

Minutes of the Meeting of JGB Market Special Participants (88th Round)

1. Date: Friday, May 22, 2020
2. Place: Held in writing
3. Gist of Proceedings:

1. Latest JGB market situation and outlook for future investments

2. Changes in the JGB Issuance Plan associated with the second supplementary budget in FY2020

▶ The Financial Bureau gave the following explanation about the changes in the JGB Issuance Plan associated with the second supplementary budget for FY2020

• As shown in the document, Prime Minister instructed the compilation of the second supplementary budget at the 34th Novel Coronavirus Infectious Diseases Control Headquarters on May 14 with a view to strengthening the first supplementary budget and the cabinet decision on the rough estimate will be made around May 27.

The second supplementary budget plans to extend employment adjustment subsidies, provide rent support for small and medium-sized enterprises, and provide cash management support for medium-sized and large companies, among other measures. Therefore, we would like to hear your opinions on the increase in the issuance amount of JGBs on the assumption that the amount of additional JGB issuance including FILP bonds will be of considerable scale.

▶ Summarized below are the views and opinions submitted:

• Compared to March in which the market was in turmoil, the JGB market has calmed down and the trading is performed in a narrow range. However, since both securities companies and investors have promoted working from home and intensified the tendency of selecting transactions in response to the spread of the novel coronavirus infection, the liquidity decreased significantly in the derivatives market in particular, while trading is conducted in a relative manner in the spot market. If the declaration of the state of emergency in the metropolitan area is lifted in the future, we believe that the liquidity will pick up gradually, but its speed will be very slow initially, and we estimate that the liquidity will continue to be unstable. In the circumstances, as for the outlook for interest rates in yen, with a full resumption of economic activities in advanced countries in June and a significant increase in the issuance of JGBs in Japan in July

onwards, we believe that the pressure of rising interest rates will continue. On the other hand, we can foresee factors that will promote the decline in interest rates, such as (1) re-spread of the novel coronavirus infection, (2) extension of the grace period for the withdrawal of the UK from the European Union at the end of June, (3) intensification of the friction between the US and China, and (4) credit trends of major corporations.

Regarding the change in the JGB Issuance Plan associated with the second supplementary budget for FY2020, in view of the yield curve as a whole, we would like to propose an issuance in the amount of ¥2.6 - 3.0 trillion per auction with an increase of ¥100 - 500 billion for the 6-Month T-Bills, ¥3.0 trillion per auction with no change for the 1-Year T-Bills, ¥2.7 - 3.0 trillion per auction with an increase of ¥300 - 600 billion for the 2-Year Bonds, ¥2.3 - 2.5 trillion per auction with an increase of ¥200 - 400 billion for the 5-Year Bonds, ¥2.4 - 2.6 trillion per auction with an increase of ¥100 - 300 billion for the 10-Year Bonds, ¥1.1 - 1.3 trillion per auction with an increase of ¥100 - 300 billion for the 20-Year Bonds, and ¥900 billion per auction with an increase of ¥100 billion for the 30-Year Bonds.

Against the backdrop of the needs to use the Special Funds-Supplying Operations to Facilitate Corporate Financing of the Bank of Japan (BOJ) in response to the spread of the novel coronavirus infection the validity period of which was extended today, the demand for collateral purposes by financial institutions is high. Although the amount of T-Bills has already been significantly increased by June, stable demand continues to be expected for bonds with a maturity shorter than 2 years in view of the strong demand from overseas and we believe that there is still a room for a reasonable increase. The size of increase for T-Bills should be judged from the overall perspective, and a balanced distribution is required. The investors' demand for the 5-Year Bonds is limited and a large increase will distort the yield curve. We consider it important to review the increase with the focus on the size of increase of the 2-Year Bonds. The investors' demand for the 10-Year Bonds with positive interest rates is strong, and since the customer range is wide, an increase in the issuance amount for the 30-Year Bonds is possible. We also believe that there is a reasonable demand by investors for the 30-Year Bonds. Provided, however, that since the increase of ¥100 billion for the 40-Year Bonds in May and the increase of ¥100 billion for the 30-Year Bonds in the change in the JGB Issuance Plan associated with the first supplementary budget have been determined, the additional increase in the change in the JGB Issuance Plan associated with the second supplementary budget should be limited to ¥100 billion. Regarding the 40-Year Bonds, we would like to leave them unchanged this time in order to determine the impact of the increase after the change in the JGB Issuance Plan associated with the first supplementary budget.

- It has been nearly two months since the start of the new fiscal year. With the decrease in the number of selling and buying transactions by investors due to the transition to working from home

and with the decrease in volatility due to the subdivision of the schedule of Outright Purchase of JGBs and the increase in the purchase amount, the situation of the low liquidity continues. In the wake of the additional easing measures whereby the BOJ shifted to unlimited purchases of Japanese government bonds by abolishing the upper limit of ¥80 trillion, the interest rates decreased once in the whole of the yield curve, but they returned to the range of 0.01% - 0.01% for the 10-Year Bonds in the same manner as in April after the long holiday break. Since the correlation of the Japanese bond market with the European and American bond markets and stock and currency exchange markets is very weak, we have the impression that we continue to need to pay a close watch on the supply and demand situation such as the auction of government bonds and the purchase by the BOJ. Since a significant increase in issuance from July is expected, however, and changes in the content of the purchase by the BOJ are expected around that time, we are of the opinion that the volatility in the JGB market will gradually return to normal in the next month onwards.

Regarding the size of the increase by term maturity following the change in the JGB Issuance Plan associated with the second supplementary budget for FY2020, since both the number and amount of purchase by the BOJ are limited for the 30-Year Bonds and it is necessary to determine the effect of the increase in the 40-Year Bonds, we consider that a further increase in the issuance of the 30-Year Bonds should be treated carefully and ¥800 - 900 billion per auction after the increase will be reasonable. Regarding the 20-Year Bonds, although both the number and amount of purchase by the BOJ are limited, they are very strongly demanded by investors under the yield curve control, we consider that an increase in the issuance amount of ¥100 - 200 billion per auction will be possible, and ¥1.1 - 1.2 trillion per auction after the increase will be reasonable. Regarding the 10-Year Bonds, in view of the market situation, we consider that an increase in the issuance amount of ¥200 - 300 billion per auction will be considered possible, and ¥2.5 - 2.6 trillion per auction after the increase will be considered reasonable. Regarding the 5-Year Bonds, in view of the market situation, we consider that an increase in the issuance amount of ¥300 - 400 billion per auction will be considered possible, and ¥2.4 - 2.5 trillion per auction after the increase will be considered reasonable. Regarding the 2-Year Bonds, in view of the market situation, we consider that an increase in the issuance amount of ¥500 - 600 billion per auction will be considered possible, and ¥2.9 - 3.0 trillion per auction after the increase will be considered reasonable. Regarding the 1-Year and the 6-Month T-Bills, we consider that the appropriate issuance amount per auction will be ¥3.5 - 4.0 trillion and ¥3.0 - 3.5 trillion, respectively. Currently, the demand for collateral purposes by domestic investors in connection with Outright Purchase of JGBs, such as the Special Funds-Supplying Operations to Facilitate Corporate Financing of the BOJ in response to the spread of the novel coronavirus infection, we consider it possible to increase around ¥4.0 trillion per auction for the 1-Year T-Bills and around ¥3.5 trillion per auction for the

6-Month T-Bills and up to ¥7.0 trillion per month.

If the increase in the issuance amount for the first supplementary budget and the second supplementary budget is made simultaneously from July, the issuance amount will increase significantly. Therefore, in order to ensure the raising of funds on the market, we consider it appropriate to initially focus the fund-raising efforts on JGBs in the short-term zone, followed by interest-bearing JGBs subsequently.

- Although market participants seem to be restricted by split work and telecommuting in response to the spread of the novel coronavirus infections, the market liquidity has not decreased as much as we feared. Supported by a strong capital supply and monetary easing by the central banks of each country, the auction results have been stable and the market has calmed down. On the other hand, the trading volume of spot and futures markets has been sluggish, and it cannot be said that the market liquidity has returned to normal. We believe that it will be necessary to bear in mind that certain operational restrictions will continue depending on the effect of the spread of the novel coronavirus infection in the future. We would like to request the debt management office to continue communication with market participants.

Regarding the change in the JGB Issuance Plan associated with the second supplementary budget for FY2020, premised on a strong monetary easing attitude of the BOJ, we consider that the appropriate priority orders are: the short to medium term zone, the long-term zone when a further increase in issuance amount is required, and the ultra long-term zone. We also consider it desirable that the increase should be started as soon as possible in order to level the issuance amount. Specifically, we believe that if an increase is made in the ultra long-term zone, the 20-Year Bonds which attracts more investors than the 30-Year Bonds and the 40-Year Bonds should be increased by around ¥100 billion per auction. Regarding the 10-Year Bonds, although the demand varies to a great extent depending on whether the interest rates are positive or negative, an increase of around ¥200 billion per auction is possible. Regarding the 5-Year Bonds, for lack of main investors, we are of the opinion that the increase in the medium-term zone should be carefully studied. Regarding the 2-Year Bonds, we consider that an increase of around ¥400 billion per auction is possible for the high demand for collateral purposes by investors. As far as T-Bills are concerned, with increased needs by domestic investors, the latest increase in the amount was financed without any problem by adjusting the amount, and we consider that an increase is possible if the issuance level is such that the demand of domestic investors is boosted. With the change in the issuance amount of JGBs associated with the first supplementary budget, already the 1-Year T-Bills were increased by ¥5.4 trillion and the 6-Month T-Bills were increased by ¥10 trillion. Therefore, if the same kind of increase is expected, the 1-Year T-Bills should be increased preferably, and we think that an increase of a maximum of ¥9.0 trillion per year for the

1-Year T-Bills and an increase of a maximum of ¥6.0 trillion for the 6-Month T-Bills are possible.

- Although the JGB market seems to have settled down with the support by the BOJ, there has been no change in the environment where the risk allowance is low against the backdrop of the physical limitations including split work sites of market participants. Since there is a wide divergence between offers and bids in the spot market, and bond futures do not function as hedging tools, we recognize that an environment where we should pay attention to liquidity and function continues. Since July, the issuance of JGBs is increased, we believe that a sense of security in the JGB market is created when the BOJ takes the initiative of buying JGBs actively, and from that perspective, we believe that information transmission by the BOJ including the “Monthly Schedule of Outright Purchases of Japanese Government Bonds (Competitive Auction Method)” to be published at the end of May will play a key role.

Regarding the change in the JGB Issuance Plan associated with the second supplementary budget for FY2020, considering that the main reason for the compilation of the second supplementary budget does not correspond to a long-term financial support, such as payment of benefits to small and medium-sized companies in order to deal with the spread of the novel coronavirus infection, and that its amount size is not transparent, we would like to see the increase in the issuance amount in bonds with a maturity of shorter than five years. In view of the current auction status, we consider an increase per auction of ¥100 billion for the 5-Year Bonds and ¥400 billion for the 2-Year Bonds is possible. In addition, T-Bills tend to be favored by both collateral givers and receivers because interest payments do not occur, and since we believe that there is a reasonable demand for collateral purposes even considering the issuance amount at the current moment, we are of the opinion that an additional increase of around ¥20 trillion per year is possible. In particular, since the 6-Month T-Bills to be issued since July onwards will straddle two fiscal years, they tend to attract demand for collateral purposes for overseas. Therefore, a monthly increase of ¥1 trillion to 1.5 trillion can be financed without any problem. However, in any event, since the size of the government bond issuance as a whole increases significantly, we believe it more important for the BOJ to purchase JGBs strongly and flexibly in order to maintain a smooth environment for the issuance of JGBs.

- In the midst of the implementation of the policy mix between fiscal and monetary policy globally, the yield curve as a whole is expected to be stable low against the backdrop of monetary policy support, lack of expectation for a sharp economic recovery and strong investment demand by investors. However, there remains uncertainty because the intention of the BOJ to buy up JGBs from July onwards is unclear when the additional JGB issuance will actually start.

As far as the increase in the JGB issuance amount is concerned, there is a strong demand for

JGBs in the ultra long-term zone with positive interest rates for the purposes of investment for many types of operations and an increase per auction of ¥200 billion between the 20-Year Bonds and the 30-Year Bonds is considered possible. Regarding bonds with a maturity shorter than 10 years, we assume that the additionally issued bonds will be absorbed due to an active Outright Purchase of JGBs by the BOJ and the yield curve control, provided, however, that the amount of increase for the 5-Year Bonds which are difficult to use by market participants in comparison with the 10-Year Bonds and the 2-Year Bonds should be relatively suppressed. Specifically, we think that the 40-Year Bonds should be left unchanged, the 30-Year Bonds increased by ¥100 billion per auction, and the 20-Year Bonds by ¥200 billion. However, if the 20-Year Bonds is increased by ¥200 billion, the size of the increase for the 30-Year Bonds should be suppressed. We consider it possible to increase ¥200 billion per auction for the 10-Year Bonds, ¥300 billion for the 5-Year Bonds, and ¥600 billion for the 2-Year Bonds. Further, we think that an increase of ¥3 trillion per month for the 1-Year T-Bills and ¥6 trillion per month for the 6-Month T-Bills is possible.

- We had a faint hope that a certain number of market participants would come back to the JGB market after the long holiday break, but our hope did not materialize and the declaration of the state of emergency has been extended and people continue to work from home. Economic activities will be resumed in Europe and America, and the declaration of the state of emergency was lifted in a part of prefectures in Japan. However, since the number of people infected with the novel coronavirus has been increasing in some countries, there is a warning about the possibility of the second wave and the third wave of coronavirus infections. Therefore, it seems that the number of market participants who restrain from trading has increased and price movements have become smaller.

As for the increase in the issuance amount of JGBs, it is likely that the size of the increase in the total annual JGB issuance amount may exceed ¥20 trillion. However, since mainly bonds in the short to medium term zone are increased and bonds in the long-term zone are not increased or very limitedly increased, and roughly the majority of the increase will be absorbed by the BOJ, we believe the adverse effect of the increase on the market is small and already discounted by the market. In other words, if the JGB issuance is different from such a view, the interest rates will react accordingly.

However, even in this case, the BOJ is expected to suppress the increase in interest rates under the yield curve control eventually, and even if the supply and demand in the ultra long-term zone deteriorates relatively, we cannot foresee that the interest rates in the ultra long-term zone alone will rise due to the existence of the term structure, and there will be also yield hunting by final investors. At any rate, the sight of the central banks suppressing interest rises associated with

economic recovery and the increase in the bond issuance amount In Japan as well as in the US and Europe is something that remains constant.

Regarding the change in the JGB Issuance Plan associated with the second supplementary budget, we consider that an increase focused on the short to medium term zone where Outright Purchases of JGBs are strong is desirable on the assumption that the additional issuance amount is similar to that in the first supplementary budget. Premised on that the amount will be increased since July, the 30-Year Bonds and the 40-Year Bonds should be left unchanged. In comparison to the 30-Year Bonds and the 40-Year Bonds, since a demand by a wide range of investors is expected for the 10-Year Bonds and the 20-Year Bonds, we consider an increase of ¥100 billion per auction is possible, in addition to an increase of ¥200 billion for the 5-Year Bonds, an increase of 400 billion for the 2-Year Bonds, an increase of ¥600 billion for the 1-Year T-Bills and an increase per month of ¥1 trillion for the 6-Month T-Bills. Overall, we estimate an increase in the amount of ¥21.6 trillion. We consider that, If a further increase becomes necessary, the 6-Month T-Bills will serve as an item for adjustment for the increase.

- Currently, the demand for collateral for the Special Funds-Supplying Operations to Facilitate Corporate Financing of the BOJ in response the spread of the novel coronavirus infection occurred and the issuance of T-Bills was significantly increased in May, but the trading of T-Bills has been smooth. Since it is expected that the total amount of the Special Funds-Supplying Operations in response the spread of the novel coronavirus infection exceeds ¥20 trillion, we are of the opinion that the current increase in the issuance of JGBs will be sufficiently absorbed so far as the operations continue. Since the room for increasing the purchase of T-Bills by the BOJ has not exceeded the maximum of ¥3 trillion, there is still a room for an increase of around ¥1 trillion per purchase operation. In addition, an additional demand for collateral for the new funds supplying means newly introduced today is also expected although not in a large amount, there is a room for an increase of ¥1 trillion per auction for both the 1-Year T-Bills and the 6-Month T-Bills. Since the 1-Year T-Bills and the 6-Month T-Bills both are high in market risk among T-Bills, they should be desirably increased in the order of the 3-Month, the 6-Month and the 1-Year in coordination with short-term government securities.

Regarding bonds in the medium-term zone, the demand for collateral for T-Bills and an increase in the purchase by the BOJ can be expected, and we do not think that an issuance in the amount of ¥2.5 - 2.8 trillion per auction for the 2-Year Bonds and an issuance in the amount of ¥2.3 - 2.5 trillion per auction for the 5-Year Bonds will cause an adverse effect. However, we would like to request the debt management office not to highlight the attitude that JGBs are absorbed from the market when the BOJ buys them, but to determine the amount of increase bearing in mind they are financed in the market. We consider that the demand for the 10-Year Bonds will be high when

the interest rates become positive, and an issuance in the amount of around ¥2.5 trillion per auction will be sufficiently financed. We also consider that since a demand from a wide range of investors can be expected for the 20-Year Bonds, an issuance in the amount of ¥1.1 - 1.2 trillion can be digested without any problem. We consider that an issuance in the amount of ¥800-900 billion per auction can be absorbed without any problem for the 30-Year Bonds due to a strong demand from insurance companies.

Although the market turmoil observed in March to April seems to have ended, currently the volatility has declined sharply, and there is a concern that if this situation continues, the market function will be distorted and the price finding function will be lost. Although this is a problem related to the purchase of JGBs by the BOJ, since the low interest rate policy is expected to last for a long period of time, we believe that the consideration of these side-effect problems will gain importance.

- Although the pressure for rising interest rates as a result of the concern over the increase in the JGB issuance amount associated with the large scale fiscal expenditure, we expect that concern over rising interest rates will continue to remain in the awareness of a further increase in the fiscal expenditure in the future. On the other hand, we believe that the 10 year interest rate will continue to be around zero % against the backdrop of the active purchase of JGBs by the BOJ.

In view of the current market liquidity and the stance of the BOJ to buy JGBs, we consider it appropriate to focus the additional issuance of interest-bearing bonds on the medium to long term zone. In addition, although it is necessary to take into consideration changes in the supply and demand structure of T-Bills, we consider desirable a balanced increase in the amount including the 3-Month T-Bills. Specifically, we think it appropriate to leave the 40-Year Bonds, the 30-Year Bonds and the 20-Year Bonds unchanged, to increase around ¥200 billion as a maximum amount per auction for the 10-Year Bonds, to increase around ¥400 billion as a maximum amount per auction for the 5-Year Bonds, to increase around ¥600 billion as a maximum amount per auction for the 2-Year Bonds, to increase around ¥1 trillion as a maximum amount per auction for the 1-Year T-Bills and to increase around ¥500 billion as a maximum amount per auction and around ¥1 trillion as a maximum amount per month for the 6-Month T-Bills, respectively.

- While restrictions due to the spread of the novel coronavirus infection continue, measures are under discussion for the resumption of economic activities in each country. However, since there is a high concern over the second wave of coronavirus infections, it is difficult for the economy to achieve a V-shaped recovery. In the circumstances, the financial market has been returning to normal gradually and the market volatility has settled down accompanied by a gradual increase

in trading volume. Although It seems it will take a little more time until the operational restrictions associated with working from home and split work are lifted, if the second wave of the novel coronavirus infections is suppressed, we think that such restrictions will be gradually lifted and the market activities will return to normal.

Regarding the change in the JGB Issuance Plan associated with the second supplementary budget for FY2020, when considering that the size of the second supplementary budget will exceed ¥10 trillion and the size of the increase in the total annual JGB issuance amount may be similar, we believe that the increase by term maturity is appropriate as follows: An increase of ¥100 - 200 billion per auction and an annual increase of ¥0.9 - 1.8 trillion for the 30-Year Bonds, an increase of ¥100 - 200 billion per auction and an annual increase of ¥0.9 - 1.8 trillion for the 20-Year Bonds, an increase of ¥200 - 300 billion per auction and an annual increase of ¥1.8 - 2.7 trillion for the 10-Year Bonds, an increase of ¥100 - 200 billion per auction and an annual increase of ¥0.9 - 1.8 trillion for the 5-Year Bonds, an increase of ¥100 - 300 billion per auction and an annual increase of ¥0.9 - 2.7 trillion for the 2-Year Bonds, an increase of ¥100 - 200 billion per month and an annual increase of ¥0.9 - 1.8 trillion for the 1-Year T-Bills and an increase of ¥100 - 200 billion per month and an annual increase of ¥0.9 - 1.8 trillion for the 6-Month T-Bills.

Incidentally, an allocation of around ¥4 trillion for subsidies in the general account and of around ¥6 trillion for FILP bonds such as special loans and crisis response loans of Japan Policy Finance Corporation is expected, the former being evenly allocated to each term maturity and the latter being allocated to bonds with a maturity shorter than 10 years, we consider it desirable that they are raised by JGBs with a maturity shorter than 10 years. In addition, on the assumption that the increase in interest-bearing bonds with a remaining maturity of 2 years or more is around ¥9 trillion similar to the change in the JGB Issuance Plan associated with the first supplementary budget, we consider it appropriate to adjust the excess or deficiency with T-Bills and to start the increase from July. There is a need for the 10-Year Bonds with positive interest rates by investors and a need for the 2-Year Bonds by overseas investors and also for collateral purposes. In addition, since the purchase percentage by the BOJ in both term maturities is high, there is an enough room for an increase for both maturities. There is a room for an increase in the issuance amount for the 20-Year Bonds with a deep-rooted demand for positive interest rates and the 30-Year Bonds with a demand by life insurance companies positioned as a benchmark for the ultra long term zone. As far as T-Bills are concerned, since currently, their issuance amount has been increased rapidly, we consider that an increase of around ¥200 billion per auction is possible, but not an increase in the amount similar to the last time. In addition, the off-the-run issues in the medium term zone have been constantly deficient, and we believe that there is a room for an increase for the 1-5 remaining year zone of the auction for enhanced-liquidity.

- Due to the effect of the spread of the novel coronavirus infections, we are of the opinion that the unstable bond market conditions will continue.

Regarding the change in the JGB Issuance Plan associated with the second supplementary budget for FY2020, we have assumed the maximum issuance amount for the respective maturity as follows:

The room for a further increase of the 30-Year Bonds is limited, and hence, an issuance amount of ¥800 billion per auction; the 20-Year Bonds is more stable than the 30-Year Bonds in terms of supply and demand, and hence, an issuance amount per auction of ¥1 trillion; the 10-Year Bonds is under the yield curve control and there is a further demand for reasons of positive interest rates, an issuance amount per auction of ¥2.4 trillion; the 5-Year Bonds do not bear positive interest rates and lack demand for collateral purposes, and hence, the room for increase is more limited than the 2-Year Bonds, an issuance amount of ¥2.3 trillion; there is a room for increase for the 2-Year Bonds due to a demand for collateral purposes, and hence, an issuance amount per auction of ¥2.6 trillion; the 1-Year T-Bills is under the yield curve control and there is a demand for collateral purposes and a strong demand by overseas investors, and hence, an issuance amount per auction of ¥4.0 trillion with the possibility of a further increase; the 6-Month T-Bills can be increased for the same reason as for the 1-Year T-Bills, and hence, an issuance amount of ¥4.0 trillion, respectively.

- The daily trading volume of JGBs has dropped significantly and JGBs are traded in a narrow range due to the lack of factors in the market and to the fact that many market participants continue working from home. Under the circumstances, however, investors are buying the dip, and we believe that this trend will continue in the future.

Although the investor's demand for both the 2-Year Bonds and the 5-Year Bonds is limited at the over-the-counter sales at our company, a further significant increase in the amount is possible due to the strong support by the BOJ. Regarding the 10-Year Bonds, since there is a genuine demand by investors at an interest rate above zero percent, in addition to strong Outright Purchase of JGBs, there is no problem for further increase. Regarding the ultra long term zone, although the effect of a significant increase in the issuance of the 20-Year Bonds with a wide investor base on the JGB market is slight, a significant increase in the 30-Year Bonds and the 40-year Bonds which lag behind the 20-Year Bonds in terms of liquidity should be avoided, and we consider that the 30-Year Bonds should be increased in a small amount and the 40-Year Bonds should be left unchanged. Specifically, we consider reasonable an increase per auction of ¥200 - 400 billion for the 2-Year Bonds, of ¥200 - 300 billion for the 5-Year Bonds, of ¥100 - 300 billion for the 10-Year Bonds, of ¥100 - 200 billion for the 20-Year Bonds, and of ¥50 - 100 billion for the 30-Year Bonds, respectively.

Further, we think that an increase of ¥500 billion per auction as a maximum amount for the 1-Year T-Bills and ¥500 billion per auction as a maximum amount for the 6-Month T-Bills is possible when considering the demand for collateral purposes and the attitude of the BOJ to buy JGBs from May.

- The absorption of government bonds in all maturities is largely affected by the yield curve control by the BOJ. In particular, its effect on bonds with a maturity shorter than 10 years is strong, and we consider that a considerable increase in the issuance is possible. In addition, since it is assumed that the use of the funds of the second supplementary budget for FY2020 is for short to medium term purposes, we consider it appropriate to focus the increase on the short to medium term zone. Specifically, we consider an increase in the amount of about ¥1 trillion per auction for a combined total of the 2-Year Bonds, the 5-Year Bonds and the 10-Year Bonds. On the other hand, while the interest rates of the bonds with a maturity shorter than 10 years fall to the negative range, there is a considerable demand for investment for the ultra long term zone with positive interests and demand can be expected from a wide range of investors. We think an increase of about ¥200 billion for a total of the 20-Year Bonds and the 30-Year Bonds per auction is possible.

Regarding the 6-Month T-Bills, since the increase in the issuance per auction is suppressed as a result of holding auction twice a month in comparison to the 3-Month T-Bills, a further increase is possible, and we believe that the issuance of ¥6 trillion per month by increasing ¥500 billion per auction will contribute to the improvement in the market liquidity.

Currently, the situation of the spread of the novel coronavirus infections has settled down, it still needs to be watched carefully in the future. In the circumstance, it is expected that the operational restrictions of market participants become the norm. As pointed out by some market participants lately, we believe that the adoption of the single-yield auction method (Dutch-style) is valid for the stable issuance of JGBs, and we request the debt management office to review the auction method.

- Even under the unprecedented economic situation, the JGB market is functioning properly under strong yield curve control. Unless the monetary policy framework is changed, no movement out of the normal range for each term maturity can be assumed. However, we can see that, while there is likely to be a concern over the weakening in supply and demand due to the increase in the issuance in particular in the ultra long term zone, the demand for the 10-Year Bonds is strong with interest rates around zero percent and the investor's behavior is different from that in the last fiscal year. There is a possibility that when the growth in deposits and loans has settled down, the market theme may change again.

Regarding T-Bills, on the assumption that the issuance of government short-term securities

decreases from July onwards, the amount corresponding to the decrease can be allocated to discount short-term government bonds. Since the outstanding issuance amount has increased sharply already, it should be avoided that the issuance amount of T-Bills exceeds the current assumption. Regarding interest-bearing bonds, there is a room for absorption for the 2-Year Bonds, the 10-Year Bonds and the 20-Year Bonds, and a monthly increase of ¥100 billion each can be digested without any problem. In order to significantly increase the issuance amount of interest-bearing bonds, we consider that an increase of ¥100 billion per term maturity per auction serves as a yardstick in the same manner as with the change in the JGB Issuance Plan associated with the first supplementary budget.

- Both the amount and the frequency of Outright JGB Purchases increased in March, and the volatility has remained stable at low levels in the JGB market after two months and the market is languishing in May. On the other hand, with a full lifting of the state of emergency in sight this week, it seems that market participants that decreased significantly in number due to split working shifts and working from home are coming back to the market gradually.

Regarding the increase in the JGB issuance amount, since the demand for the 30-Year Bonds in this fiscal year by life insurance companies has been increasing clearly premised on the increase from July, an increase per auction of ¥100 billion is possible. Regarding the 20-Year Bonds, an increase of ¥100 - 200 billion can be sufficiently absorbed due to a strong investment demand by banks for bonds with positive interest rates, in addition to life insurance companies. Regarding the 10-Year Bonds, since the investment demand varies greatly depending on whether the interest rates are positive or negative, an increase of ¥200 billion is the limit. Regarding the 5-Year Bonds, since there is hardly any demand for it except for Outright JGB Purchases, an increase of ¥200 - 300 billion is the limit. Regarding the 2-Year Bonds, the largest increase in amount is required in light of the content of the second supplementary budget, but its interest rates are deeply negative and it must count on Outright JGB Purchases, we consider that an increase of ¥500 - 600 billion is the limit. Premised on the increase in the amount of Outright JGB Purchases, an increase of ¥400 - 500 billion for the 1-Year T-Bills and an increase of ¥800 billion – 1.0 trillion per month for the 6-Month T-Bills are possible, but when considering the increase in the refunding bonds in the following fiscal year, the increase in the amount should be suppressed as much as possible.

In light of the situation where an increase in the JGB issuance similar to that of the first supplementary budget is required in the change in the JGB Issuance Plan associated with the second supplementary budget for FY2020, we strongly request again that the auction method is changed to the single-yield auction method (Dutch-style). Although the BOJ strengthens the yield curve control by increasing the amount of Outright JGB Purchases, it is true that market participants accept an extremely large amount of JGB issuance once. In particular, since bonds in

the short to medium term zone with deeply negative interest rates should depend upon several Outright JGB Purchases, we believe that the shift of the auction method to the single-yield auction method (Dutch-style) will provide a certain sense of security to investors for stable digestion of JGBs which have been greatly increased and this will ensure the participation of securities companies that are special participants in the JGB market in the JGB auction and the continuous provision of liquidity to the secondary market. In addition, as one of the reasons for the success of the newly issued 20-year bond for fund-raising purposes for the economic measures in the United States, we may cite the single-yield auction method (Dutch-style).

- Currently, the JGB market moves in a very narrow range. Under the declaration of the state of emergency, there is a lack of activities among securities companies and investors and the 10-Year Bonds fluctuates roughly at zero percent. With a further increase in the issuance of T-Bills focused on the 3-Month T-Bills in May, there was a certain concern over the weakening of supply and demand. However, so far, the market has been stable due to the active attitude of the BOJ to buy JGBs without destabilization of the yield curve as a whole due to the weakening of supply and demand and the increase in T-Bills. We expect that the JGB market will continue to move in a narrow range and stay stable for the time being to come. In July, the issuance amount in each zone will be increased, and due to changes in supply and demand, there will be movements.

Regarding the change in the JGB issuance amount associated with the second supplementary budget for FY2020, an increase in a wide variety of maturities is desired with a focus on T-Bills and JGBs in the medium to long term zone, including an increase in the ultra long term zone. Regarding the ultra long term zone, the demand has continued to be strong even after the announcement of the increase in the issuance amount due to the change in the JGB Issuance Plan associated with the first supplementary budget and there has been hardly any variation in both the yield curve and the absolute value level in addition to that the demand looking for positive interest rates and duration is strong. Therefore, we consider that an increase per auction of ¥100 - 200 billion for the 20-Year Bonds and an increase per auction of ¥100 billion for the 30-Year Bonds are possible. Regarding the long term zone, since there is a strong need at positive interest rates and the active attitude of the BOJ to buy JGBs supports the market, we consider an increase of around ¥300 billion per auction is possible. As far as the medium term is concerned, the active attitude of the BOJ to buy JGBs will serve as a support, and we consider an increase of ¥300 - 400 billion per auction for the 2-Year Bonds and the 5-Year Bonds are possible, respectively. In addition, regarding the auction for enhanced-liquidity, there has been a demand for an increase for the 1-5 remaining year since some time ago, and we believe that there is a room for an increase of ¥100 billion per auction. We believe that an increase of ¥11 trillion in total for T-Bills is possible, and regarding the 6-Month T-Bills, as a result of holding auction twice a month, the stability is

higher than one auction in a month, and we consider an issuance per auction of ¥3.5 - 3.75 trillion is possible.

- The outstanding balance of issue amount of T-Bills have increased by about ¥20 trillion from the end of March, 2020, but its effect on the market is limited. In addition, the US bond market is stable, and despite discussions on an increase in the issuance amount of JGBs, the JGB market is very stable. However, considering that the increase in the issuance of T-Bills continues and there will be a sharp increase in the issuance of interest-bearing bonds from July onwards, there remains the risk of a sudden change in the supply and demand environment. Although we expect that the BOJ absorbs impact to a certain extent through Outright JGB Purchases, we feel we must be wary of the market liquidity, etc., in the future.

Regarding the ultra long term zone, the increase of ¥100 billion per auction for the 20-Year Bonds and the 30-Year Bonds has been already determined from July, but we are of the view that a further increase of ¥100 billion can be sufficiently digested by the market because it is apparent that domestic life insurance companies and general insurance companies are coming back to the JGB market as seen in the investment trends by investor category. Provided, however, that considering that the range of investors for the 40-Year Bonds is limited, it is reasonable to leave it unchanged. On the assumption that the massive purchase by the BOJ will continue, we consider that the medium to long term zone can play the main role in the increase in the issuance of JGBs. Although we consider that an additional increase of up to ¥300 billion per auction per maturity is possible, since the 10-Year Bonds with positive interest rates under the strong yield curve control by the BOJ is the clear target for investment by investors in particular, we consider there is more room for an increase than the 2-Year Bonds and the 5-Year Bonds. In addition, as far as the auction for enhanced-liquidity is concerned, we are of the opinion that a tight supply and demand may likely to occur depending on individual issues due to the increase in the amount of Outright JGB Purchases, it should be also increased in the issuance amount.

- Regarding the recent JGB market, it seems that the volatility has declined and the liquidity has been restored, but it seems also that the sensitivity to the macroeconomic environment has dropped and the pricing function is being lost as a result of the active monetary policies of the central banks of each country. For this reason, the interest rates on 10-Year Bonds are stable at around zero percent as the target level of the yield curve control by the BOJ, and unless there is a prospect for a deeper dip into negative interest rates by the BOJ, we believe this situation will continue. On the other hand, in the ultra long term zone, interest rates have continued to rise against the backdrop of the concern over the drop in liquidity in the market and the prospect of an increase in the JGB issuance amount. However, since the liquidity has been improved and the

increase in the JGB issuance amount has been discounted, we are of the view that the interest rates will be gradually moved back unless there is a prospect for a further increase in the JGB issuance amount.

As regards the increase in the JGB issuance amount, we believe that there is a relatively large room for an increase in JGBs with a maturity shorter than 10 years on the assumption that the yield curve control by the BOJ will continue, and we consider an increase per auction as a maximum amount of ¥600 billion for the 6-Month T-Bills, ¥900 billion for the 1-Year T-Bills, ¥800 billion for the 2-Year Bonds, ¥500 billion for the 5-Year Bonds, and ¥300 billion for the 10-Year Bonds is possible. Regarding the bonds with a remaining maturity of 10 years or more, based on the firm demand for positive interest rates, we believe an increase per auction as a maximum amount of ¥200 billion for the 20-Year Bonds and the 30-Year Bonds is possible respectively. Further, regarding the 1-Year T-Bills, we consider as appropriate an issuance of ¥1.75 - 3.5 trillion per auction and the number of auctions per month should be changed according to the issuance amount.

- We should pay close attention to how much increase in Outright JGB Purchase will be made as a result of the increase in the JGB issuance from July onwards. However, we are of the view that there will be no significant change in interest rates so long as the strong yield curve control is exercised.

If the size of the increase in the JGB issuance associated with the second supplementary budget is similar to the increase in the JGB issuance associated with the first supplementary budget, we consider that the same size of increase as the last time is appropriate for each term maturity. Specifically, we think that an increase of ¥100 billion per auction for the 40-Year Bonds, the 30-Year Bonds and the 20-Year Bonds, an increase of ¥200 billion for the 10-Year Bonds and the 5-Year Bonds, an increase of ¥400 billion for the 2-Year Bonds and an increase of ¥600 billion for the 1-Year T-Bills is possible, respectively. If a further increase is required, the 6-Month T-Bills may be used for adjustment purposes.

- Against the backdrop of the settlement of fluctuations in interest rates overseas and the active JGB purchase by the BOJ including the increased number of frequencies for purchase, the recent JGB market has been stable. On the other hand, not only securities companies, but also investors are compelled to working from home under the declaration of the state of emergency. In the circumstances, non-essential and non-urgent transactions are restrained and we feel that the success of the auctions of newly issued bonds of each term maturity in recent days may be partly attributed to their procurement in auctions in preference to bonds at the secondary market. As far as the future outlook is concerned, the balance between the size of the increase in the JGB issuance

amount and the maturity composition thereof and the purchase by the BOJ will be the key. In particular, regarding the medium to long term zone with negative interest rates, there is no substantial demand from domestic investors except for trading, and there is a risk of a temporary rise in interest rates depending on the attitude of the BOJ to the purchase.

As regards the increase in the JGB issuance amount, we consider it appropriate that the increase is focused on bonds with a maturity shorter than 10 years in view of the purchase policy of the BOJ. Specifically, we consider an increase per auction of ¥300-600 billion for the 2-Year Bonds, ¥300 - 400 billion for the 5-Year Bonds, ¥100 - 200 billion for the 10-Year Bonds and ¥100 billion for each of the 20-Year Bonds and the 30-Year Bonds is possible. Regarding the ultra long term zone, despite a decrease in the purchase amount by the BOJ, since the demand by life insurance companies is strong and there is also demand by banks for positive interest rates, we think that there is a room for an increase for both the 20-Year Bonds and the 30-Year Bonds, but not for the 40-Year Bonds with a relatively small number of investors. Regarding the 10-Year Bonds, although a reasonable demand is expected at positive interest rates, the demand decreases at negative interest rates, we think that the room for an increase is quite limited when compared to the 2-Year Bonds and the 5-Year Bonds. Further, we consider it more appropriate to increase the issuance amount of the auction for enhanced-liquidity in the 1-5 remaining year instead of simply increasing the amount of the 2-Year Bonds and the 5-Year Bonds with a view to stabilizing the supply and demand. In addition, we consider that the increase in the amount of inflation-linked bonds should be dropped due to the current deterioration in supply and demand

Regarding T-Bills, the BOJ set the maximum purchase amount per one Outright T-Bill Purchase to ¥3 trillion in the “Purchase Operations of Long-term Government Bonds for the Time Being” published in April. Therefore, Outright T-Bill Purchases serves as a strong support for the market stability. When considering the balance between the T-Bills issuance amount immediately before Outright T-Bill Purchase and the purchase amount of Outright T-Bill Purchase, we think that there is a room for an increase of ¥250 billion per auction for the 1-Year T-Bills and ¥500 billion per auction for the 6-Month T-Bills.

- Against the backdrop of the concern over an increase in the JGB issuance, the pressure for rising interest rates focused on long-end bonds is likely to be applied, while the implied volatility is decreasing. We think this is due to the fact that many investors continue to buy the dip in the course of rising interest rates and an interest rate rise in excess of the upper limit of the trading range has not actually occurred, and as a result, the prospect of the occurrence of a significant interest rate rise from the current interest rate levels leading to a rise in volatility has receded. We believe that investors will strengthen the investment behavior focused on carry in the midst of low volatility. In the circumstances where the BOJ applies a positive interest rate of 0.1% to funds

supply for financial institutions and attempts to substantially reduce the side-effects of the negative interest rate policy, there is little room for a decrease in interest rates in the short to medium term zone and the investment funds will be placed eventually on long-end bonds. We consider that this will suppress the bias for interest rate rise associated with the concern over the increase in the issuance of JGBs.

As regards the size of the increase in the issuance amount from the change in the JGB issuance associated with the second supplementary budget, we consider that the 2-Year Bonds can be increased by ¥400 billion per auction and an annual total increase of ¥3.6 trillion is possible and can be stably digested due to needs for collateral purposes by investors. However, since the 2-Year Bonds serves as a hedge to T-Bills, if T-Bills are increased significantly, a further increase of the 2-Year Bonds may hinder the stable digestion. An increase of ¥200 billion per auction and of an annual total of up to ¥1.8 trillion is possible for the 5-Year Bonds, provided, however, that since there is no specific investor, there remains a doubt whether the stable digestion is possible or not when there is a further increase. An increase of ¥r00 billion per auction and of an annual total of up to ¥3.6 trillion is possible for the 10-Year Bonds due to the strong demand by investors at positive interest rates, and we believe that this kind of amount can be absorbed without any problem. An increase of ¥100 billion per auction and of an annual total of up to ¥900 billion is possible for the 20-Year Bonds. This is a zone where a sale to deposit financial institutions and investors with a long-term debt can be expected, but the support from the BOJ is small. Further, we would like to see the change in the auction method to the single-yield auction method (Dutch-style). We consider that an increase of ¥500 billion per auction and of ¥4.5 trillion per year is possible for the 1-Year T-Bills which can be hedged by the 2-Year Bonds from the issuance amount after the change in the issuance amount from the change in the JGB issuance associated with the first supplementary budget. Regarding the 6-Month T-Bills, we believe it appropriate to leave the current issuance amount unchanged, but we think that an increase of ¥500 billion per auction and of ¥9 trillion per year is possible.

We believe an increase of ¥600 billion per auction by 5 times from July is possible due to the spread of investors, but on the condition that the single-yield auction method (Dutch-style) is continued. Regarding inflation-linked bonds, we want them unchanged because they are on the way to recovery after the turmoil in March. As far as the auction for enhanced-liquidity is concerned, depending on the increase in the amount of interest-bearing bonds of the target zone, we consider it possible to increase ¥100 billion per auction for each target zone.

- Since it is considered that the amount of Outright JGB Purchases of JGBs will continue to be increased under the yield curve control, a significant increase in JGBs with a maturity shorter than 10 years is possible. On the other hand, we consider that an increase at a rapid pace is not possible

for JGBs with a remaining maturity longer than 10 years when considering that there has not been any in Outright JGB Purchase so far and the near future trend is intransparent. In addition, although we think an additional demand for collateral purposes and a demand for duration will be generated as a result of the increase in the issuance of JGBs and Outright JGB Purchases, it will take more time for us to determine whether or not and how much these lead to an increase in the demand for the ultra long term zone. On the other hand, we believe that the current interest rates for JGBs with a remaining maturity longer than 10 years is too low, and we look forward to an increase at a gradual pace in the medium to long term perspective.

Regarding T-Bills, while the supply and demand for the 3-Month T-Bills tends to be weak, the demand for the 6-Month T-Bills is strong to a certain extent, and we consider a significant increase in the 6-Month T-Bills is desirable.

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