Minutes of the Meeting of JGB Investors
(77th Round)

・Date: Wednesday, November 21, 2018 (1:30 p.m. to 2:45 p.m.)
・Place: Special Conference Room 3, Ministry of Finance
・Gist of the Proceedings

1. Latest JGB market situation and outlook for future investments
2. JGB Issuance Plan for FY2019

▶ The Financial Bureau gave the following explanation about the JGB Issuance Plan for FY2019.

(Discussions of the meeting of the Advisory Council on Government Debt Management (October 22) (i)(Explanation by the Financial Bureau))
・The Advisory Council on Government Debt Management, which held a meeting on October 22, is a forum for discussions about an issuance policy not for the immediate future but for a medium- to long-term policy. Before starting an exchange of opinions about the JGB Issuance Plan for the next fiscal year, we will inform you about the discussions held at the advisory council's meeting.

※Regarding the debt management office's explanation at the Advisory Council on Government Debt Management, please refer to the minutes of the Advisory Council on Government Debt Management. (Attachment)

(Discussions of the meeting of the Advisory Council on Government Debt Management (October 22) (ii)(Summary of the day's discussions))
・Regarding the issuance amount per maturity, an attendee of the meeting expressed the view that issuance maturities should be reviewed and revised in the medium term in view of the fact that the average maturity of Japanese government bonds (JGBs) is deviating from the duration of investors' investment funds and has been longer compared with the average maturity of government bonds in other countries. On the other hand, another attendee suggested that attention should be paid to the possibility that the situation will change as a result of the large-scale Outright Purchases of JGBs by the Bank of Japan (BOJ) and a change in fund investment by the household sector due to the aging of society.
・With respect to the market's liquidity, an attendee expressed the view that the situation

will improve if the BOJ takes action more proactively.

・Regarding the increase in the balance of the front-loading issuance of Refunding Bonds, many attendees requested the reduction of the balance. However, some attendees recognized the significance of keeping the balance at a certain level in light of the current monetary and fiscal situations.

(Main points of discussions at the Meeting of JGB Market Special Participants (held on November 20))

・At yesterday's Meeting of JGB Market Special Participants, too, discussions were held on the JGB Issuance Plan for the next fiscal year. The following are the main opinions expressed by the meeting's attendees:

・If the total issuance amount is to be reduced, the reduction should be made in a well-balanced manner, avoiding a disproportionately large reduction in a specific zone.

・Regarding the issuance amount per maturity, in the super long-term zone, it is desirable to reduce the issuance amount of 20-Year Bonds, rather than 30-Year and 40-Year Bonds, for which the issuance amount was reduced in the current fiscal year.

・As the yield on 10-Year Bonds is a benchmark interest rate, it is necessary to keep the issuance amount at a certain level, but a small reduction is possible.

・With respect to the short-to-medium-term zones, it is possible to reduce the issuance amount because real demand from domestic investors is limited.

▶ Summarized below are the views and opinions presented by the attendees:

・As a situation that aggravated risk sentiment occurred after October, the yen interest rate temporarily trended upward, but it has currently remained at a low level again. Therefore, opportunities for investment in JGBs continue to be limited. Next year and beyond, U.S. interest rate hikes will continue, and as there are concerns that the economy will generally slow down as a result, it is rather difficult to foresee a steep rise in long-term interest rates.

As was pointed out in the discussions at the Advisory Council on Government Debt Management, the JGB Issuance Plan for the next fiscal year should be considered based on medium-term demand, therefore we request the debt management office to consider how to reduce the issuance amount from a long-term perspective while thinking about the need to lengthen the duration at issuance as much as possible from the viewpoint of fiscal management.

・Regarding the JGB Issuance Plan for the next fiscal year, we would like to recommend that the top priority should be placed on reducing the issuance amount of 5-Year Bonds by around ¥100 billion per auction, followed by the reduction of the issuance amount of 10-Year Bonds, which are issued in a relatively large amount, by around ¥100 billion per auction. As the needs for 5-Year Bonds as an investment vehicle for surplus cash are not as strong as the needs for JGBs in the shorter than remaining 2 years to maturity zone, they are not so attractive under the current interest rate environment, therefore the issuance amount may be reduced. Regarding other JGBs, it is desirable to maintain the current issuance amounts.

・Recently, against the backdrop of concerns that the U.S.-China trade friction will drag on for a long period of time and uncertainty over the United Kingdom’s exit from the European Union, among other factors, risk-off sentiment is growing, resulting in increases in bond purchases both in and outside Japan. As for the domestic bond market, we have the impression that the market has somewhat restored its functionality, in the sense that it moves in a way that reflects the domestic and foreign economic environments and indicators, since the revision of the monetary policy at the end of July.

Our investment stance is that regarding reinvestment of funds derived from the redemption of JGBs, we would like to secure stable profits by basically reinvesting the funds mainly in JGBs, but in light of the current interest rate environment, it is difficult to do so. Therefore, our stance is shifting to earning profits by engaging in relatively short-term trading in JGBs at the same time as allocating funds to foreign bonds and stocks, among other investments.

As for the JGB Issuance Plan for the next fiscal year, as there is stable demand for 30-Year and 40-Year Bonds, it is desirable to maintain the current issuance amounts. It is possible to reduce the issuance amount of 20-Year Bonds, which are the only JGBs in the super long-term zone for which the issuance amount was not reduced in the current fiscal year. With respect to 5-Year and 10-Year Bonds, it is appropriate to maintain the current issuance amount. Although there is demand for 2-Year Bonds from overseas investors, it is possible to reduce the issuance amount in consideration of the fact that while the issuance amount of 5-Year Bonds was reduced by ¥200 billion per auction under the Issuance Plan for the current fiscal year, the issuance amount of 2-Year Bonds was reduced by only ¥100 billion per auction. Regarding other JGBs, it would be better to maintain the current issuance amounts.

・At a time when massive redemption of JGBs that we hold is continuing, it is rather difficult to make reinvestment at the current interest rate level. From the viewpoint of ALM, over the medium term, it will be necessary to make some investments in JGBs, mainly 10-Year and 20-Year Bonds, but we will have to be restrictive in investment in light of the recent yield curve situation and interest rate level.

We hold JGBs as core assets in the hope of securing a low credit cost and diversified investment effects due to a low or inverted correlation with other financial assets, including stocks. As JGBs' prices have now become rigid due to reduced sensitivity to overseas interest rates and stocks, the diversified investment effects have weakened, and as a result, risks for the portfolio as a whole could grow. Therefore, we request the BOJ to correct the current abnormal interest rate level while maintaining the effects of the monetary policy and giving due consideration to the impact on the real economy.

Regarding the JGB Issuance Plan for the next fiscal year, as the amount of investment in 10-Year Bonds grows significantly in a phase of an interest-rate rise, we request that if the issuance amount is to be reduced, the reduction of 10-Year Bonds be small.

・Since the revision of the monetary policy at the end of July, we have not observed a major change in the JGB market. Recently, in our view, we have entered a period in which the appreciation of the value of financial assets in general in response to the global monetary easing is prone to be adjusted. Based on this view, we are continuing our strategy of making short-term, flexible investments while basically putting funds in risk-free assets. Therefore, regarding JGBs, we plan to continue to mainly hold bonds in the short-term zone for the purposes of collateral and of surplus fund investment.

As for the JGB Issuance Plan for the next fiscal year, it would be better to basically maintain the current issuance amount. If the issuance amount is to be reduced, it may be better to reduce the issuance amount of 10-Year Bonds, for which it is relatively easy to adjust the investment amount.

・The BOJ's monetary policy has been simultaneously pursuing two objectives—achieving the price stability target and giving consideration to possible negative side effects—since its revision at the end of July, therefore it is very difficult to foresee the future prospect. Although yen interest rates' upward sensitivity has grown since the end of July, there have been lingering suspicions that the BOJ may reduce the purchase amount in a phase of declining yen interest rates. Therefore, when interest rates are declining abroad due to risk-off sentiment, as they have been recently, yen interest rates do not decline so easily. In this situation, investment in JGBs is entering a difficult stage. If yen interest rates' sensitivity, both upward and downward, is restored in the future, demand for JGBs may recover and the market's functionality may also be restored.

Regarding the JGB Issuance Plan for the next fiscal year, in our view, it is not necessary to reduce the issuance amount, as the demand-supply condition is not so unfavorable for bonds with any maturity. However, if the issuance amount is to be reduced, we request the debt management office to disperse the reduction across various maturities, with the reduction amount for each maturity kept small, in order to minimize the impact.

・The BOJ still continues to have a great influence over the JGB market. Although expectations for normalization temporarily heated up because of the revision of the monetary policy at the end of July, we have the impression that the enthusiasm has recently cooled down as U.S. interest rates have declined and the stock market has remained weak. Even so, there are lingering expectations concerning the BOJ's monetary policy stance.

As for our future investment policy, we plan to basically continue international diversified investments with due consideration for duration control.

With respect to the JGB Issuance Plan for the next fiscal year, basically, there is nothing wrong with maintaining the current issuance amount. However, if the issuance amounts of JGBs with maturities of shorter than remaining 10 years are reduced drastically, there will be an impact on the market because those JGBs carry negative or extremely low interest rates. Therefore, we would like to recommend that the issuance amounts of 2-Year, 5-Year, and 10-Year Bonds should be reduced by ¥50 billion per auction for a reduction of ¥600 billion per year for each maturity. As for the super long-term zone, reducing the issuance amount of 30-Year Bonds by ¥50 billion per auction may be the most that can be done because 20-Year Bonds are basically necessary for the purpose of duration control and also because the issuance amount of 40-Year Bonds, whose liquidity is low, cannot be reduced.

・As market activity has become more vigorous, it has become somewhat easier to conduct trading. However, when we try large-lot trading, that still affects prices. Regarding investment, we will continue to invest mainly in yen-denominated bonds or currency-hedged foreign bonds while taking into consideration the cash flow on the liability side from the viewpoint of ALM. However, as the attractiveness of currency-hedged foreign bonds has weakened due to increased hedging cost, we are also considering investing widely in yen-denominated non-JGB bonds, not to mention investing in JGBs.

Regarding the JGB Issuance Plan for the next fiscal year, we request that if the issuance amount is to be reduced, the reduction be made across all sectors in a well-balanced manner. The issuance amounts in the super long-term zone are smaller than the amounts for other maturities, therefore the reduction of ¥100 billion per auction will have a considerable impact. Regarding maturities of shorter than remaining 20 years, the market for non-JGB bonds, including corporate bonds, has become active, but in the 30-year and 40-year sectors, in which trading has not become so active, we request the debt management office to maintain the current issuance amounts. As for Liquidity Enhancement Auctions, we request the debt management office to keep the issuance amount at a certain level, as the auctions are very useful for building a portfolio on the asset side.

・Since the revision of the monetary policy at the end of July, we have had the impression that yen interest rates may move downward, but not upward, as a reflection of the economic situation. It is only when the method of the BOJ's Outright Purchase or the purchase amount is changed that yen interest rates rise. Our impression is that yen interest rates rise only in response to a factor like that. In our view, that is largely because of the stock effect, which refers to the high ratio of the amount of JGBs held by the BOJ to the total amount of JGBs issued. As for our future investment policy, as monetary tightening has proceeded in the United States, the market's volatility has grown. However, since there is a wide gap with the liability cost at the current yen interest rate level, we will continue to invest mainly in risk assets such as stocks, or in foreign bonds.

Regarding the JGB Issuance Plan for the next fiscal year, it would be difficult to reduce the issuance amounts of 30-Year and 40-Year Bonds because there is some real demand for the purpose of maintaining the duration and also because there are few non-JGB bonds that serve as substitutes for those bonds. Therefore, if the issuance amount is to be reduced in the super long-term zone, it would be better to reduce the issuance amount of 20-Year Bonds.

・Recently, the risk-off trend that originated abroad has lowered domestic interest rates. Although this is a factor that originated abroad, our impression is that domestic interest rates have declined more than overseas interest rates. In addition to the purchase of domestic bonds as a safe asset, the stock effect associated with the BOJ's massive holdings of JGBs and domestic interest rates' tendency to decline when JGBs draw buying due to the bonds' low liquidity may be factors behind that. We have the sense that it is a good trend that yen interest rates' sensitivity to overseas markets and the fundamentals has been growing since July. On the other hand, we also have the impression that the market's price discovery function is not functioning effectively because of the low liquidity.

Regarding the JGB Issuance Plan for the next fiscal year, in order to secure investments with durations that match liability durations, we request the debt management office to avoid reducing the issuance amounts in the super long-term zone. As strict risk management has become necessary in recent years, the needs for JGBs in the super long-term zone have become stronger than before. It would be better to reduce the issuance amounts of JGBs with maturities of shorter than remaining 10 years instead of JGBs in the super long-term zone. It would be easier to reduce the issuance amount for shorter maturities because, even if interest rates decline temporarily as a result of the reduction, the BOJ will exert control to keep them at an appropriate level by reducing the amount of its Outright Purchases.

Although 40-Year Bonds are issued every other month, we request the debt management office to issue them every month, by reducing the issuance amount per auction if necessary, in order for us to level out purchases. Likewise, we also request the debt management office to hold the Liquidity Enhancement Auctions every month with respect to the zone with longer than remaining 15.5 years to maturity.

- If the BOJ moves toward the normalization of the monetary policy following the revision of its monetary policy at the end of July, yen interest rates are expected to rise moderately. On the other hand, as worries have recently grown somewhat with respect to political risks in Europe and the economic outlook for 2019, we fear that the BOJ's move toward normalization may come to a halt. Therefore, in order to figure out how yen interest rates will move in the future, we must pay attention to overseas situations. As for our investment policy for the time being, we plan to continue to invest mainly in currency-hedged foreign bonds because, although yen interest rates have risen somewhat since July, they have not yet reached an attractive level.

Regarding the JGB Issuance Plan for the next fiscal year, we would like to recommend that the issuance amounts of JGBs with maturities of shorter than remaining 10 years should be reduced because end-investors' needs are limited for those bonds, particularly JGBs which carry negative interest rates. On the other hand, as real-money investors have strong potential needs for JGBs in the super long-term zone, particularly 30-Year and 40-Year Bonds, we request the debt management office to consider increasing their issuance amounts somewhat if possible, rather than reducing the amounts.

- As the dollar is strengthening amid the rise in U.S. long-term interest rates due to continued U.S. interest rate hikes, the BOJ is also moving to slightly tighten its monetary policy. However, if the United States puts off interest rate hikes at a time when U.S. long-term interest rates are higher than the long-term equilibrium interest rate and the exchange rate of the dollar has risen to a high level relative to the purchasing power parity, we expect that the exchange market will be affected, raising the risk that the BOJ's move to revise the monetary policy will also be slowed down. As for the investment outlook, it is rather difficult to make active investments, but we will make some investments in a phase of an interest-rate rise, mainly in the long-term and super long-term zones.

Regarding the JGB Issuance Plan for the next fiscal year, it would be somewhat difficult to reduce the issuance amount of 40-Year Bonds, whose liquidity is low, but basically, it would be better to reduce the issuance amount universally across all maturities.

・After the revision of the monetary policy at the end of July, the JGB market's liquidity and functionality improved temporarily, but given the moving range of up to plus or minus 0.2 percentage points, the improvement is limited. On the other hand, the BOJ has made its Outright Purchases more flexible than before, so there will be a steepening bias. In addition, on the premise of continued interest rate hikes in the United States, probably, the hedging cost of investment in foreign bonds will be high and volatility will grow. In consideration of that point, the attractiveness of JGBs may become relatively strong.

Regarding the JGB Issuance Plan for the next fiscal year, there is room for a decrease with respect to 2-Year and 5-Year Bonds, which are in a zone for which investors' demand is weak due to negative interest rates. In our view, there is also some room for a decrease with respect to 10-Year and 30-Year Bonds, but we request the debt management office to secure an issuance amount of at least ¥2 trillion per auction with respect to 10-Year Bonds. Regarding 40-Year Bonds, the issuance amount was reduced under the JGB Issuance Plan for the current fiscal year, so we request the debt management office to maintain the current issuance amount. As for 20-Year Bonds, we request the debt management office to maintain the current issuance amount because there is demand from a broad range of investors. With respect to Liquidity Enhancement Auctions, if the issuance amounts of 2-Year and 5-Year Bonds are to be reduced, we request the debt management office to increase the issuance amount for the zone with remaining-1-5-year to maturity to ¥500 billion per auction.

・Regarding the revision of the BOJ's monetary policy at the end of July, our understanding is that the policy revision represents the tolerance of a rise in yen interest rates when overseas interest rates rise as a result of an improvement of the global economy. However, in our view, neither interest rates nor volatility will rise much, so our stance is to continue to invest in zones where there is substantial room for carry income and roll-down gains.

Regarding the JGB Issuance Plan for the next fiscal year, it is possible to reduce the issuance amount of 20-Year Bonds, 5-Year Bonds, 2-Year Bonds, 1-Year T-Bills, in the descending order of possibility. Although the GC-SC spread has recently been widening, that is considered to be related to the dwindling liquidity of outstanding bonds due to the BOJ's massive Outright Purchases, so we request the debt management office to increase the issuance amount with respect to Liquidity Enhancement Auctions.

・While the market's function appears to have been slightly restored following the Monetary Policy Meeting at the end of July, the BOJ continues to play the leading role in the market. Although the BOJ has implemented fine-tuning measures to increase volatility, such as reducing the amount and frequency of its JGB Outright Purchases and changing the auction schedule, the absolute interest rate level has not changed much, so there is not as high a term premium as was expected. The term premium has been kept low due to the risk-off environment and the stock effect associated with the BOJ's massive holdings of JGBs, and in this situation, it would be difficult to invest in JGBs through outright transactions.

Regarding the JGB Issuance Plan for the next fiscal year, it is not desirable to excessively reduce the issuance amount in the super long-term zone, which is the only zone where the term premium is expected to recover. If it is inevitable to reduce the issuance amount in the super long-term zone, it is desirable to reduce the issuance amount of 20-Year Bonds, for which real-money investors' demand is low and for which the issuance amount was not reduced under the JGB Issuance Plan for the current fiscal year, whereas there is strong investor demand for 30-Year and 40-Year Bonds. For domestic investors, it is desirable to reduce the issuance amount in the short-term zone, where demand is weak due to negative interest rates. However, overseas investors have strong demand for T-Bills used for the purpose of converting funds from dollars, particularly 3-month T-Bills that are convenient for use, so it is not desirable to reduce the issuance amount of 3-month T-Bills. In addition, it is desirable to maintain the current issuance amount regarding Liquidity Enhancement Auctions.

・In an opinion paper regarding the budget for the next fiscal year submitted yesterday by the Fiscal System Council, the council looked back at the fiscal situation in the Heisei era and expressed the view that the mistake not to oppose to the pressure to increase benefits, and to reduce and postpone the burden, should never be repeated in the future.

In the future, it is essential to consider how to promote fiscal consolidation in a "post-truth" situation, or "a situation in which appeals for emotions and personal beliefs, rather than objective facts, are influential in the formation of public opinions". In that respect, the Fiscal System Council states that evidence-based policy making, or policy making based on objective facts, is important. From now on, it will be necessary to implement measures to reform systems and management methods, including the enhancement of the capability to disseminate information, in view of the new era of post-truth.

Under these circumstances, people who are well-versed in the market have a role to play as agents who protect future generations from tragic consequences that may arise from the postponement of the burden. In a situation where interest rates do not serve as an alarm bell, comments by market players have very grave significance when fiscal expansion occurs and discipline tends to loosen.

(Attachment)

Minutes of the Advisory Council on Government Debt Management (48th Round)

1. Date: Monday, October 22, 2018 (1:00 p.m. to 2:45 p.m.)

2. Place: Ministry of Finance Special Conference Room 3,

3. List of the Proceedings

1. Bank of Japan’s monetary policy
2. Current debt management policy

1. Bank of Japan’s monetary policy

First, Deputy Director-General Nakaone from the Bank of Japan (BOJ) explained the bank’s monetary policy (Document 1), after which the members exchanged opinions on that topic.

➢ Views expressed by the members have been summarized (by the Financial Bureau) below.

▪ Since the results of monetary policy do not easily extend to elderly people, effectiveness of such policy will be reduced as the population ages, which require further monetary easing. How is the BOJ going to address the demographic change?

Explanation from the BOJ:

▪ We are addressing the issue with an expectation of positive effects of complete exit from deflation on macroeconomic problems, including enhancement of growth potential.

▪ The policy revisions on July 31 expanded the fluctuation range for long-term interest rate. Since the revision happened after a period of fixed-rate environment, it will probably lead some speculative movements. When making future policy revisions, it will be more important than ever to engage in dialogue with the market.

- Furthermore, although the policy revisions on July 31 recovered the market to some extent, Quantitative and Qualitative Monetary Easing with Yield Curve Control is controlling long-term interest rate as they do to the policy rates, which contradicts the function of the market. From this perspective, it is very useful to hear an explanation today from the BOJ regarding this matter.

- While it is true that the policy revisions on July 31 did temporarily restore the function of the JGBs market, recent interest rate has shown little movement —not once has it reached the maximum range of ±0.2%. This is because, in terms of stock, the BOJ now owns about 45% of JGBs.
- Meanwhile, the share of Treasury bonds holdings by the US Federal Reserve will soon fall below 10% because of the FRB's reduction of Treasury bonds holdings and increase of bonds issuance. Although the economic conditions of the US and Japan are different, the US has been broadening its maneuvering room for policy changes, as a preparation for the next economic peak.
- The current monetary policies of Japan are lacking flexibility compared to those in the US; how does the BOJ prepare for the various risks that may occur in the future?

Explanation from the BOJ:

- We agree with that the monetary policies have inflexibility. However, we, the BOJ, believe that the most important goal of the BOJ is to achieve the price stability target of 2%. The shortest way to achieve the goal is to maintain a positive supply-demand gap. We therefore take measures within the scope premised by the goal, though we are searching for options that obstruct the market as little as possible.

- Some say that introducing negative interest rates while the bank spread is extremely narrow will force regional banks to take on further risks to increase their profits, resulting in a sort of moral hazard. What are the BOJ's thoughts on this?

Explanation from the BOJ:

- As noted in April's financial systems report, our analysis presents that financial institutions are increasing their lending to middle-risk businesses to ensure profits under the strengthened pressure of shrinking profit margins from lending. Although, proper risk management is critical when lending money to businesses with relatively high risk, our analysis shows that it is not necessarily being conducted.

- The policy revisions on July 31 did in fact restore the function of the bond market to some extent. However, even though the BOJ announced that they have expanded the fluctuation range for long-term interest rate to ±0.2%, many people only acknowledge the revision as raising of interest rate. That makes us feel that there is a gap between the operation of the BOJ's monetary policies and the way in which they are interpreted. It is needed to be explained more that this is a hybrid policy for expanding the fluctuation range in both directions.

2. Current debt management policies

Next, the Financial Bureau explained the current debt management policies (Document 2), after which members exchanged opinions on that topic.

➢ Below is a summary of the Financial Bureau's presentation.

(Basic approach)

- In order to achieve stable and smooth issuance and minimize financing costs, we have to issue bonds based on market demands. However, excessive response to temporary demands may harm the predictability for market participants, which may raise financing costs, with the investors requiring certain risk premium.
- Since continuous issuance of large amount of bonds is expected in Japan, it is particularly important to aim for stable issuance by ascertaining trends in demand over the medium and long terms.

(Current bond issuance and future forecasts)

- As a result of lengthening of weighted average maturity of JGB issues in recent years, both the amount of Refunding Bonds issuance and the total JGB issuance have decreased, despite an increase in the outstanding amount. In addition, although the supplementary budget for FY2018 contains a 700 billion yen increase in Construction Bonds and an equivalent increase in the total JGB issuance amount (revenue for this fiscal year), calendar-based market issuance remains unchanged because the amount of front-loading Refunding Bonds for the next fiscal year has been simultaneously reduced by 700 billion yen.

- Under the recent low-interest circumstances, we have decreased the issuance amount of short-and medium-term bonds and increased the issuance amount of super long-term bonds. While this has remarkably increased the outstanding amount of super long-term bonds due to its small amount of redemption, the outstanding amount of medium-term bonds was decreased.

- This has steadily lengthened the weighted average maturity of JGBs in terms of both stock and flow. With the exception of England, where investment in super long-term bonds is popular due to pensions, JGBs now have the longest average maturity of any major nation. The approaches for weighted average maturity is different from country to country. The US and Germany have enacted policies to stabilize their current levels of weighted average maturity, rather than attempt to lengthen it even further. On the other hand, England and France are continuing with efforts to lengthen the weighted average maturity of their bonds.

- Future estimates of JGB issuance amount shows that the issuance amount of Refunding Bonds in the next fiscal year is expected to be 101.3 trillion yen, which is roughly the same amount as this year. It will transit in a stable way around 100 trillion yen in the following years as well. Also, assuming the distribution ratio of issuance amount in each term continues as FY2018, the average maturity will be lengthened steadily because while medium-term bonds are redeemed, the net supply of super long-term bonds is maintained at a large scale.

(Investor trends)

- Since FY2013, when the Quantitative and Qualitative Monetary Easing policy began, the amount of outstanding bonds held by banks has decreased significantly. However, that decrease in outstanding amount has begun to stall. As the BOJ analyses, banks have identified a need to maintain a certain amount of JGBs for collateral and other purposes, which makes it critical to fully understand their investment trends when considering future supply and demand for the medium- and long-term zones.

- Life insurance companies have been increasing their holdings since 2008, lengthening the duration of their assets by replacing their medium-and long-term bonds with super long-term bonds. However, for the past two or three years, the increase of outstanding amount of super long-term bonds held by these companies have slowed down, who had supported an overall rise in outstanding amount for those super long-bonds. It was because continuing matching the duration of their assets with liabilities under the low interest rate circumstances will fix the negative spread, which means that lengthening of the duration of their assets may resume if interest rates rise. On the other hand, the Financial Services Agency has pointed out that revenue from insurance premiums may decrease and new insurance needs may appear as population demographics shift in the future. Because such transitions in insurance demand will have a certain impact on the liability duration of life insurance companies, it is imperative to understand how the liability of these companies will change in the future, both qualitatively and quantitatively.
- Our analysis of potential funding sources for JGBs across the entire market indicates that indirect finance comprises a large part of the financial sector, with relatively large amount of short-duration funds, in Japan. It results in the duration of potential funding sources being 6.2 years, shorter than the 8.7 years of the US. While potential funding sources are merely funds that have the potential to be invested in JGBs and should not be directly compared to JGBs duration, it is important to note that the weighted average maturity of JGBs is lengthened even though Japan has more short-duration funds than the US.

(Current liquidity of the JGB market)

- JGBs transaction volume and turnover ratio seem to show a slight recover in terms of JGB market liquidity recently, though investors' activity had been continuously declining. Although investors generally rated the market as low-functioning on the survey by the BOJ, there has been some recent improvement there as well.
- Yet liquidity from a micro point of view, the transaction availability of individual bonds remains low. The GC-SC spread rose significantly in March of last year. While it abated temporarily, it has recently begun increasing again. The amounts of bid accepted for the Securities lending Facility by the BOJ are also increasing lately.
- While one reason for this tightening of supply-demand balance for specific bonds is that market supply is mainly current bonds (such as 5-Year Bonds and 10-Year Bonds), the BOJ's purchases include off-the-run bonds other than these, which results in supply-

demand imbalance for some specific bonds. Liquidity Enhancement Auctions, which issue additional bonds according to those off-the-run needs, will therefore continue to play a major role.

(Issuance plan estimates)

- By comparing actual results to the estimates made at the time the JGB Issuance Plan was formulated, we see that the amount of funds raised will be more than required if economic measures are taken during the fiscal year as in FY2016. However, even though such measures are not taken, tax revenue may be higher than the initial expectation and annual expenditures may go unused due to the conservative estimates made at formulating the plan, and in many cases the requisite funding will actually be less. With regard to the financing methods, it should be noted that bonds are issued based on the actual sales by "Non-price-competitive auction II" and "Sales for households," which means the totals listed in the plan are merely estimates. Since those estimates are also made in a conservative way, the actual issuance amount tends to exceed the initial estimates. In order to keep the predictability in the market, calendar-based market issuance should not be reduced. Rather, issuance should be conducted as outlined in the plan, which means that funding surpluses occur easily.
- This has led the issuance amount for front-loading Refunding Bonds to climb from 28.8 trillion yen at the end of 2014 to 49.4 trillion yen at the end of the last fiscal year, an increase of about 20 trillion yen over a three-year period. While we are working on making the estimates more refined in terms of issuance amount by financing method, we also need to utilize front-loading Refunding Bonds to control calendar-based market issuance to some extent.

➢ Views expressed by the members have been summarized (by the Financial bureau) below.

- From a prudence point of view, we need to observe how the weighted average maturity of government bonds is being lengthened compared to the liability duration of financial institutions and life insurance companies. Further analysis and examination are needed because small and medium financial institutions and regional banks may be affected if the current state of JGB issuance continues.

- Front-loading Refunding Bonds were originally issued as a buffer that preserved a stable JGBs issuance amount and maintained market function in cases where there were swings in issuance amount due to the effects of economic measures or fluctuating tax revenue caused by business cycles.

- While they have now reached a scale that is difficult to justify under that reason alone, we have to recognize that this is due to the current unique financial and fiscal state. The critical thing is that, while interest payment costs are kept at a low level at present by this unconventional monetary easing, the process of exiting those policies may conversely lead a tremendous shock to the market. A buffer is important to prepare for such an event. Moreover, while our aging population is experiencing a decline in birth rates that is unprecedented even among developed countries, our tax system is not suited for these demographic changes and no progress has been made on social security reform, which means that we need a sizable buffer from a public finance point of view as well.
- There is a risk that an inverted discussion might be raised that being able to issue such amount of front-loading bonds means there is a room for increases in annual expenditures, which is concerned. It is therefore imperative that we accurately explain to the public the significance and necessity of front-loading Refunding Bonds and prevent it from leading increases in annual expenditures.

- While it is important to carefully observe discrete trends in demand from banks and life insurance companies, who are the main investors of JGBs, it was difficult to ascertain the current situation from a macro point of view. The information on page 16 is therefore very meaningful. Because the expansion of a gap between assets and liability duration will have future effects over the long term, it is essential to keep in mind the state of affairs described by these preliminary calculations when considering the issuance plan for the next fiscal year.
- Although it is true that the buffer of front-loading Refunding Bonds is needed, 50 trillion yen is too much, which should be reduced to a more reasonable amount.
- While there has been a slight shift toward improvement in the liquidity of the JGB market, the GC-SC spread is still wide when respective JGBs issuance is considered. What is the BOJ’s idea about the tightened supply-demand balance for particular bond issues when conducting its purchase operations?

Explanation from the BOJ:

- As you've noted, even though liquidity has improved on the macro level, there are still some shortages of respective bonds, particularly those are scarce in the market. The BOJ has been addressing those issues by Securities Lending Facilities, by which financial institutions can purchase bonds from the BOJ, while their efforts for procurement is premised.

- I suppose that the fragmentation of the JGBs market has been proceeding further than before between short to medium-term zone, where the holding share of banks is large, and long to super-long-term, where life insurance companies and a part of pensions are the major investors. This fragmentation is also needed to be taken into account when formulating issuance plans in the future.
- (Regarding page 16 of Document 2) While the weighted average maturity of Japanese government bonds is longer than the asset duration of financial institutions, the opposite situation is true in the United States. This implies that the structure of Japan's financial sector is vulnerable to rising interest rates, which is consistent with previous assessments. Moreover, with its large amount of JGBs purchase, the BOJ is the one that carries the most risk of the situation suddenly shifting and interest rates rising.
- The recent ultra-low-interest environment has enabled the substantial amount of front-loading Refunding Bonds issuance. However, it should be recognized that such blessed circumstances will not continue forever and fiscal discipline is needed to be taken into account when considering this.

- The weighted average maturity of JGBs has now exceeded eight years, which surpasses other developed nations except the UK and could even reach ten years in the future. One of the challenges is how to adjust the weighted average maturity to be matched to the global standard. The only way is to increase the amount of short to medium-term bonds issuance while decreasing that of super-long-term bonds since adjustment by buy-back operation in a large scale is difficult.
- I believe the stock effect of the BOJ's policy has had a considerable impact on the market liquidity.

    When considering bonds consumption over next five years, for example, we must not lose sight of foreign investors. As Italy has been evaluated by the market based on the fiscal discipline of EU, I suppose some benchmarks are needed for assessing the progress of Japan’s macroeconomic policy.

- The outstanding amount of front-loading Refunding Bonds are now approaching 50 trillion yen, which is quite a considerable amount. In addition to a decrease in Special Deficit-Financing Bonds and Fiscal Investment and Loan Program (FILP) Bonds due to unused annual expenditures, that large amount include above-par issuances as well as increases from initial estimates for JGBs for Retail Investors and Non-price-competitive auction II. The Financial Bureau is involved in a number of recent initiatives regarding the latter, but we can’t say the same about the former. Shouldn’t we devise a scheme that can eliminate both of these through matched orders, like with Buy-back operations for example?

- Although the outstanding amount of front-loading Refunding Bonds is 50 trillion yen, which seems large compared to the flow-based issuance amount, the amount might not necessarily be too large if compared to the stock-based outstanding amount.

Explanation from the Financial Bureau:

- Since it is impossible to decrease front-loading Refunding Bonds in a short time, this is a problem that will take time to resolve. It is also important to note that our goal with front-loading Refunding Bonds is to systematically even out the issuance amount for the current and next fiscal years.

- As the BOJ’s monetary policies are designed to target interest rates, it is inevitable that liquidity decrease to some extent. In addition to that, another factor lowering liquidity is the lack of established practices of fails in settlements. Also, while trades which remove distortion of the yield curve by borrowing of bonds from federal banks without limits, it is the impression we get from JGBs. I suppose that more flexible lending by the BOJ will improve liquidity.

- Fiscal discipline is retreating amidst these low interest rates, as evidenced by the target year for fiscal consolidation being postponed from 2020 to 2025 as well as the fact that achievement of primary balance surplus was positioned to be the same level goal as stable reduction of government debt outstanding. I hope that the existence of front-loading Refunding Bonds does not lead a weakened fiscal discipline.

- It was explained that the “regular and predictable issuance of bonds” is the goal of the US. However, it is rather a principal than a goal. This strategy, adopted in the mid-1970s and still in place today reflects the lesson that tactical issuance of bonds does not lead to reductions in costs. It is also the optimal way to ensure stable market liquidity. While in Japan, the MOF has been expanding Liquidity Enhancement Auctions as the BOJ’s massive JGB purchase operations continue, it is better to be based on the general principle of “regular and predictable.”

- If we examine supply and demand for life insurance companies over long term, it is clear that the working age population will decline. On the other hand, the number of 65 or older will increase with life expectancy extending to 85 or 90 years. This will create demand for asset management with a duration of 20 to 30 years. For instance, demand for annuities, health insurance, and long-term care insurance is being enhanced while demand for conventionally sold products like term insurance with death benefits decreases. Those new needs are currently being met by insurance denominated in foreign currencies. However, such situation will change if the interest rate for 30-Year Bonds increases.
- (Regarding page 16 of Document 2) There is a significant gap between deposits and loans at depository institutions, which account for a big part of the potential capital for JGBs investment as a whole. However, we should note that the share held by life insurance companies may increase over the medium and long term by meeting the demand generated by aging population.
- By considering the integrated balance sheet of BOJ and the government, duration of the government sector’s liability is shortened. Therefore, it can be said that BOJ is bearing interest rate risk.

- To determine the optimal level for front-loading Refunding Bonds, we should consider the burden that they will place on future generations.
- Fiscal discipline will be stabilized by adopting an approach in which tax rates are modified according to the outstanding amount of JGBs. We need to look at annual revenue and expenditures through the lens of a simultaneous equation.

- Regarding the effects that rising interest rates will have on the management of regional banks, the merger issue as well as the decisions of the Japan Fair Trade Commission regarding it are also important. It is worth watching because it may affect demand structure of the JGB market.