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Bank of Japan

"Comprehensive Assessment" of the Monetary Easing: Concept and Approaches

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.

At the Monetary Policy Meeting (MPM) held at end-July, the Bank of Japan decided to enhance monetary easing by increasing its purchases of exchange-traded funds (ETFs) and by ensuring smooth funding in foreign currencies by Japanese firms. At the same time, against the backdrop of heightened uncertainty over the outlook for prices, with a view to achieving the price stability target of 2 percent at the earliest possible time, it also decided to conduct at the next MPM to be held in late September a comprehensive assessment of the developments in economic activity and prices, as well as of the policy effects, over the past three years since the introduction of quantitative and qualitative monetary easing (QQE). Today, I would like to talk about the concept of and approaches to this comprehensive assessment.

I. Background

The Bank introduced QQE in April 2013. During the more than three years since then, Japan's economic activity and prices have improved substantially, and Japan's economy is no longer in deflation. However, the price stability target of 2 percent has not been achieved yet, despite the unprecedented large-scale monetary easing. How monetary policy has functioned during these years and what factors have possibly hampered achievement of the 2 percent target is the first issue to be analyzed. The second issue is regarding "QQE with a Negative Interest Rate," which was introduced more than half a year ago. Under the negative interest rate policy, various interest rates, including Japanese government bond (JGB) yields as well as rates for lending and corporate bonds, have declined substantially; thus, the policy already has exerted remarkable effects. At the same time, however, it has had an impact on financial markets' liquidity and financial institutions' profits. The effects and impact of this policy also need to be assessed.

The Bank will examine these issues in an objective manner, by carefully analyzing observed facts and checking them against the theories underpinning the Bank's policy. With the results of the assessment, the Bank will discuss what should be done in order to make sure that the price stability target of 2 percent is achieved at the earliest possible time. Let me

emphasize that the assessment is conducted with the aim of achieving the 2 percent target at the earliest possible time. A reduction in the level of monetary policy accommodation, which is being called for by some market participants, will not be considered.

II. Japan's Economy since the Introduction of QQE, and Its Effects

Economic Activity and Prices During Past Three Years

To start with, I would like to take a look back at economic activity and prices since the introduction of QQE.

First, in the corporate sector, profits increased considerably, including those of small firms (Chart 1). Corporate profits, measured by the ratio of current profits to sales, marked a record high level in fiscal 2015. Profits are expected to decrease slightly this fiscal year, especially those of manufacturers, but remain high.

Second, in the household sector, the employment and income situation has improved significantly. The number of employees has been increasing steadily. The unemployment rate has declined recently to 3 percent, which is virtually full employment. As for wages, the annual labor-management wage negotiations in 2014 resulted in base pay rises for the first time in two decades; base pay rises have continued for three consecutive years.

Third, the underlying trend in inflation has clearly improved (Chart 2). As a result of the fall in crude oil prices of more than 70 percent since summer 2014 until the beginning of this year, the latest figure for the year-on-year rate of change in the consumer price index (CPI, all items less fresh food) is minus 0.5 percent. Nevertheless, on a basis excluding fresh food and energy, the year-on-year rate of change in the CPI, which had been in the range of around minus 0.5 to minus 1.0 percent before the introduction of QQE, became positive in autumn 2013, and thereafter has remained in positive territory for two years and ten months. This is the first time since the late 1990s, when Japan's economy fell into deflation, that the year-on-year rate of change in the CPI has been in positive territory for such a long period. Japan's economy is no longer in deflation, which is commonly defined as a situation where prices are declining in a sustainable manner.

Of course, these changes are not brought about merely by the Bank's monetary easing policy. The government's flexible management of fiscal policy, as well as its initiatives for structural reform to enhance growth potential, have contributed to the recovery, and the private sector's initiatives for promoting innovation have played a big role in bringing the changes. That said, it is unquestionable that the Bank's unprecedented large-scale monetary easing measures, such as QQE and the subsequent "QQE with a Negative Interest Rate," have contributed significantly to the positive turnaround in Japan's economy.

Factors That Hampered Achieving 2 Percent Price Stability Target

However, despite the Bank's large-scale monetary easing, the price stability target of 2 percent has not been achieved. I would like to point out three exogenous factors that seem to have had a negative impact: (1) substantial and sequential declines in crude oil prices since summer 2014; (2) weakness in demand, particularly in private consumption, following the consumption tax hike in April 2014; and (3) the slowdown in emerging economies from summer 2015 and volatile developments in global financial markets reflecting that situation.

However, what is more important is the mechanism through which these exogenous factors hampered achieving the 2 percent target. A key factor here is inflation expectations; that is, firms' and households' outlook for prices. To highlight the importance of inflation expectations, let me remind you about the transmission mechanisms of QQE. QQE aims to raise inflation expectations through the Bank's strong and clear commitment to achieving the price stability target of 2 percent and through large-scale monetary easing that underpins the commitment (Chart 3). At the same time, the Bank exerts downward pressure on nominal interest rates across the entire yield curve through purchases of JGBs. These two channels together bring about a decline in real interest rates. This decline boosts firms' and households' economic activity, which in turn leads to higher inflation rates, supported by higher inflation expectations. As people actually experience inflation, inflation expectations will rise further.

Inflation expectations represent the core element of the mechanism of the Bank's monetary easing. Against this backdrop, we have the dynamics of inflation expectations: how they have been increased by the Bank's policy and how the aforementioned three exogenous

factors have hindered a rise in inflation expectations. This is the first issue to be analyzed in the comprehensive assessment.

Developments in Inflation Expectations

Let us take a look at the developments in inflation expectations (Chart 4). Inflation expectations can be measured by market-based indicators including those calculated using yields of inflation-indexed JGBs as well as indicators based on the results of surveys of households, firms, and economists. Although developments in each of these indicators vary, reflecting their own characteristics, those in inflation expectations since the introduction of QQE can be divided into three phases.

The first phase is the period after the introduction of QQE through summer 2014. In this period, indicators of inflation expectations rose clearly. The introduction of QQE appears to have had a significant impact on inflation expectations. The second phase is from summer 2014 through summer 2015. During this period, many indicators of inflation expectations were largely unchanged. The fall in crude oil prices since summer 2014 and weak demand after the consumption tax hike in April 2014 seem to have pushed down inflation expectations. In order to preempt the manifestation of a risk that conversion of the deflationary mindset -- which had shown steady progress until then -- might be delayed, and to maintain the momentum of expectation formation, the Bank expanded QQE at end-October 2014. Thanks to this response, inflation expectations managed to remain elevated despite the strong headwinds. The third phase is the period since summer 2015 up until now. Many indicators of inflation expectations have weakened during this phase. This is attributable to the slowdown of emerging economies, continued volatile developments in global financial markets amid such a situation, and a further decline in crude oil prices. The Bank introduced the negative interest rate policy in January 2016, but this has not been enough to offset negative effects on inflation expectations amid continued volatility in global financial markets.

Mechanism of Inflation Expectation Formation

These experiences suggest that the mechanism of inflation expectation formation in Japan is still largely "adaptive," meaning that, when the observed inflation rate shows sluggishness

due to factors such as the decline in crude oil prices and the temporary weakness in demand, inflation expectations tend to decline accordingly, following the course of the observed inflation rate. It is widely accepted that people's inflation expectations are formed by two factors: a "forward-looking formation mechanism" and an "adaptive formation mechanism." The "forward-looking formation mechanism" points to the view that, even if the observed inflation rate fluctuates from time to time due to a variety of factors, it eventually will revert to the price stability target set by a central bank, which is 2 percent in many countries. On the other hand, the "adaptive formation mechanism" points to the view that the inflation rate will continue to be around the current level. For instance, if the observed inflation rate has been around 0 percent, people believe that the inflation rate will be around 0 percent going forward.

In cases where the "forward-looking formation mechanism" prevails in a sufficiently strong manner, even if the observed inflation rate somehow deviates from the price stability target either upward or downward, people expect it to revert to close to the 2 percent target in due course, and prices and wages are set based on such expectation. Therefore, the actual inflation rate will gravitate toward the target. This situation is phrased as inflation expectations being "anchored," and this is preferable for central banks having a mandate of price stability. In countries such as the United States, inflation expectations have been anchored at around 2 percent; in Japan, however, as the price stability target has been missed under prolonged deflation, the effects of the "adaptive formation mechanism" seem to have dominated. In other words, the view is entrenched among people that inflation will continue to be sluggish because it has been so for a long time. The Bank, by continuing with QQE, has been trying to enhance the "forward-looking formation mechanism" and thereby to anchor people's inflation expectations to the price stability target of 2 percent. Unfortunately, however, before the "forward-looking formation mechanism" became strong enough, the observed inflation rate declined due to a variety of factors such as the significant decline in crude oil prices, and inflation expectations also have declined again through the "adaptive formation mechanism."

Going forward, the underlying trend in inflation is expected to rise as the economy continues to grow at a rate above the potential growth rate and the effects of the decline in

crude oil prices are expected to dissipate. Therefore, the observed inflation rate is expected to rise gradually. Under these circumstances, inflation expectations will be pushed up by the "adaptive formation mechanism." For the time being, however, the observed inflation rate is unlikely to accelerate, hovering at slightly negative or about 0 percent. As a result, there is considerable uncertainty about the extent to which inflation expectations will rise through the "adaptive formation mechanism." Against this background, it is imperative for the Bank to firmly maintain its commitment to achieving the price stability target of 2 percent at the earliest possible time from the viewpoint of the "forward-looking formation mechanism."

III. Effects and Impact of the Negative Interest Rate

Effects of the Negative Interest Rate

Now, let me move on to the second point; that is, the negative interest rate policy, which the Bank decided to adopt this January. The negative interest rate policy, in combination with the Bank's JGB purchases, has produced substantial effects in lowering interest rates on JGBs across the entire yield curve (Chart 5). It has become clear that the Bank can affect the entire yield curve through an appropriate combination of the negative interest rate policy and JGB purchases. The framework of QQE with the negative interest rate has proven to be extremely powerful.

Before the introduction of the negative interest rate policy, some argued that lower risk-free rates, or JGB yields, would not lead to a decline in banks' lending rates as well as interest rates on corporate bonds and CP, as room is limited for a decline in rates on deposits, the main source of funding for financial institutions. In fact, however, after the introduction of the negative interest rate, banks' lending rates, as well as interest rates on corporate bonds and CP, fell significantly, each marking historical lows. The pass-through of the decline in JGB rates to these funding rates since the introduction of the negative interest rate policy has been roughly similar to changes in previous episodes of interest rate cuts. Moreover, new developments relating to corporate finance have been taking place recently; both the issuance of corporate bonds with a maturity of over ten years and firms' borrowings through subordinated loans have increased. The negative interest rate policy thus far seems to have succeeded in lowering funding costs of firms and households. According to the results of surveys such as the Short-Term Economic Survey of Enterprises in Japan (*Tankan*) and the

Senior Loan Officer Opinion Survey on Bank Lending Practices at Large Japanese Banks (often dubbed the *Loan Survey*), financial institutions' lending attitudes have continued to be proactive. Thus, we are not in a situation where their intermediary functions are impaired because their profits are squeezed as a result of the negative interest rate.

That said, there are two issues we need to consider. The first is that the policy effects that I have just mentioned are what have been observed thus far, and one cannot tell the extent to which such interest rates as banks' lending rates can be lowered further. The second is that the significant fall in lending rates with a marginal decline in rates on deposits has been achieved at the expense of financial institutions' profits. This point is closely related to the first one, in that the policy effects on lending rates will also depend on financial institutions' lending attitudes.

Impact on Financial Intermediation

Let me put this in more general terms. In assessing the effectiveness of the negative interest rate policy, the potential impact on the financial intermediation due to its influence on the profits of financial institutions needs to be taken into account. Considering that the profits affect the soundness of financial institutions in a cumulative manner, the impact can vary depending on the duration of the policy.

Generally speaking, financial institutions raise short-term funds and invest them in long-term assets as their basic business model. Given that the rates on deposits -- which are the main funding tools -- rarely become negative, the decline in yields throughout the entire yield curve or the narrowing of the spread between short- and long-term yields will lead to smaller spreads between deposit and lending rates, thereby negatively affecting the profits of financial institutions. For Japan in particular, the impact of the negative interest rate policy on the profits of financial institutions tends to be relatively large, due to such factors as the amount outstanding of deposits far exceeding that of lending, and to the spreads between deposits and lending rates already being extremely small following prolonged competition among financial institutions.

As long-term and super-long-term rates have declined significantly since the introduction of the negative interest rate policy, the rates of return on investments of insurance and pension products are expected to decline. Under these circumstances, the sales of some saving-type products are suspended. Some business firms have revised down their profit forecasts due in part to the increase in the net present value of retirement benefit obligations. Although direct impacts of these developments on the entire economy may not be substantial, we should take account of the possibility that such developments can affect people's confidence by causing concerns over the sustainability of the financial function in a broad sense, thereby negatively affecting economic activity.

In sum, in proceeding with "QQE with a Negative Interest Rate," the Bank should make an appropriate policy judgment by taking account not only of its powerful impact on the yield curve but also its impact on the financial intermediation in a broad sense. Needless to say, there is still ample space for further cuts in the negative interest rate and for an increase in size in the "quantity" dimension. The Bank has a broad range of policy options. It will continue to choose the most appropriate policy actions among those options, depending on the situations for economic activity, prices, and financial conditions.

Conclusion: Mechanism of Monetary Policy

I have explained several issues related to the forthcoming comprehensive assessment. The ones I have mentioned here are just some of the issues to be analyzed toward the next MPM. The Policy Board members will have an in-depth discussion at the next MPM on these issues, as well as other relevant topics.

I will conclude my speech by touching on my views on the challenges in monetary policy.

The basic mechanism of monetary policy, whether it is conventional or unconventional, is to drive the real interest rate higher or lower than the "natural rate of interest," which is the level of the real interest rate neutral to economic activity and prices. In normal times, this can be achieved by adjusting short-term rates; namely, simply lifting or lowering them. But given that monetary accommodation with virtually zero short-term rates did not produce sufficient stimulative effects, central banks around the world have devised a variety of

unconventional policy measures to overcome this "zero lower bound." For instance, "forward guidance" and the "purchases of long-term government bonds" to lower the nominal medium- to long-term rates have been adopted by the central banks in Japan, the United States, and Europe. The "negative interest rate" policy started in Europe, followed by Japan. Measures to lower the real interest rate by raising inflation expectations directly through monetary policy have been introduced as "QQE" in Japan, where inflation expectations have long been at a very low level.

In conducting monetary policy, what measures should be adopted and how they are implemented depends on the economic and financial situations of the country concerned. For instance, in the United States, where money market mutual funds (MMMFs) play a pivotal role in financial markets, a negative interest rate policy has not been adopted; instead, the main measure for monetary easing has been to push down long-term rates through the purchases of long-term government bonds. It also has been stressed that monetary easing does not affect inflation expectations because they already have been well anchored.

On the other hand, in Japan, where deflation has been persistent for a prolonged period, the most powerful monetary easing measures are needed among advanced economies, and all of the aforementioned measures have actually been implemented. As a result, unprecedented extremely accommodative financial conditions across the major economies have been achieved. I expect firms and households to make the most of such accommodative financial conditions for proactive economic activity, and for that purpose, I would like to reiterate the importance of raising the "natural rate of interest" I explained earlier; namely, raising the potential growth rate by undertaking initiatives for structural reform.

It is often argued that there is a "limit" to monetary easing, but I do not share such a view. Needless to say, there is a limit in the sense that there are things that "cannot be done legally" or "should not be done," such as directly underwriting government bonds and monetizing fiscal deficits. As I said earlier, however, even within the current framework, there is ample room for further monetary easing in either of three dimensions -- quantity, quality, and the interest rate -- and other new ideas should not be off the table.

What we should bear in mind when conducting monetary policy is not its "limit" but a comparison between its "benefits" and "costs," as is the case with any public policy. There is no free lunch for any policy. Given that we have been implementing such large-scale monetary easing, any additional monetary easing entails "costs," which negatively affects some sectors. That said, we should not hesitate to go ahead with it as long as it is necessary for Japan's economy as a whole; namely, if its "benefits" outweigh its "costs." Furthermore, what is important is that a balance between "benefits" and "costs" can change depending on the situation. Monetary policy should be conducted in a flexible manner. There may be a situation where drastic measures are warranted even though they could entail "costs," depending on the situations for economic activity, prices, and financial conditions. The central bank should always prepare policy options to address such situations.

I would add that the "benefits" of achieving the price stability target of 2 percent at the earliest possible time are enormous as Japan's economy is finally overcoming deflation that lasted for a prolonged period of time. The Bank will continue to make its utmost efforts to achieve this commitment.

Thank you.

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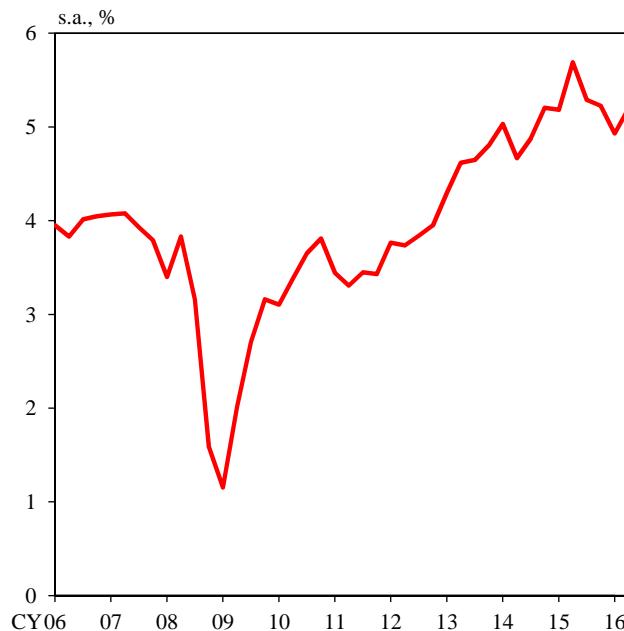
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Chart 1

Corporate Profits and Labor Market Conditions

Ratio of Current Profits to Sales

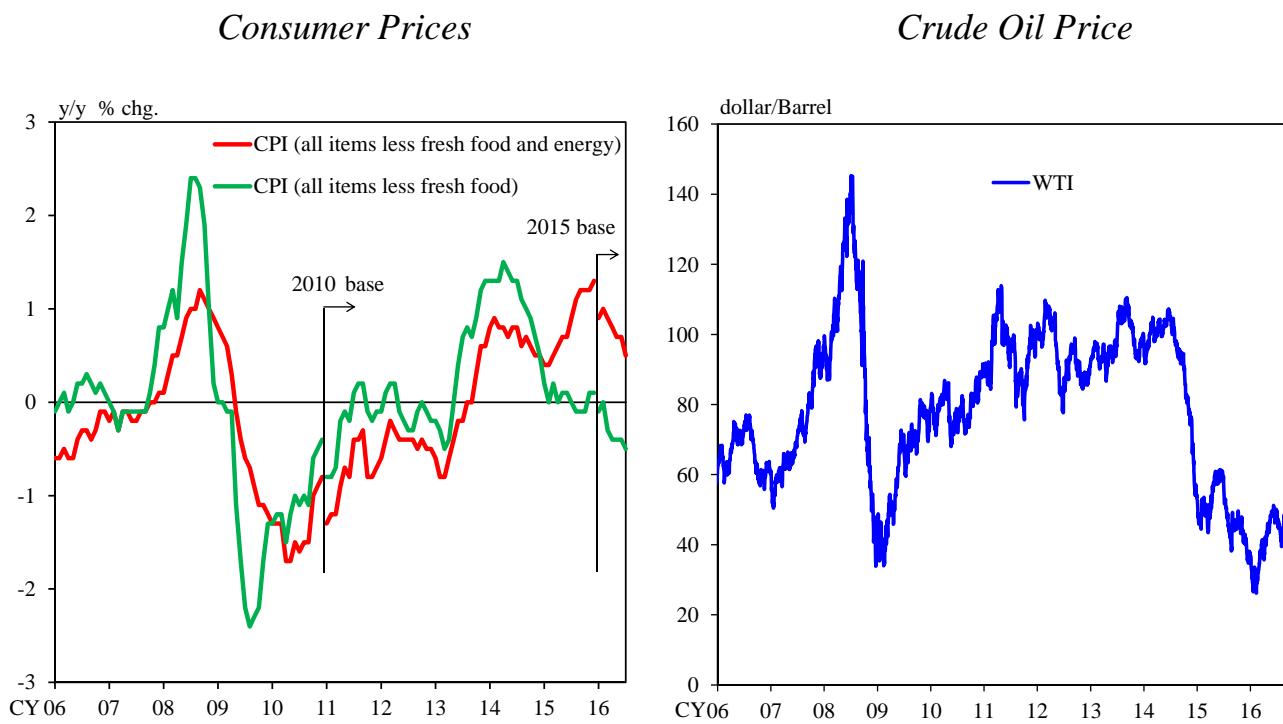


Unemployment Rate



Note: Figures for ratio of current profits to sales exclude “Finance and Insurance.”
Sources: Ministry of Finance; Ministry of Internal Affairs and Communications.

Prices



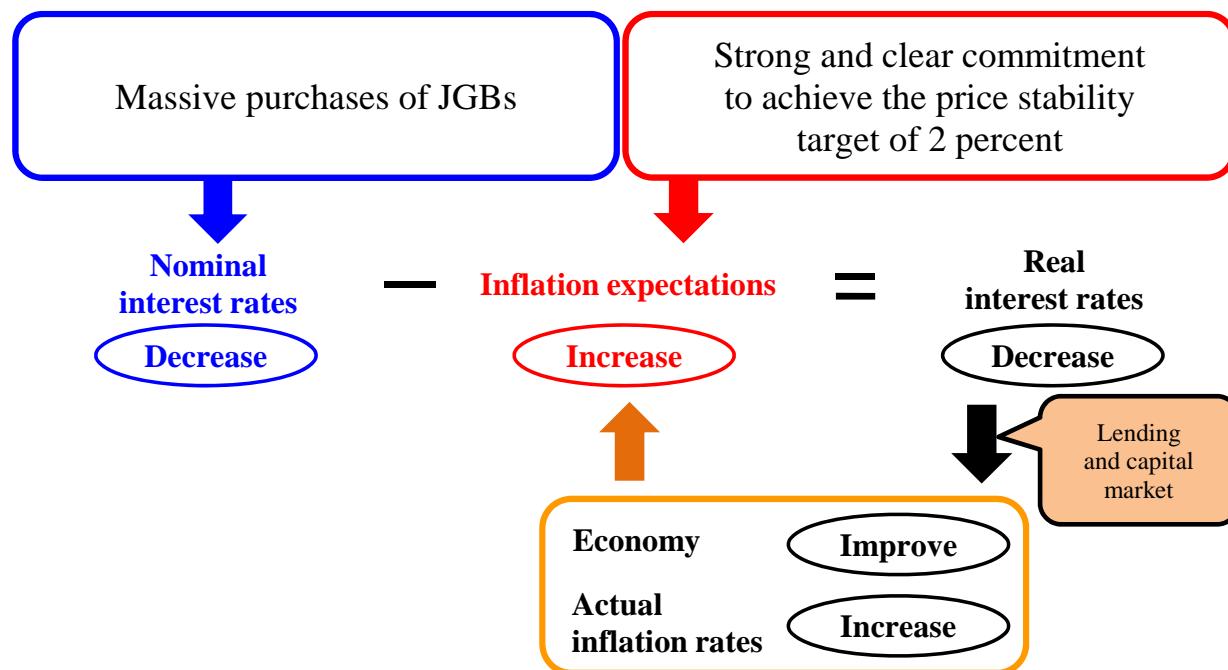
Notes: 1. Figures for the CPI (all items less fresh food and energy) are calculated by the Research and Statistics Department, Bank of Japan.

2. Figures for the CPI are adjusted to exclude the estimated effects of changes in the consumption tax rate.

Sources: Ministry of Internal Affairs and Communications; Bloomberg.

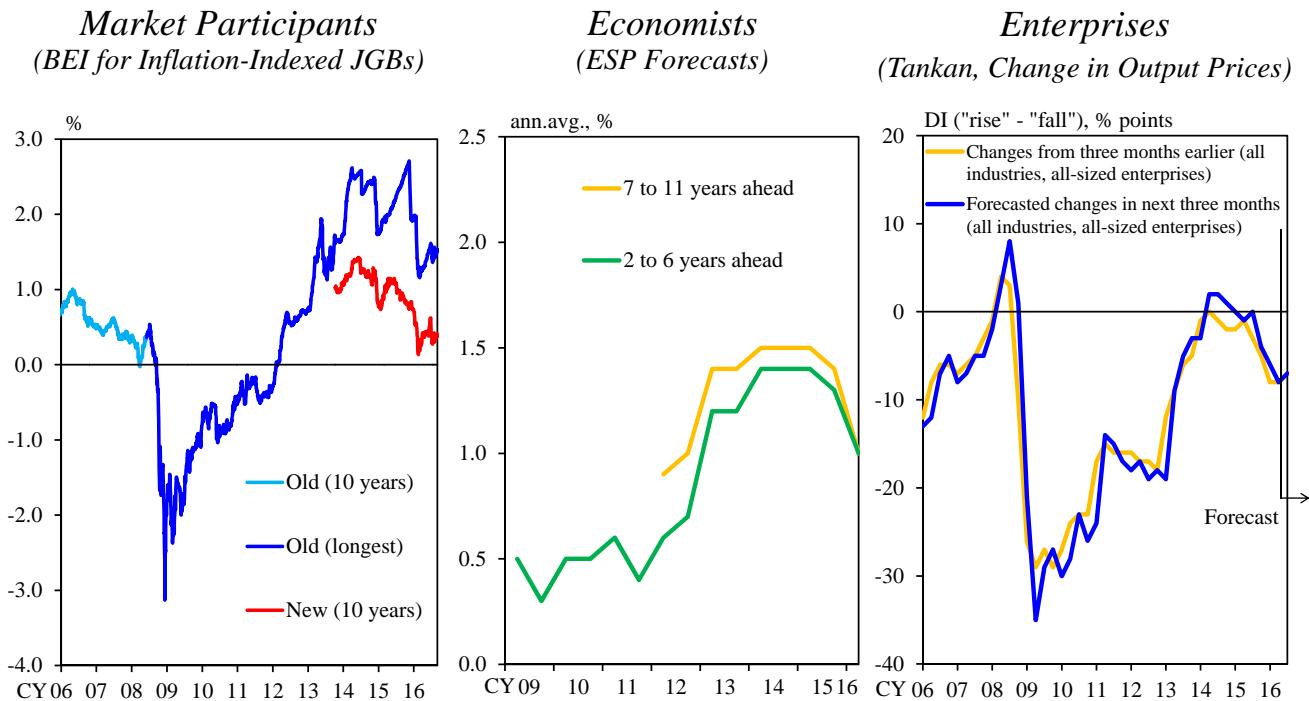
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Mechanism of Quantitative and Qualitative Monetary Easing



3

Inflation Expectations



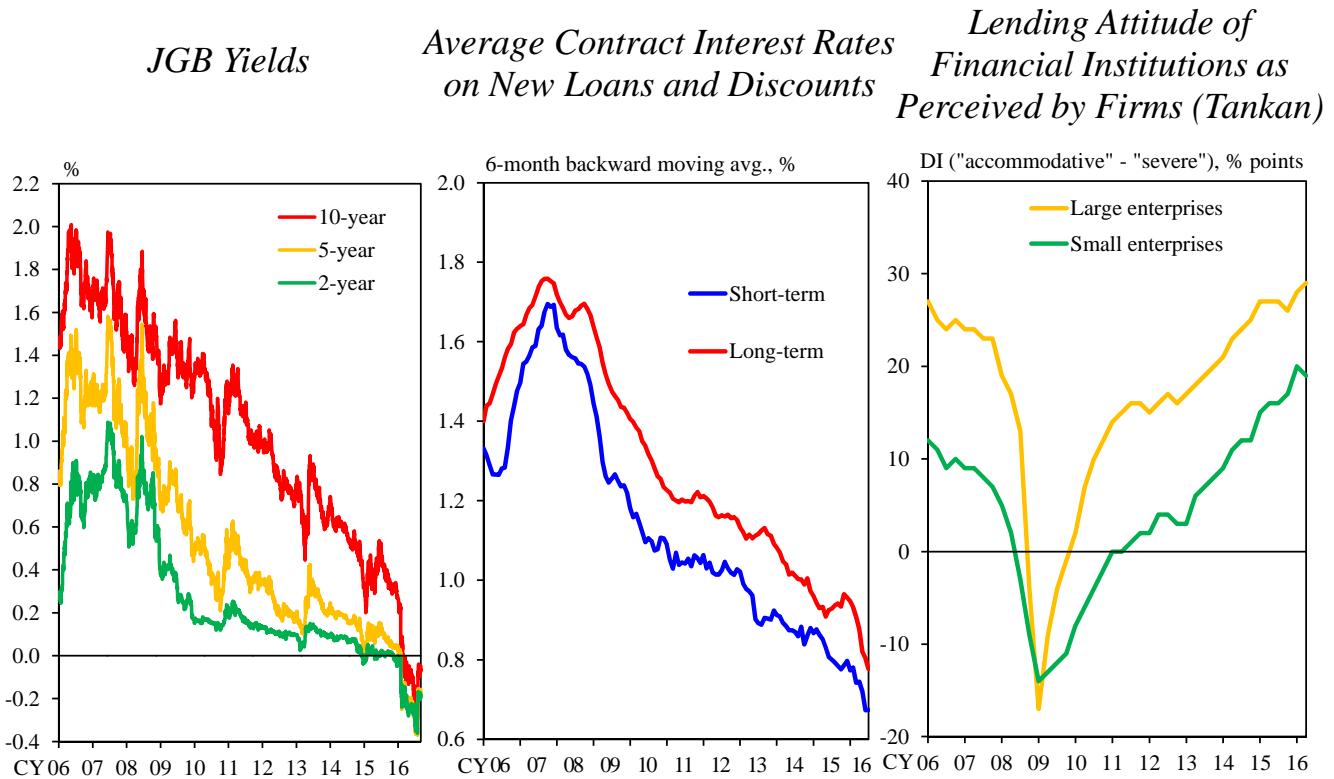
Notes: 1. BEI (break-even inflation) rates are yield spreads between fixed-rate coupon-bearing JGBs and inflation-indexed JGBs. Inflation-indexed JGBs issued since October 2013 are designated as "new," while the rest are designated as "old." Figures for "old (longest)" are calculated using yield data for issue No. 16 of inflation-indexed JGBs, which matures in June 2018.

2. Figures for the "ESP Forecast" are compiled every June and December, and exclude the effects of the consumption tax hikes.

Sources: Bloomberg; JCER; Bank of Japan.

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Financial Conditions



Note: Data from the *Tankan* are based on all industries.

Sources: Bloomberg; Bank of Japan.

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