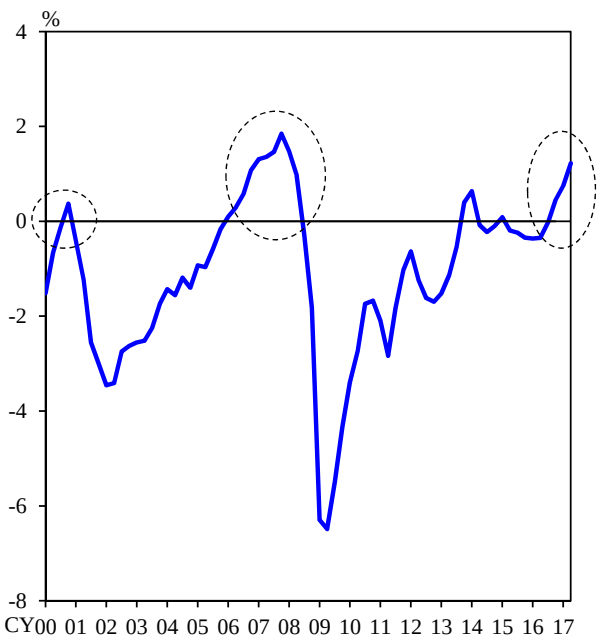
Chart 2

Economic Recovery in Japan

Real GDP



Output Gap

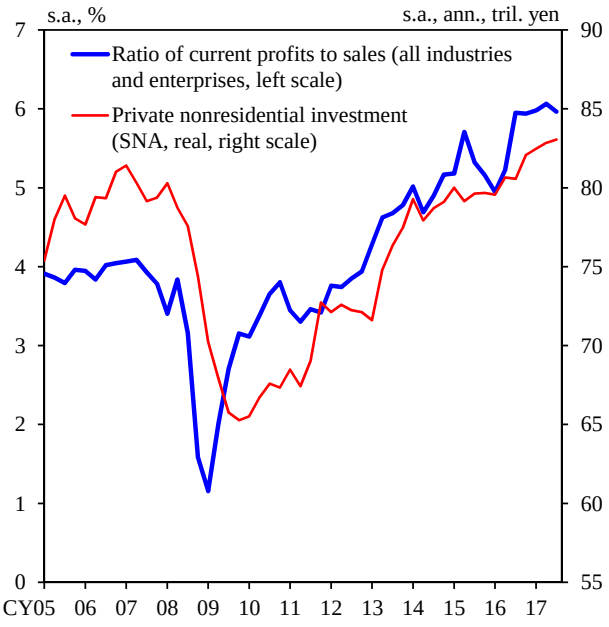


Note: Figures for output gap are based on BOJ staff estimations.
Sources: Cabinet Office; Bank of Japan.

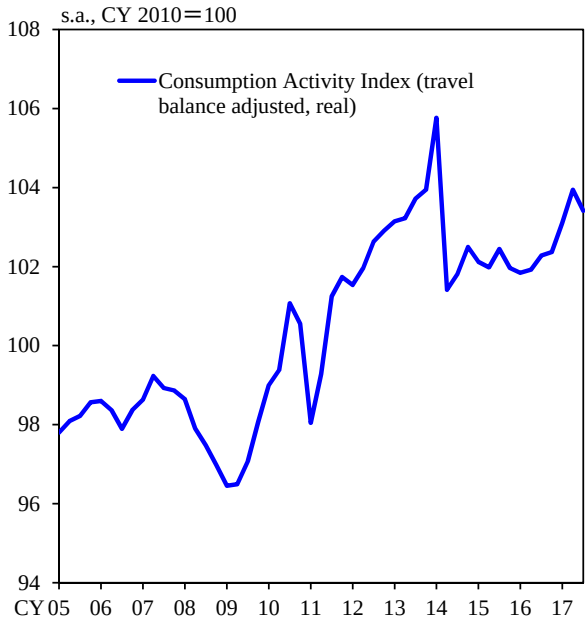
Chart 3

Domestic Demand

Corporate Profits and Business Fixed Investment



Private Consumption

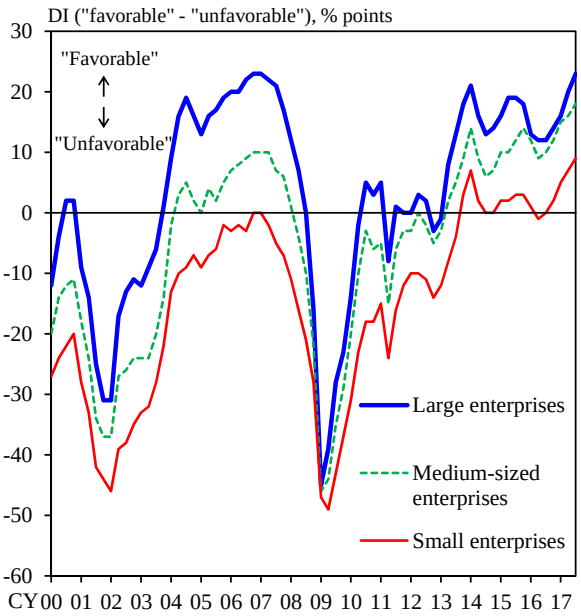


Notes: 1. Figures for corporate profits are based on the *Financial Statements Statistics of Corporations by Industry, Quarterly*. Excluding "finance and insurance."
2. Figures for private consumption are based on BOJ staff calculations. Figures exclude inbound tourism consumption and include outbound tourism consumption.
Sources: Ministry of Finance; Cabinet Office; Bank of Japan.

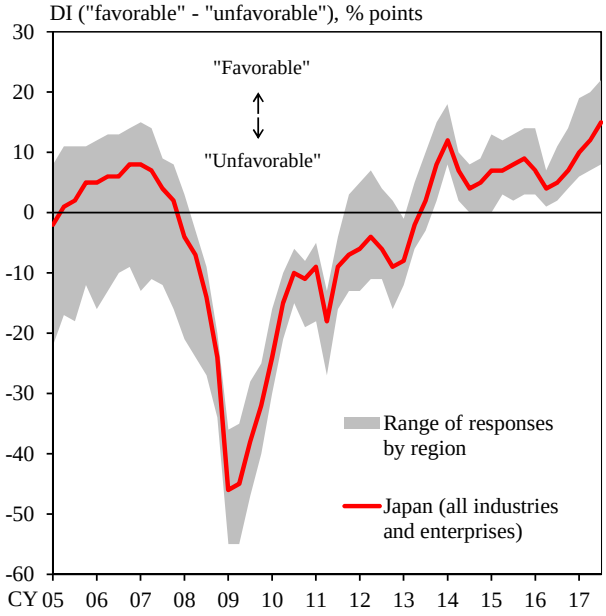
Chart 4

Business Conditions DI (*Tankan*)

By Firm Size



By Region

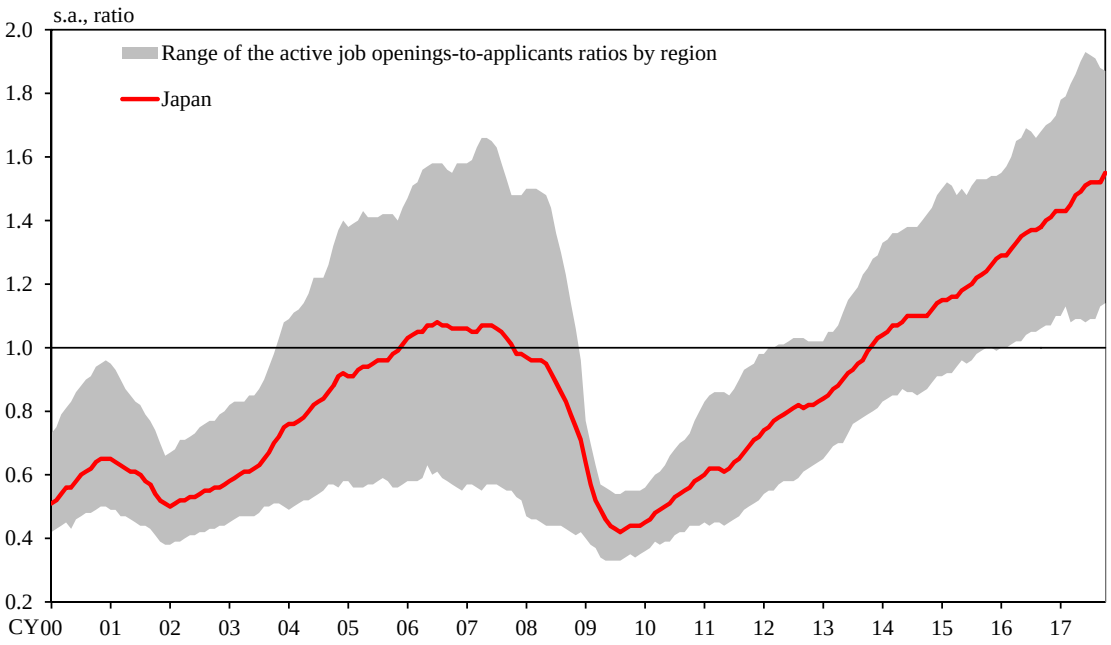


Source: Bank of Japan.

Chart 5

Employment Situation

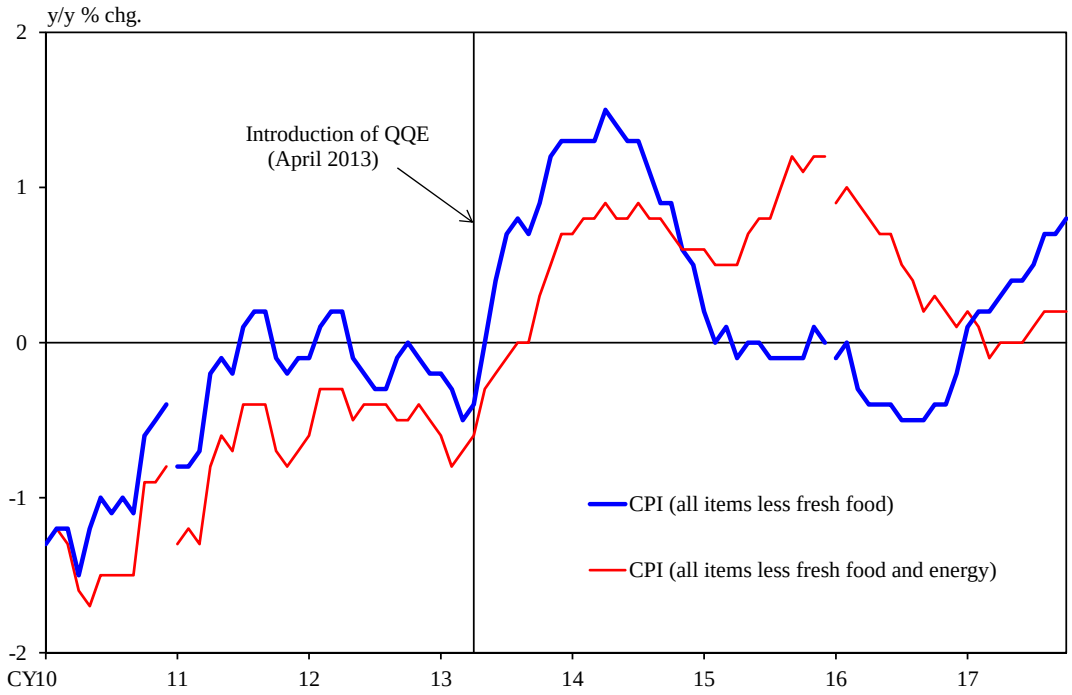
Active Job Openings-to-Applicants Ratio by Region



Sources: Ministry of Health, Labour and Welfare; Bank of Japan.

Chart 6

Consumer Prices

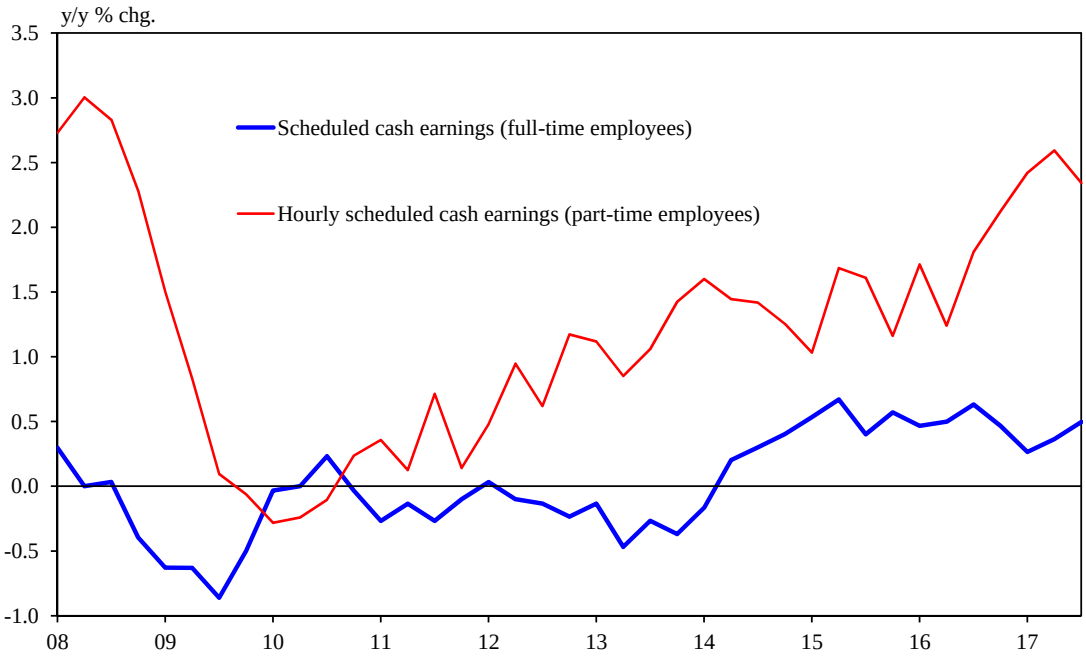


Note: Figures are adjusted for changes in the consumption tax rate.
Source: Ministry of Internal Affairs and Communications.

Chart 7

Income Situation

Wages of Full-Time and Part-Time Employees

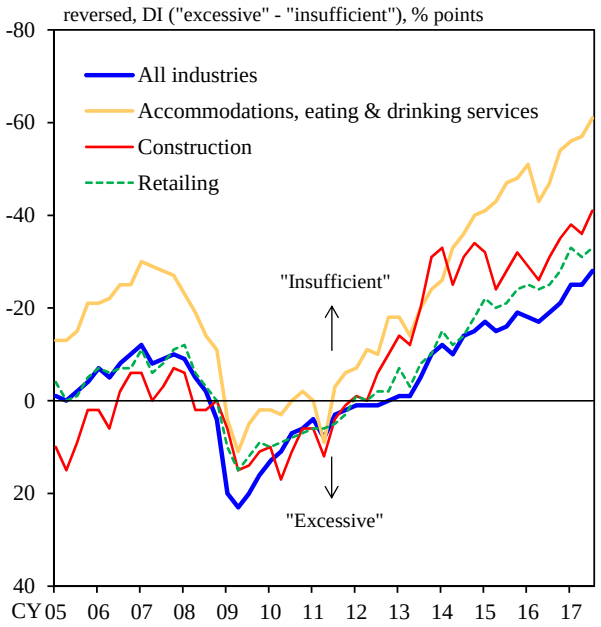


Note: Q1 = March-May, Q2 = June-August, Q3 = September-November, Q4 = December-February. The figure for 2017/Q3 is that for September.
Source: Ministry of Health, Labour and Welfare.

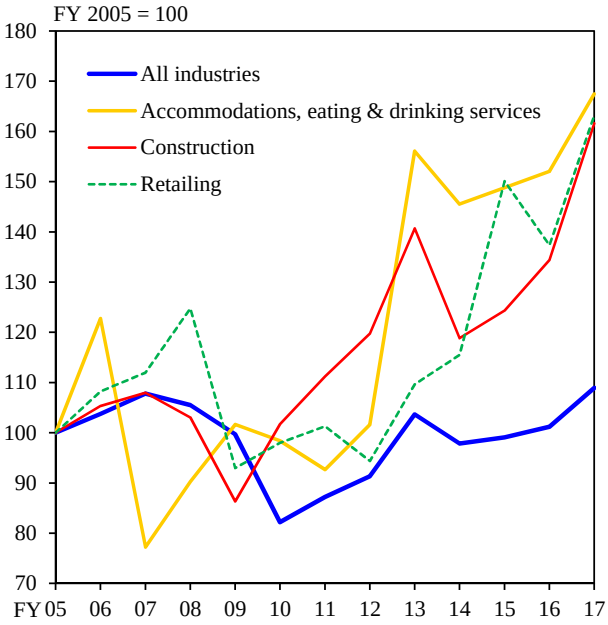
Chart 8

Firms' Efforts to Address Labor Shortage

Employment Conditions DI (Tankan)



Software Investment (Tankan)

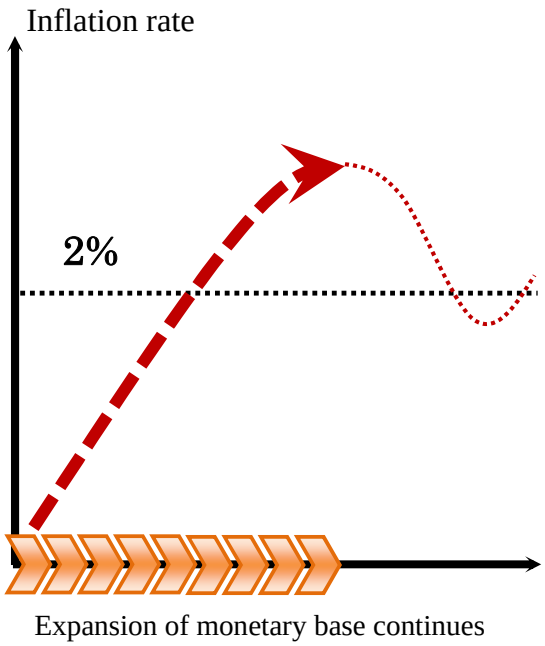


Note: Figures for the software investment plans for fiscal 2017 are forecasts from the September 2017 *Tankan* survey.
Source: Bank of Japan.

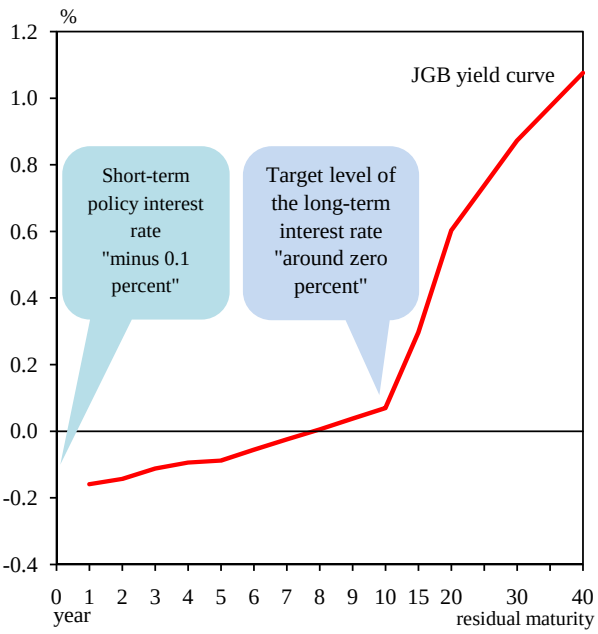
Chart 9

QQE with Yield Curve Control

Inflation-Overshooting Commitment



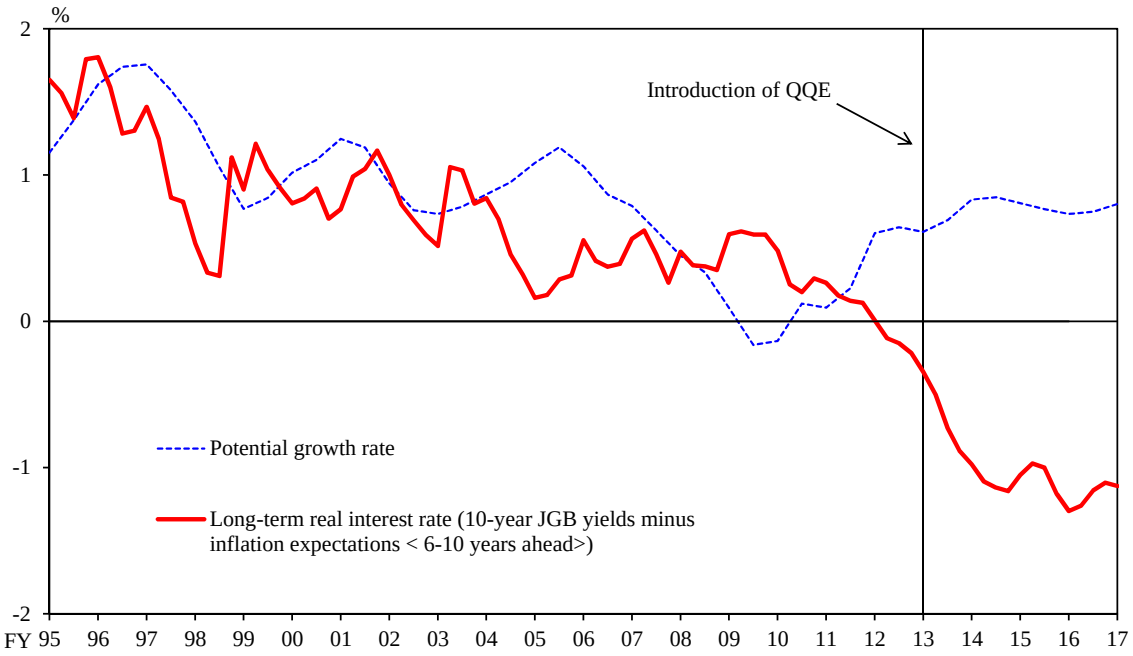
Yield Curve Control



Source: Bloomberg.

Chart 10

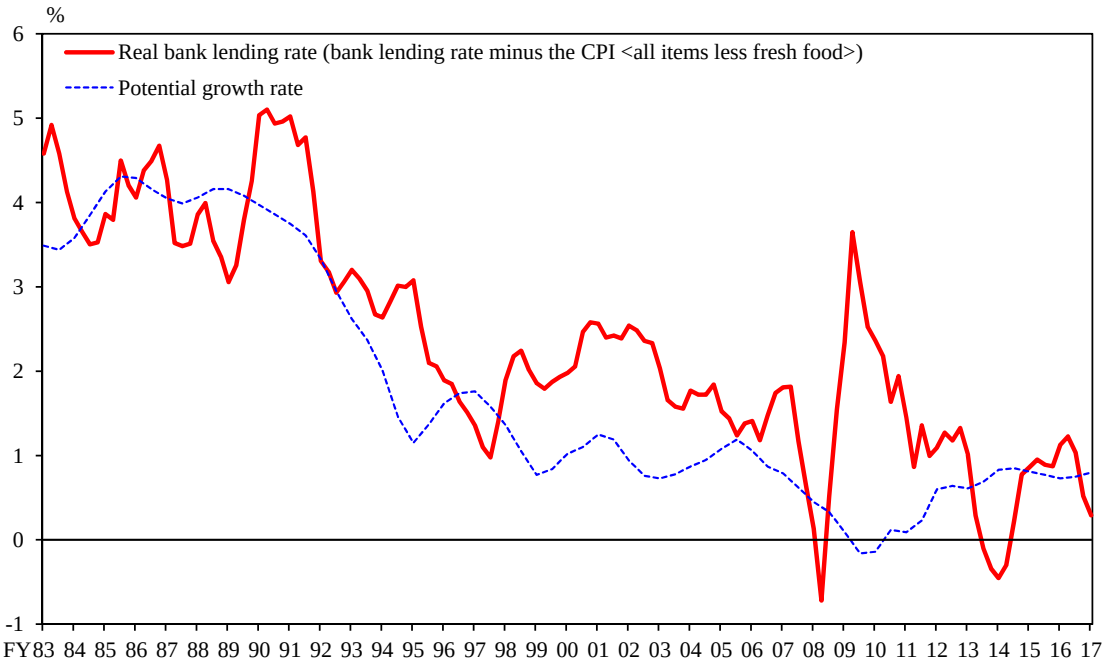
Long-Term Real Interest Rate



Notes: 1. Figures for inflation expectations (y/y, ann. avg., %) are from the "Consensus Forecasts." Those for the potential growth rate (y/y % chg.) are based on BOJ staff estimations.
2. Figures for fiscal 2017 are those for 2017/Q2.
Sources: Consensus Economics Inc., "Consensus Forecasts"; Bloomberg; Bank of Japan.

Chart 11

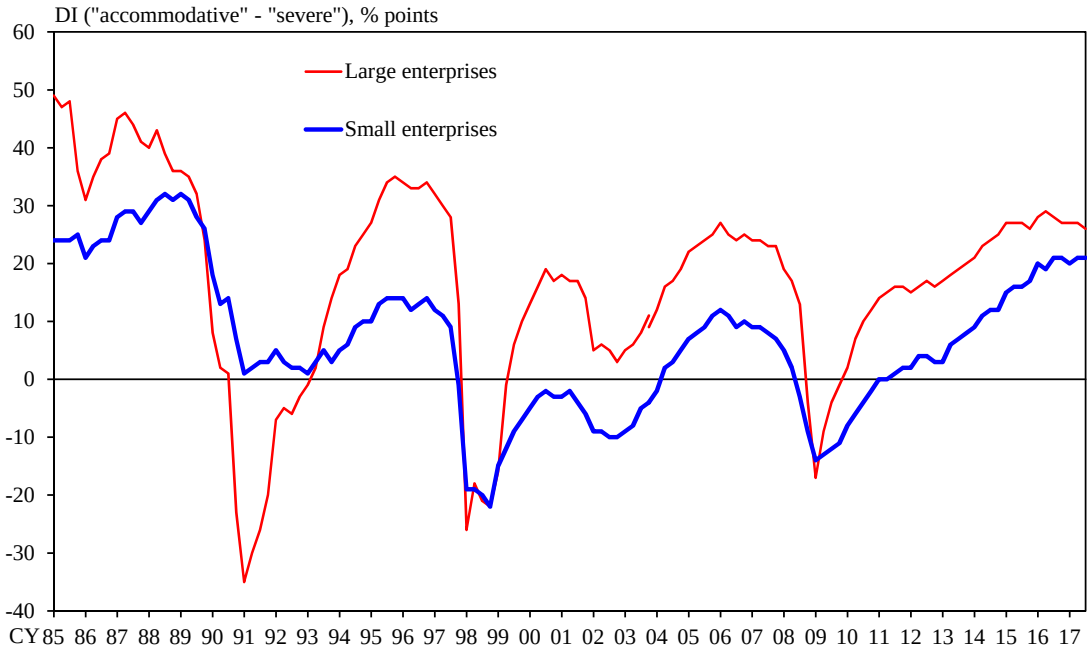
Bank Lending Rate



Notes: 1. Figures for the bank lending rate are the average contract interest rate on new loans and discounts (total). The CPI figures (y/y % chg.) are adjusted for changes in the consumption tax rate. Figures for the potential growth rate (y/y % chg.) are based on BOJ staff estimations.
2. Figures for fiscal 2017 are those for 2017/Q2.
Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

Corporate Finance

Lending Attitude of Financial Institutions (Tankan)



Note: There is a discontinuity in the data in December 2003 due to a change in the survey framework.
Source: Bank of Japan.