

Minutes of the Meeting of JGB Investors (80th Round)

1. Date: Monday, June 24, 2019 (1:25 p.m. to 2:20 p.m.)
2. Place: Special Conference Room 1, Central Common Government Offices No.4
3. Gist of Proceedings

1. Issuance amount of Inflation-Indexed Bonds in the July-September quarter 2019

▶ The Financial Bureau gave the following explanation about the issuance amount of Inflation-Indexed Bonds in the July-September quarter 2019:

▪ As shown on page 3, the JGB Issuance Plan for FY2019 announces issuance of Inflation-Indexed Bonds four times a year with the amount of ¥400 billion per each time while stating “the issuance amount may be adjusted in a flexible manner in response to market circumstances and demands of investors, which will be determined based on discussions with market participants”. Therefore, we would like to hear your opinions about the amount of issuance in the July-September quarter 2019 at today’s meeting.

▪ In the April-June quarter 2019, as shown on page 4, we conducted an auction of issuance for the amount of ¥400 billion in May, and Buy-Back Auction for the amount of ¥20 billion in each of April and June.

As shown on page 5, the result of the auction of issuance in May was comparable with those of past auctions, with the bid-to-cover ratio at 3.72.

As shown on page 6, the Buy-Back Auction and Outright Purchase of JGBs by the Bank of Japan have resulted in generally similar level as the market rates.

As shown on page 7, despite a decline in interest rates on nominal bonds, the BEI has recently remained almost flat at around 0.2% in the secondary market.

▪ In such circumstances, we asked for your opinions beforehand. While there were some opinions that showed concern about the fact that purchases of Inflation-Indexed Bonds have not been so active as to raise the BEI after the auction of issuance and the expansion of investor base for Inflation-Indexed Bonds is continuously limited, many of the opinions supported maintaining the current amounts of issuance and Buy-Back in the July-September quarter because some investors were purchasing the bonds when they were considered to be undervalued.

▪ In view of such circumstances and these opinions, as shown on page 8, we are considering an issuance auction of Inflation-Indexed Bonds for the amount of ¥400 billion and carrying out a Buy-Back Auction for the amount of ¥20 billion in August in the July-September quarter, which is in the same amount as the April-June quarter. In addition, as stipulated in the proviso, we will keep watching the market environment and other factors closely and take appropriate actions as the debt management office in accordance with the situation.

▪ This proposal was also discussed at the Meeting of JGB Market Special Participants last Friday and endorsed by most of the attendees.

▪ We consider the development of the Inflation-Indexed Bond market to be an important goal of the debt management policy. We would like to hear your opinions regarding the amount of issuance in the July-September quarter and related matters.

▶ In addition to many responses stating that there were no objections to the Financial Bureau's proposal regarding the issuance amount of Inflation-Indexed Bonds in the July-September quarter 2019, the following opinions were expressed:

- We have no objection to the Financial Bureau's proposal. We consider Inflation-Indexed Bonds to be undervalued because we assume that the floor value of Inflation-Indexed Bonds is around 15bps, though it depends on its volatility, and downside risks are limited at the recent BEI level. We also consider the BEI in Japan to be linked to the BEIs abroad to some degree. Therefore, we are interested in investing in Japanese Inflation-Indexed Bonds from a long-term perspective when we look at the BEI in Japan compared with the BEIs abroad.
- We have no objection to the Financial Bureau's proposal. Although the liquidity of Inflation-Indexed Bonds is not necessarily high, we consider the bid-to-cover ratio and other results in recent auctions to be in line with the market rates. Therefore, we see no problem with maintaining the current amount of issuance and Buy-Backs. As we have the sense that the current BEI is undervalued, we may make investment in Inflation-Indexed Bonds from the viewpoint of relative value, depending on the circumstances.
- We have no objection to the Financial Bureau's proposal. While the BEI has stayed at around 20bps, Inflation-Indexed Bonds attracted some demand in the most recent auction because they appeared to be undervalued. In addition, the results of the Buy-Back Auctions have remained at a reasonable level. On the other hand, while the volume of trading is not expanding in the secondary market, the supply-demand balance might be eased depending on the outlook of inflation and the trend of BEIs abroad. Therefore, we believe that it is appropriate to maintain the current amount of issuance and Buy-Back.
- We have no objection to the Financial Bureau's proposal. We do not hold Inflation-Indexed Bonds as part of our allocation, but we are replacing some 10-Year nominal bonds with Inflation-Indexed Bonds because the BEI has become substantially undervalued since the beginning of this year.
- We have no objection to the Financial Bureau's proposal. It is difficult to invest in Inflation-Indexed Bonds because it is hard to expect that inflation expectation continuously rises. On the other hand, amid the growing consciousness about the BEI level of 20bps as the lower limit, further decline in the BEI will make it possible to invest in Inflation-Indexed Bonds because the room for a further decline in the value of Inflation-Indexed Bonds is limited.
- We have no objection to the Financial Bureau's proposal. In the present environment, it is difficult to envision a scenario in which the domestic inflation rate rises sharply. However, it is appropriate to keep a wait-and-see stance and maintain the current amounts of issuance and Buy-Back in order to meet demands from investors when Inflation-Indexed Bonds become undervalued.
- We have no objection to the Financial Bureau's proposal. It is difficult to treat Inflation-Indexed Bonds as a major investment product for the purpose of ALM from the viewpoints of merchantability and liquidity. Therefore, we will basically continue to make a limited investment in Inflation-Indexed Bonds while keeping a close watch on the BEI level.

- Although the current BEI is undervalued, the BEI level have stayed stable. Therefore, we have no objection to maintaining the current amounts of issuance and Buy-Back.
- We have no objection to the Financial Bureau’s proposal. Although we held Inflation-Indexed Bonds previously, there is no outstanding holding at present because we do not have a strong view on the outlook of inflation. While we may consider investing in Inflation-Indexed bonds if they become more undervalued, we have no plan to change our investment policy for the moment.
- We have no objection to the Financial Bureau’s proposal. As we have no liabilities linked to inflation, there is no demand for Inflation-Indexed Bonds for the moment.

2. Liquidity Enhancement Auctions in the July-September quarter 2019

▶ The Financial Bureau provided the following explanations regarding the Liquidity Enhancement Auctions in the July-September quarter 2019:

- As shown on page 10, the FY2019 JGB Issuance Plan states the following about Liquidity Enhancement Auctions:

(1) While the operating assumption is that the total annual issuance amount will be ¥12.6 trillion (¥2.4 trillion for the remaining maturity of 1-5 years zone, ¥7.2 trillion for the remaining maturity of 5-15.5 years zone, and ¥3.0 trillion for the remaining maturity of 15.5-39 years zone)

(2) “The issuance amount and its allocation among each zone may be adjusted in a flexible manner in response to market circumstances and demands of investors, which will be determined based on discussions with market participants.”

Accordingly, we would like to hear your opinions about the amount of issuance for each zone in the July-September quarter.

- As shown on page 11, in the April-June quarter, we issued JGBs worth ¥400 billion in May (odd-numbered month) for the remaining maturity of 1-5 years zone, ¥600 billion in each month for the remaining maturity of 5-15.5 years zone , and ¥500 billion in April and June (even-numbered months) for the remaining maturity of 15.5-39 years zone, as stipulated under the FY2019 JGB Issuance Plan.
- Page 12 and after show the results of the recent Liquidity Enhancement Auctions. Regarding the results of the auctions for the remaining maturity of 15.5-39 years zone, the price tail was long and the bid-to-cover ratio was low in some cases. Therefore, it will be necessary to keep watching the future situation closely. However, the result of auctions for other zones have been generally stable.
- When we heard opinions under these conditions about the Liquidity Enhancement Auctions in the July-September quarter in advance, there were many opinions that it is appropriate to maintain the current amount of issuance.
- In view of this situation, we have prepared our proposal for each zone’s issuance amount during the July–September quarter (see page 15). We are considering issuing ¥400 billion in July and September (odd-numbered months) for the remaining maturity of 1-5 years zone, ¥600 billion each month for the remaining maturity of 5-15.5 years zone, and ¥500 billion in August (an even-numbered month) for the remaining maturity of 15.5 -39 years zone, as we did in the April-June quarter. On this point, at last Friday’s Meeting of JGB Market Special Participants, many attendees were of the opinion that it is

appropriate to maintain the current issuance amounts.

- Following today's discussion, we will decide the amount of issuance for each zone of the Liquidity Enhancement Auctions in the July-September quarter. We would like to ask for opinions.

► In addition to many responses stating that there were no objections to the Financial Bureau's proposal regarding the Liquidity Enhancement Auctions in the July-September quarter 2019, the following opinions were expressed:

- We have no objection to the Financial Bureau's proposal because it was not heard that there has recently been an extreme distortion of the demand-supply balance.

- In some cases, the price tail may be somewhat long in the remaining maturity of 15.5-39 years zone. However, as we do not believe that there is any distortion in the supply-demand environment as a whole, we agree with maintaining the current amount of issuance.

- It is desirable to increase the amount of issuance in the remaining maturity of 15.5-39 years zone because demand in the super-long-term zone is strong from the viewpoint of ALM and also the cost for investment is considered to be high due to the relatively small volume of trading in the market.

- We request the Financial Bureau to increase the amount of issuance in the remaining maturity of 15.5-39 years zone. In the current situation, the decline of the interest rate, especially in the super-long-term zone, is particularly significant. This may be due to a shift of demand from the negative interest rate zone to the positive interest rate zone. Therefore, it is better to increase slightly the amount of issuance in the remaining maturity of 15.5-39 years zone.

- We have no objection to the Financial Bureau's proposal. However, in the phase of a rapid decline of interest rate, mainly in the super-long-term zone, since the beginning of this month, liquidity has decreased substantially when investors feel inclined toward purchase. Because there are limits to the hedging by swap against an interest rate decline, investors holding liabilities with long durations may want the Financial Bureau to increase the amount of issuance in the remaining maturity of 15.5-39 years zone.

3. Latest JGB market situation and outlook for future investments

► The views and opinions expressed by the attendees are summarized below:

- In consideration of the current low interest rate environment, it is necessary not only to extend the average maturity of investment in JGBs but also to invest in yen-denominated bonds other than JGBs and to diversify the investment internationally. Since ECB President Draghi and FRB Chairman Powell made the comments last week, the interest rate level has been changing globally. Therefore, we will have to make investments using resourceful methods such as asset swaps while continuing the traditional investment by the method placing emphasis on carry return.

- Currently, the market participants are hunting for yields globally. In this situation, we will have to be conscious of interest rate risks when making investments, considering diversification of investment maturities and investment in domestic and foreign assets other than JGBs in accordance with regulations.

- It is true that investments in longer maturities with respect to JGBs, local government bonds, and bonds issued by Fiscal Investment and Loan Program institutions are increasing, but it is impossible to increase such investments without any limits because of the regulation for the amount of interest rate risks. After increasing investment in longer term bonds to the limit, we will invest by considering not only income gains but also capital gains besides investing in foreign bonds.
- As a large amount of medium- and long-term bonds purchased in the past are reaching maturity, it will be necessary in the future to purchase a certain amount of JGBs in preparation for the possibility that even the interest rate on 20-Year Bonds will be negative. However, from the viewpoint of income, it will be difficult to purchase a large amount of medium- and long-term bonds because their interest rates are negative. Therefore, it will be inevitable to concentrate our purchases in the 20-year zone, where interest rates are still positive, and this means it will be difficult to build a bond ladder.
- Currently, we are continuing making the international diversified investments besides investing in long-term JGBs with positive interest rates and local government bonds minimizing the duration risk. Also, we started to invest in bonds issued by European countries and emerging countries in addition to the U.S. Treasury. Furthermore, we are investing in products with credit risk and those related to stock index. By diversifying investments, we are trying to secure returns even when interest rate rises. Moreover, we are checking on market liquidity and fund liquidity by implementing stress tests under various scenarios.
- Excluding short-term government bonds held as collateral assets, it is inevitable for investors to look for undervalued assets globally while keeping a close watch on credit risk and duration. In addition, when there is not any asset from which income can be secured when interest rates decline, we cannot cover credit losses at the time of recession. Therefore, we have to invest in foreign bonds with positive interest rates from the viewpoint of ALM, rather than that of investment. However, recently, interest rates, including on Spanish government bonds, have fallen steeply, forcing us to invest in some assets different from those in which we have invested until now.
- The outstanding amount of investments in JGBs is declining due to its prolonging of negative interest rates. Also, it is inevitable to invest in bonds with longer term maturities that still have positive interest rates, which leads to lengthening of asset duration. Our investment policy is focusing on how to expand international diversified investments because super-low interest rates continue in Japan.
- From the viewpoint of economic value, if interest rates decline, we will face significant interest rate risk in liabilities. Therefore, we still have to hold a minimum necessary amount of yen interest rate assets.
- As we are facing a duration gap, it is necessary to lengthen the duration of our assets to some degree. In addition, we expect that it will be necessary to diversify asset classes to include alternative investment while making investments abroad in order to diversify currencies and countries. As low interest rates have continued for a prolonged period, the difficulty of providing customers with products corresponding to yen is a serious problem.
- Although it is unavoidable to keep investing in JGBs in the super-long-term zone, we are concerned that this may lead to a decline in dividends paid to customers ultimately. On the other hand, given the current low interest rate environment, we will face difficulty if we invest only in JGBs in the super-long-term

zone, which makes us consider investing in foreign credit products in the future.

- As a result of the long-lasting monetary easing policy, domestic investors are investing in currency-hedged foreign bonds. While this situation makes JGBs compelling to foreign investors, it is becoming less compelling to domestic investors. We have the future investment policy of promoting international diversified investments, instead of investing in bonds with longer duration. Specifically, we will look for and invest in assets that still deliver even a bit of income in the fields of credit investment and alternative investment.
- As the amount of funds flew out is larger than the amount of funds paid in by customers, we are now significantly reducing reinvestment of funds derived from redemption. Basically, we are making diversified investments in a way that minimizes duration risk, credit risk and liquidity risk, and we expect this situation to continue for a while.
- As yen-denominated interest rates have fallen steeply, the investment environment is very difficult. At a time when the interest rates on bonds with remaining maturity of around 14-15 years are negative, we prefer to take credit risk, rather than to take duration risk in pursuit of positive interest rates. Recently, as issuance of hybrid bonds by businesses is increasing substantially, we are investing in those products because of their attractiveness from the viewpoint of securing positive interest rates.
- At present, the Bank of Japan (BOJ) is continuing the policy of raising inflation rate by maintaining low interest rates. As the forward guidance was strengthened in April, we have to make investment on the assumption that this situation will continue for a while. Bonds with remaining maturity of 5-7 years are yielding negative spreads even if they are used as collateral for funding. Interest rates have fallen to a level that makes it completely impossible to invest in bonds. Moreover, expected interest rate cuts in the United States and Europe are being priced into the market at an accelerating pace, lowering the interest rate on the 10-year French government bond almost to zero. In this situation, domestic investors holding liabilities with long durations have returned to JGBs, and we believe that this is the reason why interest rates have been falling rapidly this month. Under these circumstances, there is no option but to earn income by seizing opportunities when interest rates have fallen too low while keeping a close watch on the macro environment. While we are already earning income through international diversified investments, we have to consider shifting from yen to other currencies because expected returns on yen-denominated assets have declined significantly.
- The challenge is how to secure income through measures such as extending the duration of JGBs in which we are investing and combining investment in open foreign bonds and currency-hedged foreign bonds. Currently, as yen-denominated interest rates are falling in tandem with global interest rates, JGBs maintain a high degree of linkage with bonds in other developed countries. However, if we look at phases of falling and rising interest rates, we see asymmetry. In a phase of globally falling interest rates, bull flattening occurs, whereas in a phase of rising interest rates, the degree of steepening is small, leading to a further decline in interest rates on super-long-term bonds. In the current phase, while carry income is declining globally, it is difficult to find currency-hedged foreign bonds that can serve as alternatives to JGBs, resulting in the return to JGBs. We believe that this is contributing to the flattening of JGBs' curve.

Going forward, we have to pay the closest attention to the interest rate trend in the United States, which can change policy interest rates with a relative freedom, and the impact of interest rate changes there. Most recently, U.S. short-term interest rates have declined, and subsequently, an interest rate decline for JGBs has been priced into the market. However, if interest rate reduction is actually implemented under

the current framework of the BOJ's monetary policy, we believe that the greatest risk is the possibility of a decline in short-term interest rates leading to a flattening for super-long-term bonds, as happened in the most recent case.

4. Matters explained by the Financial Bureau

▶ The Financial Bureau explained the revision of the frequency of the Meeting of JGB Investors as follows:

- Until now, it has been customary to hold the Meeting of JGB Investors five times per year—in each of the four quarters and in November, when the JGB Issuance Plan is discussed. However, in consideration of the fact that JGB investors basically formulate investment plans in the first and second halves of each year, we are considering holding the meeting twice per year in principle—in November, when the JGB Issuance Plan is discussed, and in March, when auction methods for the next fiscal year and beyond are discussed from July this year onward.

However, we plan to hold an extraordinary Meeting of JGB Investors at times other than in November and March to coincide with the Meeting of JGB Market Special Participants, when major policy changes, such as revision of the JGB Issuance Plan, are scheduled to be made.

The next Meeting of JGB Investors is scheduled to be held in November unless any special circumstances arise.

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