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Bank of Japan

Economic Activity, Prices, and Monetary Policy in Japan

Speech at a Meeting with Business Leaders in Oita

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(English translation based on the Japanese original)

Introduction

Thank you for giving me this opportunity to exchange views with you and for having taken the time to be here despite your busy schedules. It is indeed a great honor to be here today. Please allow me to express my gratitude for your great cooperation with the business operations of the Bank of Japan, particularly of the Oita Branch.

The Bank has implemented quantitative and qualitative monetary easing -- or QQE for short -- since April 2013 and introduced various additional measures such as the negative interest rate policy, yield curve control, strengthening the framework for continuous monetary easing, and clarification of forward guidance for policy rates, all with the aim of achieving the inflation target of 2 percent.

As a result of these measures, Japan's economy has been improving. It is true that the economic expansion has not exactly been robust, reflecting such events as the consumption tax hike in fiscal 2014 from 5 percent to 8 percent, the latest hike in October 2019 from 8 percent to 10 percent, the slowdown in the global economy observed from mid-2015 through early 2016 and from the second half of 2018 to the present, and the downtrend in the working-age population. Nevertheless, the economy has managed to continue its expansion so far.

Today, I would like to explain monetary policy measures conducted by the Bank and what they have achieved. First and foremost, the achievements are obvious. The unemployment rate has declined to its lowest level in nearly three decades and productivity has been increasing. The challenge lies elsewhere; namely, in the fact that prices have not been rising. It is increasingly being argued that interest rates consequently have remained low, eroding banks' profitability. However, I believe that the deterioration in banks' profitability is caused by the structural problem that banks are accumulating more deposits than they can lend. Banks therefore need to deal with this problem. Moreover, if interest rates were raised, this would lead to a decrease in the demand for loans, a decline in prices, an appreciation of the yen, an economic downturn, an increase in bankruptcies (raising banks' credit costs), and so forth. Therefore, raising interest rates would not solve the problem. Considering that the current low interest rates are partly attributable to the deflationary monetary policies

pursued in the past, as I will describe later, the only way out is to maintain the current accommodative monetary policy in order to achieve sustained expansion of economic activity until we see increases in prices and interest rates.

I. Monetary Easing Measures

Table 1 presents an outline of the monetary policy measures conducted by the Bank since April 2013, when it introduced bold monetary policy.

Table 1 Timeline of the Bank's Monetary Policy Measures

Jan 13	**Introduction of the "price stability target" of 2 percent**
Apr 13	**Introduction of QQE** **- Monetary base: increase at an annual pace of about 60 to 70 trillion yen** **- Amount outstanding of the Bank's JGB holdings: increase at an annual pace of about 50 trillion yen**
Oct 14	**Expansion of QQE** **- Monetary base: increase at an annual pace of about 80 trillion yen** **- Amount outstanding of the Bank's JGB holdings: increase at an annual pace of about 80 trillion yen**
Jan 16	**Introduction of "QQE with a Negative Interest Rate"** **- A negative interest rate of minus 0.1 percent is applied to the Policy-Rate Balances in current accounts held by financial institutions at the Bank.**
Jul 16	**"Enhancement of Monetary Easing"** **- Amount outstanding of the Bank's ETF holdings: increase at an annual pace of about 6 trillion yen**
Sep 16	**Introduction of "QQE with Yield Curve Control"** **- Yield curve control** **The Bank will purchase Japanese government bonds (JGBs) so that 10-year JGB yields will remain more or less at the current level (around zero percent). With regard to the amount of JGBs to be purchased, the Bank will conduct purchases more or less in line with the current pace.** **- Inflation-overshooting commitment**
Jul 18	**"Strengthening the Framework for Continuous Powerful Monetary Easing"** **- Introduction of 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** **The yields may move upward and downward to some extent mainly depending on developments in economic activity and prices.** **With regard to the amount of JGBs to be purchased, the Bank will conduct purchases in a flexible manner so that their amount outstanding will increase at an annual pace of about 80 trillion yen.**
Apr 19	**Clarification of 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, at least through around spring 2020, taking into account uncertainties regarding economic activity and prices including developments in overseas economies and the effects of the scheduled consumption tax hike.**
Oct 19	**Introduction of new forward guidance for policy rates** **As for the policy rates, the Bank expects short- and long-term interest rates to remain at their present or lower levels as long as it is necessary to pay close attention to the possibility that the momentum toward achieving the price stability target will be lost.**

As a result of these measures, real interest rates -- nominal interest rates minus expected inflation rates -- have greatly declined due to the decrease in nominal interest rates and the rise in inflation expectations.

The decline in real interest rates has stimulated investment, boosted stock prices in Japan, and led to a depreciation of the yen. Rising stock prices further raise investment and lead households that have become wealthier to increase their consumption expenditure. It is through these channels that economic activity started to improve.

Next, I would like to explain my stance on the new forward guidance introduced in October 2019, which is shown in Table 1. The forward guidance in April 2019 stated that the Bank "intends to maintain the current extremely low levels of short- and long-term interest rates for an extended period of time, at least through around spring 2020." While I thought that clarifying the forward guidance was desirable, I opposed the policy proposal on the basis that the Bank should indicate data-dependent guidance to further clarify its link with the price stability target.[1] Under the new guidance, the Bank "expects short- and long-term interest rates to remain at their present or lower levels as long as it is necessary to pay close attention to the possibility that the momentum toward achieving the price stability target will be lost." Although it is somewhat ambiguous, I voted for this proposal because the guidance became more akin to data-dependent guidance, in which the link to the price stability target is clearer, and allowed for the possibility of a future interest rate reduction. However, I continued to oppose allowing long-term yields to move in a more flexible manner. Since I already have elaborated on my reasons for this in the past, let me move on to the next topic.[2]

II. Achievements of Bold Monetary Easing

Improvement in economic activity can be seen in various fields. There are a lot of indicators that show improvement, such as employment, productivity, fiscal conditions, investment, exports, corporate profits, and wages; moreover, perceptions that the economy is recovering,

[1] For my opinion regarding data-dependent forward guidance, see Yutaka Harada, "Economic Activity, Prices, and Monetary Policy in Japan: Speech at a Meeting with Business Leaders in Yamanashi," Bank of Japan, March 2019.

[2] See the reference cited in footnote 1.

the suicide rate, the income distribution, and women's entry into the labor market provide further indications of improvement.[3] Of these indicators, I would like to talk today about the improvements in employment, productivity, and fiscal conditions.

Improvement in Employment

The improvement in employment is clear from the rise in the active job openings-to-applicants ratio, the decline in the unemployment rate, the increase in the number of employees, and other indicators. The increase in the number of employees is due to the rise in the employment rates of women and the elderly in particular. While there remains the issue that many of the women and the elderly are not regular but non-regular employees and only work short hours, the situation certainly is an improvement from the past. In an aging society, the fact that the employment rate of the elderly actually has risen holds great importance. The problem with an aging population is that the number of people who cannot work because of old age is increasing relative to the number of working-age people. It is worrying that it seems the ratio of the elderly (those aged 65 and over) to the working-age population (those aged 15-64) will rise from 47 percent in 2018 to 70 percent in 2045 (and then further rise moderately to 75 percent in 2065). However, if we assume that the working-age population comprises those aged 15-69 and the elderly population consists of those aged 70 and over, the ratio of the elderly to the working-age population will reach only 49 percent in 2045 and 55 percent in 2065. Looked at this way, the increase in the employment rate of the elderly brought about by monetary easing can be regarded as good news for Japan's aging society.

Next, I would like to look at the employment situation, focusing on the employment environment for the young. Chart 1 shows the unemployment rate, the youth unemployment rate, and the job offer rates for university students as of October and December of the year before they graduate and as of February and April of the year of graduation.[4,5] As

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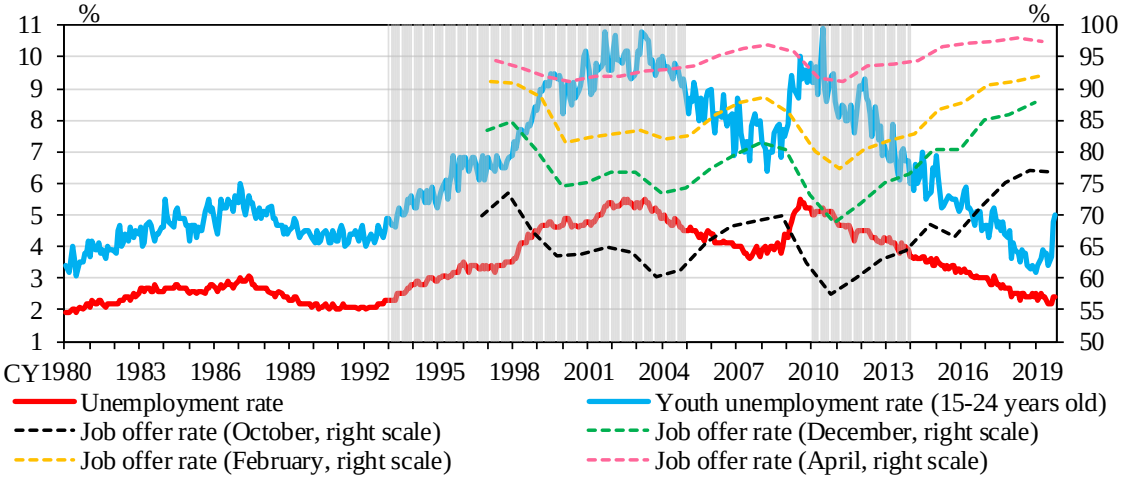
[3] Regarding improvements in these indicators, also see Yutaka Harada, "Economic Activity, Prices, and Monetary Policy in Japan: Speech at a Meeting with Business Leaders in Fukushima," Bank of Japan, November 2017, and Yutaka Harada, "Economic Activity, Prices, and Monetary Policy in Japan: Speech at a Meeting with Business Leaders in Yamanashi," Bank of Japan, March 2019.

[4] The job offer rate is the ratio of students who have received job offers among applicants.

[5] The academic term in Japan starts in April and ends in March.

mentioned earlier, the overall unemployment rate has declined almost consistently, marking 2.4 percent in October 2019. While the youth unemployment rate usually is higher and tends to be more volatile than the overall unemployment rate, this also has been declining steadily. In addition, the job offer rates for the respective months have registered record highs. While figures for the job offer rates are only available from 1997, the rates must have been high during the bubble period and lower after the burst of the bubble, given that they are negatively correlated with the youth unemployment rate. The shaded areas in the chart represent the so-called "employment ice age."[6] If the unemployment rate had been lowered through monetary policy, there might not have been such an employment ice age, or at least it might have been mitigated.

Chart 1 Unemployment Rates and Job Offer Rates



Notes: 1. Job offer rates are for university students that are expected to graduate.
2. Figures for job offer rates (February, right scale) for 1997, 1998, and 1999 are those for March.
3. The shaded areas represent the so-called "employment ice age."

Source: Ministry of Education, Culture, Sports, Science and Technology and Ministry of Health, Labour and Welfare, "*Daigaku, tanki daigaku, kōtō senmon gakkō oyobi senshū gakkō sotsugyō yoteisha no shūshoku naitei jōkyō chōsa*."

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[6] Per its support plan for the employment ice age generation, released on May 29, 2019, the Ministry of Health, Labour and Welfare defined people who graduated from university from around 1993 to 2004 as the "employment ice age generation." The period of a few years from the outbreak of the global financial crisis in 2008 is also regarded as a reemergence of the employment ice age, according to the following report. Genda Yuji et al., *Shūshoku hyōgaki sedai no keizai, shakai e no eikyō to taisaku ni kansuru kenkyū iinkai hōkokusho* (Tokyo: Japanese Trade Union Confederation Research Institute for Advancement of Living Standards, November 2016). Regarding the impacts of the employment ice age, see Saeko Maeda et al., "How does the first job at graduation matter for female workers in Japan?" *ESRI Discussion Paper Series*, no. 234, March 2010.

The Bank started QQE in April 2013, but if it had been introduced earlier, the unemployment rate in Japan without doubt would have remained in the range of 2.0-3.0 percent throughout. Since the unemployment rate from the mid-1990s to 2012 on average was roughly 4.5 percent, the current unemployment rate of 2.4 percent means that the unemployment rate has almost halved. This decline in the unemployment rate also has helped to raise productivity, which I will touch on next.

Productivity Growth

Productivity also has been rising in tandem with the improvement in employment. Since I have talked about this in the past, here I only would like to note that it has been rising.[7] Let me just briefly summarize the reason behind this occurrence. When an economy is in recession, firms curtail investment in physical assets, human resources, and research and development. Young people caught up in the employment ice age missed out on on-the-job training opportunities. Although it is impossible to make up all the lost ground, some of it can be slowly gained over time, helping to gradually raise the productivity of the economy.

Improvement in Fiscal Conditions

Bold monetary easing has stimulated economic activity, increased tax revenues, and improved fiscal conditions. Chart 2 presents the ratios relative to nominal GDP of the general government fiscal balance, gross government debt outstanding, and net government debt outstanding. The GDP ratio of the general government deficit has decreased by 5.6 percentage points from 8.3 percent in fiscal 2012 to 2.7 percent in fiscal 2017, and the GDP ratio of net government debt, which had been increasing sharply, is more or less unchanged at around 121 percent since fiscal 2012.[8]

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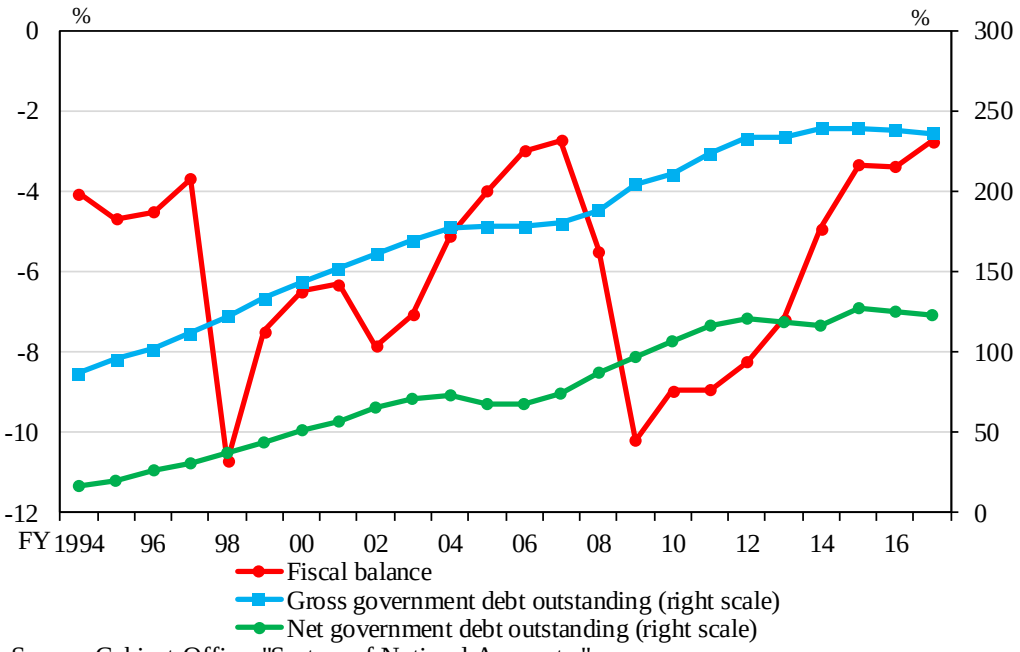
[7] See Harada Yutaka, "Nihon keizai to seisansei: Special Lecture at a Conference Commemorating Daiwa Institute of Research's 200th Release of Japan's Economic Outlook," Bank of Japan, March 2019.

[8] Of the improvement in the GDP ratio of the general government fiscal balance of 5.6 percentage points, 1.5 percentage points were brought about by the consumption tax hike from 5 percent to 8 percent.

Let me explain the importance of net government debt.[9] Net government debt is calculated by subtracting government financial assets from gross government debt. It used to be argued that, although Japan's gross government debt was substantial, this was not a problem because net government debt was not that large. However, at present, net government debt is actually also fairly large. Net government debt matters when considering the possibility of government debt default. While some argue that, given the large amount of government debt, even a small increase in interest rates could cause serious problems, it is important to think about the impact in terms of net debt. The reason is that when interest rates rise, interest receipts on financial assets held by the government also increase, partly cancelling out the impact on gross government debt.

Chart 2 General Government Fiscal Balance, Gross Government Debt, and Net Government Debt (Ratios Relative to Nominal GDP)



Source: Cabinet Office, "System of National Accounts."

[9] The following articles also note the importance of net debt. Tomoyuki Nakajima and Shuhei Takahashi, "The optimum quantity of debt for Japan," *Journal of the Japanese and International Economies*, vol. 46, issue C, 17-26, December 2017. Koji Nakamura and Tomoyuki Yagi, "Fiscal Conditions and Long-term Interest Rates," *Monetary and Economic Studies*, vol. 35, November 2017.

III. Why Interest Rates Are Low

Since the introduction of QQE, employment has been improving, productivity has been rising, and fiscal conditions have been improving. What, then, is at the core of the problem of bold monetary policy? Simply put, prices have not been rising. Prior to the introduction of QQE, the Bank decided that it would aim to achieve inflation of 2 percent. However, the year-on-year rate of change in the consumer price index (CPI) excluding fresh food for October 2019 is 0.4 percent, a long way off the target.[10] You might think that it is not a problem that prices are not rising if employment is improving, productivity is rising, and fiscal conditions are improving. However, if prices do not rise, neither will interest rates, which poses a problem for financial institutions.[11]

When asked "Why are interest rates in Japan low?" one might answer: "Because that is the Bank's very intention." However, this is not necessarily the case. From a theoretical perspective, maintaining interest rates at low levels will cause the economy to overheat and prices to rise, possibly resulting in inflation that significantly exceeds 2 percent. In order to avoid this, interest rates will need to be raised. Alternatively, they will rise over time in due course. In a nutshell, in the long term, a low interest rate policy brings about increases in prices and nominal interest rates. Looked at from a different angle, what this means is that Japan fell into deflation and a situation of low interest rates because interest rates were not

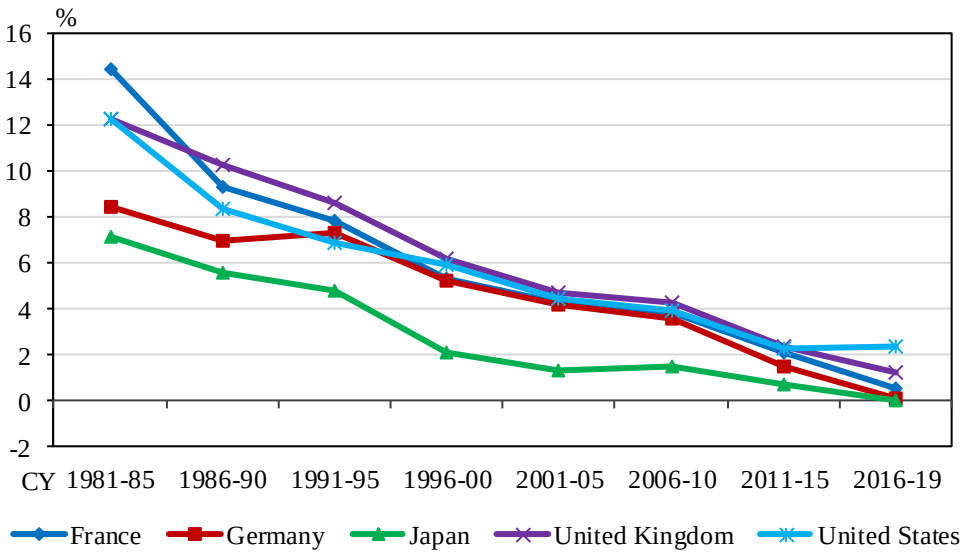
[10] According to the Statistics Bureau, Ministry of Internal Affairs and Communications, the CPI figure becomes 0.2 percent when the effects of the consumption tax hike and the introduction of free preschool education are excluded.

[11] I have explained the importance of the 2 percent price stability target in the section titled "Why Is the 2 Percent Inflation Target Important?" in Yutaka Harada, "Economic Activity, Prices, and Monetary Policy in Japan: Speech at a Meeting with Business Leaders in Nagasaki," Bank of Japan, May 2019.

lowered sufficiently during economic downturns in the past.[12] Moreover, this decline in interest rates is actually not unique to Japan, but rather a global phenomenon.

Chart 3 shows 10-year government bond yields for major countries. For visual clarity, each point represents a five-year average. Interest rates have been declining globally and, although not visible in the chart, 10-year government bond yields have been negative in Japan, Germany, and France since around the middle of 2019.

Chart 3 10-Year Government Bond Yields for Major Countries

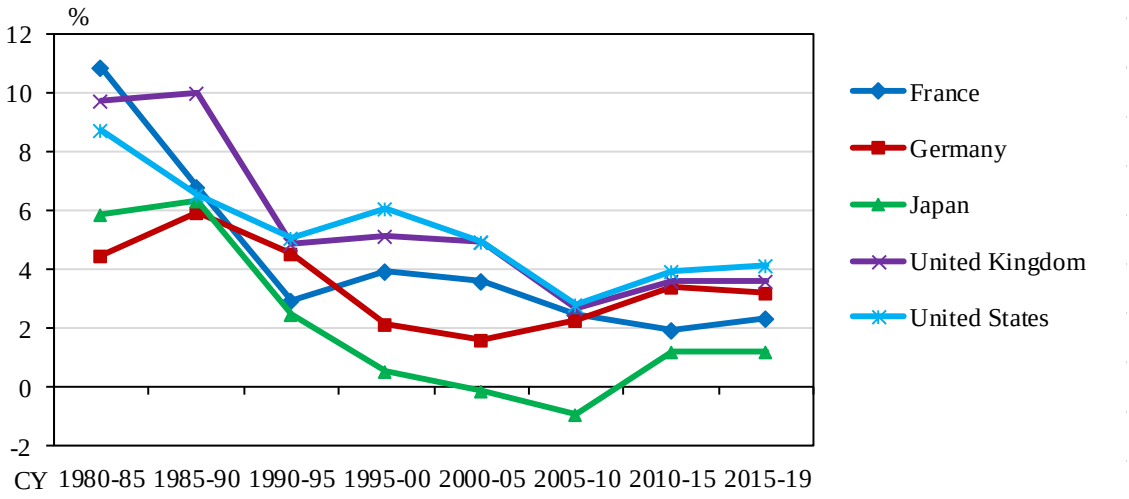


Note: Figures for Japan through 1988 are based on those of the Cabinet Office.
Sources: OECD; Cabinet Office.

[12] Harada Yutaka, "Naze nihon no kinri wa hikui no ka," *Keiki to saikuru*, no. 62, Japan Association of Business Cycle Studies, November 2016. Yutaka Harada, "Economic Activity, Prices, and Monetary Policy in Japan: Speech at a Meeting with Business Leaders in Ishikawa," Bank of Japan, July 2018. Hibiki Ichiue and Yuhei Shimizu, "Determinants of long-term yields: A panel data analysis of major countries," *Japan and the World Economy* 34-35 (2015) 44-55. While this paper argues that declines in long-term interest rates can be explained by decreases in expected inflation rates and expected labor productivity growth rates, the same can be said of declines in observed inflation rates and labor productivity growth rates as these are also capable of pushing down the expected rates. Ben S. Bernanke, "Why are interest rates so low?" Brookings Institution, March 30, 2015, https://www.brookings.edu/blog/ben-bernanke/2015/03/30/why-are-interest-rates-so-low/.

Low interest rates reflect low rates of both real economic growth and inflation. Let us look at the nominal GDP growth rate, which is the sum of these two rates. As can be seen in Chart 4, nominal GDP growth rates of major countries have been declining on the whole.

Chart 4 Nominal GDP Growth Rates of Major Countries

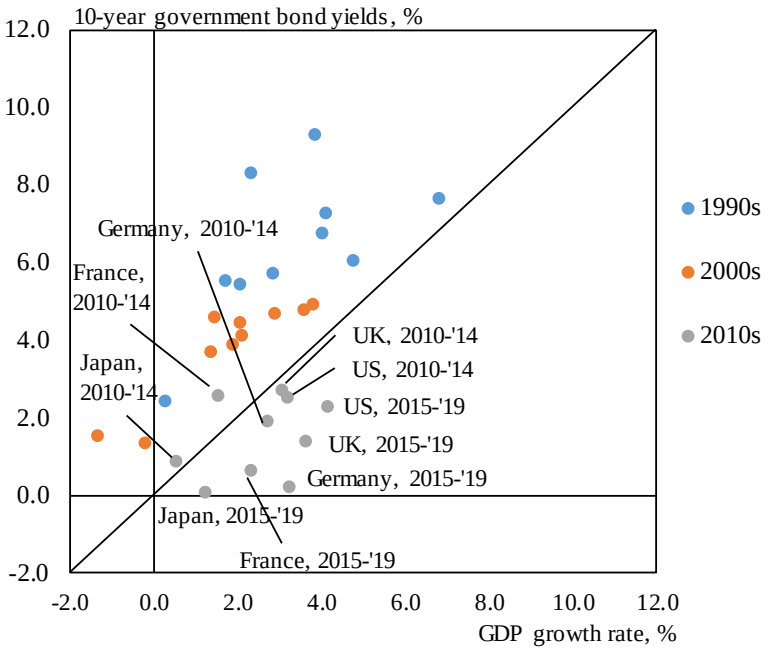


Note: Figures for Germany from 1990 to 1995 are calculated by using the data from 1991 to 1995, since there is a data gap between 1990 and 1991 due to German Unification.

Source: IMF, "World Economic Outlook Database."

While nominal GDP growth rates have indeed been declining, this alone cannot fully explain the decline in interest rates. In Chart 5, the vertical axis represents 10-year government bond yields, while the horizontal axis represents the nominal GDP growth rates of major countries. Each dot in the chart depicts the five-year average for each country from 1990 to the present. Up until the 2000s, interest rates moved in sync with nominal GDP growth rates and were around 2 percentage points higher than them. However, looking at the trend since the second half of the 2010s, interest rates have fallen 2 percentage points below nominal GDP growth rates and have failed to rise substantially when nominal GDP growth rates increased to some extent. However, because it is only since the start of 2010 that interest rates have been below nominal GDP growth rates, the situation might change quickly and interest rates may rise swiftly if nominal GDP growth rates increase. Therefore, we might not have to expect the situation of the past five to ten years to last forever.

Chart 5 Nominal Interest Rates and Nominal GDP Growth Rates



Note: Dots in the chart show 5-year average of 10-year government bond yields and nominal GDP growth rates.
Sources: IMF, "World Economic Outlook Database"; OECD.

Why did interest rates fall more than the nominal GDP growth rate? Proposed explanations for the decline in interest rates, in addition to the decline in the rates of inflation and real GDP growth, include changes in the saving-investment balance.[13] Various factors are said to be responsible for such changes: demographic forces; higher inequality; the glut of precautionary saving by emerging markets; the decline in the relative price of capital; the high profitability of large IT firms and their large cash reserves; lower public investment; the shortage of safe assets; and the improvement in fiscal conditions.[14] Some argue that the recent decline in interest rates is cyclical and changes in the saving-investment balance might be due to the decline in investment and increase in savings, and that this has led to the decline in interest rates.

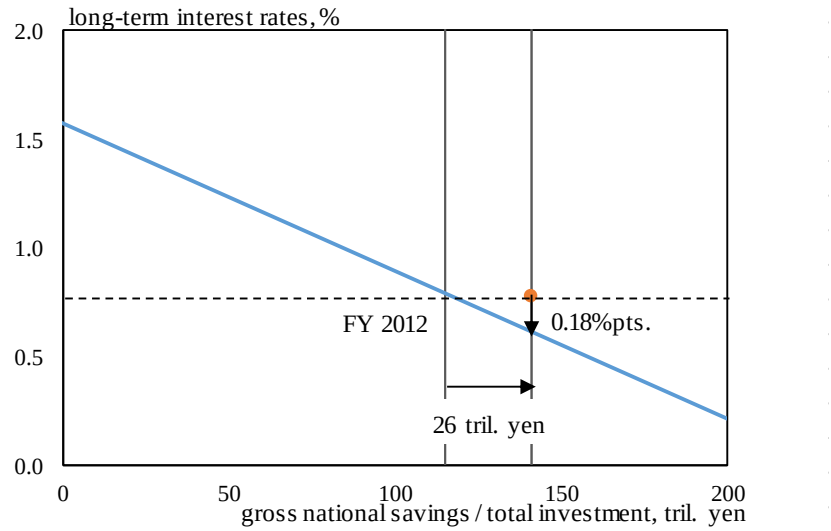
[13] See Lukasz Rachel and Thomas D. Smith, "Are Low Real Interest Rates Here to Stay?" *International Journal of Central Banking*, vol. 13 (3), 1-42, September 2017, and other articles through page 117 in this volume of the journal.

[14] With regard to the shortage of safe assets, see Ricardo J. Caballero, Emmanuel Farhi, and Pierre-Olivier Gourinchas, "The Safe Assets Shortage Conundrum," *Journal of Economic Perspectives*, vol. 31 (3), 29-46, Summer 2017.

Among the reasons behind the decline in interest rates mentioned earlier, I will focus on the effects of the improvement in fiscal conditions in Japan. First, let us assume that interest rates in Japan are determined by the saving-investment balance in Japan. Another assumption is that a change in fiscal conditions does not affect private-sector decisions with regard to saving and investment.

In fiscal 2012, long-term interest rates in Japan were 0.8 percent, while gross national savings, which equal total investment -- the sum of domestic and foreign investment -- amounted to 115 trillion yen. The general government deficit declined by 26 trillion yen from fiscal 2012 to fiscal 2017. Due to this decline, gross national savings should have increased by 26 trillion yen. Chart 6 shows the relationship between interest rates and gross national savings, which equal total investment. As the interest elasticity of savings is said to be small, the supply curve of savings is almost vertical. Meanwhile, the investment demand curve is drawn assuming that the interest elasticity of investment is one. The chart indicates that interest rates declined by 0.18 percentage points due to the decline in the general government deficit by 26 trillion yen.[15]

Chart 6 Fiscal Balance and Interest Rates



Sources: Cabinet Office, "System of National Accounts"; Bloomberg.

[15] Nakamura and Yagi ibid. (see footnote 9) estimates that, in the case where the ratio of net government debt to GDP exceeds 90 percent, a 1 percentage point increase in the ratio of fiscal deficit to GDP would push up nominal long-term interest rates by 0.26 percentage points. This estimate is around 8 times as much as the one presented in my speech today.

While it is difficult to judge whether this decline in interest rates is large or small, what is clear is that, if the government deficit led to a rise in interest rates, this would pose a major problem, as it would reduce important investment and damage Japan's economy in the future; on the other hand, if the government deficit does not lead to a rise in interest rates, it also does not reduce important investment, and would not be a major problem.

Arguments That Low Interest Rates Cause Problems

In addition to the debate surrounding low interest rates mentioned earlier, it has been argued that the low interest rate policy allows inefficient firms to survive, leading to a decline in productivity and, consequently, a decline in the natural rate of interest. This could be called the "zombie firm argument" -- that is, the argument that low interest rates artificially keep inefficient firms alive.[16] Yet another argument is that the current low interest rates are due to low interest rates in the past that brought about a "frontloading" of demand and resulted in a further decline in interest rates.[17]

First of all, it needs to be noted that these arguments focus on real, not nominal, interest rates. Thus, as for the first argument that the low interest rate policy allows inefficient firms to survive, leading to a decline in productivity, this is implausible given that productivity has been rising as a result of QQE. In addition, if inefficient firms were forced to exit the market because of higher interest rates, this would lead to employment issues. In contrast, Japan's economy is currently facing labor shortages due to monetary easing. If inefficient firms are to be forced to exit the market, it is much better if this occurs through labor shortages and upward wage pressures.

With regard to the second argument that the current low interest rates are merely the result of a "frontloading" of future demand, both production and people's incomes have been

[16] There had been claims that, due to low interest rates, inefficient firms are able to survive. For example, see "Zonbi kigyō to wa hatan jōtai 'oi kashi' de enmei," *Nikkei*, February 9, 2019 and Kamei Katsuji, "Zonbi o amayakasu nichigin," *Nikkei*, October 4, 2019. These referred to the following analysis indicating that the increase in the number of zombie firms is linked to the effects of lower interest rates: Ryan Banerjee and Boris Hofmann, "The rise of zombie firms: causes and consequences," *BIS Quarterly Review*, Bank for International Settlements, September 2018.

[17] See, for example, Okina Kunio, *Kinri to Keizai* (Tokyo: Diamond, Inc, 2017), 174-177.

rising. I assume that when people have higher incomes, they are likely to demand a higher standard of living in the future as well. Owing to the stable exchange rate environment brought about by QQE, more foreign visitors have been coming to Japan. I feel that it is rather strange to think that Japan has merely attracted visitors that were expected to come in the future and that, since these visitors will not come in the future, this would lead to a decline of the economy in the future.

When the Bank introduced QQE, I assumed that achieving the inflation target of 2 percent would not take much time. If the inflation rate were to approach 2 percent, the Bank would have to raise interest rates. I therefore did not expect interest rates to stay at around 0 percent or in negative territory for such a long period of time. It seems that many economists had similar expectations.[18]

Let me go back to the discussion regarding the factors underlying low interest rates. Given that interest rates have fallen 2 percentage points below nominal GDP growth rates, the decrease in the fiscal deficit mentioned earlier cannot fully explain the low interest rates. In fact, the reasons why interest rates have fallen so much are not yet fully understood. However, given that interest rates in the United Kingdom and the United States -- where inflation rates of around 2 percent had been successfully maintained -- have remained higher than interest rates in Japan, it is clear that Japan's past deflationary monetary policy has led to the decline in interest rates. In addition, it is only for the last five or ten years that interest rates have been 2 percentage points below nominal GDP growth rates. Therefore, we might not have to expect this situation to last forever.

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[18] For example, Hayakawa argues that private banks currently hold huge amounts of government bonds. In terms of quantity, major banks have substantial amounts of government bonds, but the duration of their bonds is little more than two years. Meanwhile, the duration of the bonds held by regional financial institutions is around four years -- longer than that of bonds held by major banks. Since there is little demand for credit from regional financial institutions, such institutions' only option is to buy bonds, which extends the duration of their bonds. If prices of government bonds were to fall, it is regional financial institutions that would incur the greatest losses, not the major banks. For details, see Hayakawa Hideo, "Waga kuni kin'yūgyō no kadai," *Shin kokusaku*, Research Institute for National Policy, November 2012. This argument is based on the assumption that monetary easing eventually increases interest rates. Also, the idea that government bonds with a duration of four years entail risks reflects the assumption that, in about four years, prices will rise, thereby leading to an increase in interest rates.

IV. Low Interest Rates and Banks' Profitability

Although it is not clear why, interest rates have fallen globally and are negative, not only in Japan but also in many European countries. Banks are dissatisfied with low interest rates. While these have improved the employment situation and boosted productivity, it frequently is argued that they undermine banks' profitability.[19]

Functions of Banks

Before considering the relationship between low interest rates and banks' profitability, I would like to explain banks' functions. How do banks make profits? Textbooks on finance define the functions of banks as consisting of information production and asset transformation and explain banks' profits as the result of performing these two functions.[20]

As for information production, banks, on behalf of depositors, examine borrowers' future profits from investments and the quality of their assets, assess whether the projected outcome has been achieved after a loan was made, and check whether borrowers' accounting information is correct. Banks demand collateral and/or personal guarantees from borrowers. Sufficient collateral and personal guarantees alleviate banks' burdens of monitoring firms' accounting information and therefore reduce the cost of information production. Since depositors cannot demand collateral or personal guarantees, the function of information production falls on banks. If firms provided more detailed accounting information, given that they are sufficiently large, they could obtain funding through capital markets and would not have to rely on bank lending. The reason that in practice most large firms in Japan borrow from banks is that banks provide inexpensive lending to them. This means that lending to large firms is less profitable for banks.

While it is very difficult to project future profits to begin with, there are certain firms other than banks that can project the future profits of another firm more accurately. For instance, a large assembler to a certain extent knows the sales figures of its suppliers. The simple reason is that the assembler procures orders from the supplier. Similarly, trading and other

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[19] See, for example, "Mienu 'deguchi,' fukusayō zōdai: ginkōkai ni takamaru fuman -- mainasu kinri 3-nen," Jiji Press, Ltd., February 15, 2019, https://www.jiji.com/jc/article?k=2019021500887&g=eco.

[20] See, for example, Iwata Kikuo, "Kin'yū chūkai to kigyō kin'yū," chapter 4 in *Kin'yū* (Tokyo: Toyo Keizai Inc., 2000).

companies that take part in the management of particular firms may also be better placed to project their future profits. Banks compete with such firms with information advantages. Even if the firms they lend to are very successful, the margin that banks can earn is very small. Since banks are not allowed to invest depositors' money, they cannot invest in venture firms and earn returns that are considerable multiples of their outlays.

If banks try to assess the future profits of a firm, which are unknowable, it is the person with the greatest authority that ultimately makes the assessment. If a firm is not managed properly, it likely would face a situation illustrated in the world of novels -- that is, the credit examination division would stop functioning and the human resources division, which is responsible for assessing personnel, would engage in internal power struggles.[21] If banks instead provide loans based only on observable and objective criteria such as collateral, they could cut costs by substantially downsizing their credit examination division and/or human resources division. That is, banks should lend based on observable and objective criteria and examine future profits of firms only in exceptional circumstances.[22] Even by focusing only on the examination of observable and objective criteria, banks would be doing something that depositors cannot.

Asset transformation -- banks' other function -- consists of two components. The first is the act of accumulating short-term deposits and transforming them into long-term lending. Since borrowers use funds to buy machinery or construct buildings, they cannot pay back the money on short notice. Banks can lend over the long term by accumulating deposits from a large number of depositors. The second component is the transformation of loan assets, which entail the possibility of default, into risk-free deposits. As a result, depositors can rest assured that their funds are safe when entrusting them to banks. This means that

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[21] Although fiction, similar situations are vividly described in books focusing on banks written by Jun Ikeido, such as, *Oretachi Baburu Nyūkōgumi*, (Tokyo: Bungeishunju Ltd., 2004), *Shairokku no Kodomotachi*, (Tokyo: Bungeishunju Ltd., 2006), and *Rosujene no Gyakushū*, (Tokyo: Bungeishunju Ltd., 2012). The stories are exaggerated but are more or less similar to fragmentary information that I gained personally.

[22] Observable and objective criteria include deposits and withdrawals from firms' accounts as well as deposits on housing rent. There also are cases where lenders, not banks, manage the accounts for deposits on housing rent.

banks transform assets that involve risks into safe assets through the function of information production.

To what extent can banks maintain the amount of loans by utilizing these functions? There are some landowners that only have a small amount of deposits, but their deposits would increase if they succeed in their business. If the quality of people's lives improves, the number of people who can let their assets lie idle over the long term would increase, leading to a narrowing of the spread between short- and long-term interest rates. As some borrow money even at high interest rates, banks might be able to make loans to them at such rates. However, these people do not represent the majority.

Banks can make loans even without sufficient collateral. If a borrower makes a certain down payment to start up a shop, banks can place confidence in the borrower's diligence and steadiness. Even if the amount of collateral is not sufficient for banks, the borrower certainly should be considered serious enough, since all the efforts made over several years would be in vain upon failure. In the case of housing loans, a 10-20 percent down payment might be insufficient for banks. However, it seems that such a down payment level would not cause problems because borrowers would want to keep their houses at all costs.

Looking at banks' assets, as of end-September 2019, of the total loans made by domestically licensed banks of 509 trillion yen, 324 trillion yen was for corporations (including 206 trillion yen for small enterprises) and 144 trillion yen for households.[23] As for loans to households, as of end-September 2019, the amount of housing loans was 131 trillion yen and that of consumer loans was 10 trillion yen.[24] I assume that the total amount of loans -- those to small enterprises and households combined -- with which banks might be able to gain profits is around 350 trillion yen. Though based on different statistics, as of end-August 2019, of the total loans of 485 trillion yen, the amount of loans made at interest rates of 5 percent or more only stood at 5.9 trillion yen.[25]

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[23] Bank of Japan, *Deposits, Vault Cash, and Loans and Bill Discounted*.

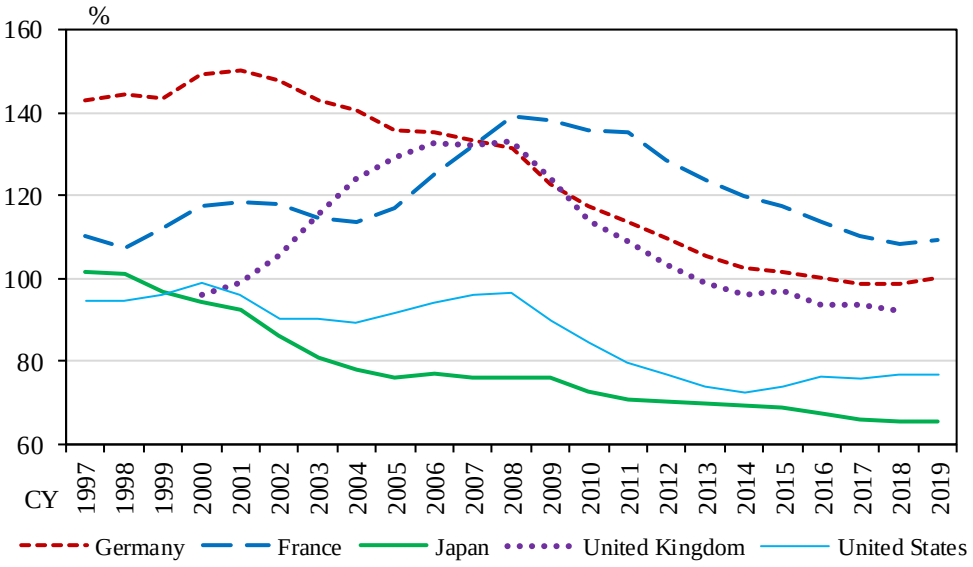
[24] Bank of Japan, *Loans to Households*.

[25] Bank of Japan, *Loans and Discounts Outstanding by Interest Rate*.

Increase in Deposits in Excess of the Increase in Loans at Japanese Banks

An increase in deposits in excess of the increase in loans at banks also is a problem. Chart 7 shows the loan-to-deposit ratios (calculated by dividing loans by deposits) of banks in Japan, the United States, the United Kingdom, Germany, and France. In Japan, the ratio, which had been at around 100 percent through the end of the 1990s, declined sharply thereafter and is hovering at around 60 percent at present. On the other hand, the ratios in the other countries, albeit declining, have remained at around 100 percent except in the United States. Banks in those countries accumulate deposits only to the extent necessary to make loans. Even then, banks in Europe have had difficulties maintaining profitability. For banks in Japan that have been accumulating an excessive amount of deposits, the situation should become even more severe.

Chart 7 Loan-to-Deposit Ratios of Banks in Major Countries



Sources: Bank of Japan; Bank of England; ECB; FRB.

From the time of the introduction of QQE up until September 2019, loans by domestically licensed banks, which had been on a declining trend, increased by 79 trillion yen while deposits increased by as much as 161 trillion yen.[26] In this context, news reports suggest that financial institutions are struggling to attract personnel and that staff members are

[26] Bank of Japan, *Financial Institutions Accounts*.

retiring early.[27] While this is reported as though it is troublesome, it consequently could lead to a reduction in the number of personnel contributing to the collection of more deposits than needed and in that of branches. I think that this would increase the productivity of the banking sector, and thus of Japan's economy as a whole.

There are concerns that, facing difficulties in expanding lending while accumulating too much deposits, banks in Japan do not seem to be trying to reduce deposits, but instead are relying on riskier lending or investment and recommending that their customers buy investment trusts rather than make deposits. Estimates by the Financial Services Agency (FSA) of customers' total return on investment trusts (after fees and commissions) suggest that, as of end-March 2019, 34 percent of customers of all investment trust distributors face negative total returns.[28] Given that the average holding period of such funds is thought to be around three years and that stock prices in major countries have risen during that period, including in Japan, where the Nikkei 225 Stock Average has risen by around 25 percent, the return on most funds should be positive. This means that the negative returns must be due to high fees and commissions. As highlighted by the FSA, some of the distributors of investment trusts seem to be encouraging their customers to churn between funds in the short term to gain profits from transaction fees.[29] Moreover, looking at the costs and returns of investment trust funds by type of distributor, I find that banks and securities firms engaged in face-to-face sales tend to sell trusts involving high costs and low returns. In contrast, independent investment trust firms and securities firms specializing in sales via the internet tend to sell trusts at a lower cost and that offer higher returns.[30]

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[27] See, for example, the 2-day series, Minami Takero and Nakatani Shogo, "Chigin haran jinzai kokatsu no kiki," *Nikkei*, February 20 and 21, 2019.

[28] For details, see Financial Services Agency, "Publication of the monitoring results pertaining to the implementation status of customer-oriented business conduct taken by financial institutions" (the full text is available only in Japanese), November 2019, https://www.fsa.go.jp/en/newsletter/weekly2019/367.html. In fact, this situation where customers are making losses in their investment trusts has even made it into works of fiction, such as *Shairokku no Kodomotachi* (p.16) by Jun Ikeido, mentioned earlier.

[29] Toshihide Endo, "To turn challenges into opportunities," Speech at the 34th Annual General Meeting and Reception of the International Bankers Association of Japan, Financial Services Agency, November 2018.

[30] See footnote 28 for the reference.

Some financial institutions in Europe, where interest rates also are low, are in the process of significantly enhancing their business efficiency due to the prolonged sluggishness of profits. Since drastic employment adjustments in Europe seem to be difficult due to factors such as labor practices, some financial institutions are revising their organizational structure globally, including in Japan. Given that Japan is facing labor shortages due to bold monetary easing, such revisions should be easier than in Europe. If banks successfully can downsize their number or their asset holdings, they would become profitable. In capitalism and a market economy, firms need to switch from unprofitable to profitable business areas. If banks release human resources and capital while making this shift, this will have a positive impact on Japan's economy as a whole. Although I recognize the difficulty of giving up business in Japan, if banks -- which should form the core of capitalism and the market economy -- understand this point, I believe productivity of the economy will improve greatly.[31]

Concluding Remarks

Nearly seven years have passed since the introduction of bold monetary easing in 2013, and almost five years have passed since I was appointed as a Member of the Policy Board of the Bank. Even now, achieving the inflation target of 2 percent seems to be a long way off. Interest rates have not been rising due to low inflation. However, owing to bold monetary easing, economic activity clearly has improved. Employment, especially youth employment, has improved. Had the Bank implemented bold monetary easing since the 1990s, the employment ice age could have been avoided. There also have been various other positive developments, as I mentioned earlier.

However, since interest rates have not been rising, banks, which believe their profits would increase with higher interest rates, express growing dissatisfaction. In my opinion, banks' low profitability is caused by the structural problem that they are accumulating more deposits than they can lend and the banking sector as a whole therefore will not be able to maintain its current size. As shown in Chart 5, it is only over the past ten years or so that

[31] The solution of shrinking the size of banks is not considered at all in the novels by Jun Ikeido mentioned earlier. I fully understand that it is difficult to implement in practice what is difficult even in the world of fiction.

interest rates have failed to rise to any meaningful extent, and thus it might be premature to conclude that it is not possible to see a return to the former situation. If the Bank were to raise interest rates now, this would revive the deflationary mindset and consequently further delay increases in prices and interest rates. This would not benefit the banking sector either. Some argue that the Bank should raise interest rates soon because Japan's economy is in a good state given the demographic trends. However, it was only after the introduction of QQE that real GDP per working-age person started to increase; therefore, raising interest rates would just throw us back. That is, raising interest rates would lead to the following: an appreciation of the yen; falling stock prices; declines in exports, investment, consumption and employment; and the reemergence of the employment ice age.

Thank you for your attention.