## Key Points of Today's Policy Decisions

- The Introduction of "Quantitative and Qualitative Monetary Easing (QQE) with a Negative Interest Rate"
$\diamond$ The Bank will apply a negative interest rate of minus 0.1 percent to current accounts that financial institutions hold at the Bank. It will cut the interest rate further into negative territory if judged as necessary.
$\diamond$ The Bank will introduce a multiple-tier system which some central banks in Europe (e.g. the Swiss National Bank) have put in place. Specifically, it will adopt a three-tier system in which the outstanding balance of each financial institution's current account at the Bank will be divided into three tiers, to each of which a positive interest rate, a zero interest rate, or a negative interest rate will be applied, respectively.
- "QQE with a Negative Interest Rate" is designed to enable the Bank to pursue additional monetary easing in terms of three dimensions, combining a negative interest rate with quantity and quality.
$\triangleleft$ The Bank will lower the short end of the yield curve and will exert further downward pressure on interest rates across the entire yield curve through a combination of a negative interest rate and large-scale purchases of JGBs.
$\diamond$ The Bank will achieve the price stability target of 2 percent at the earliest possible time by making full use of possible measures in terms of the three dimensions.


Q1. Will the Bank continue to purchase Japanese government bonds (JGBs) after the introduction of a negative interest rate?
A. Under "QQE with a Negative Interest Rate," the Bank will pursue monetary easing by making full use of possible measures in terms of three dimensions, combining quantity, quality, and interest rate. It will lower the short end of the yield curve by slashing its deposit rate on current accounts into negative territory and will exert further downward pressure on interest rates across the entire yield curve, in combination with large-scale purchases of JGBs.

Q2. Will a negative interest rate make it difficult for the Bank to continue purchasing JGBs?
A. The Bank can continue purchasing JGBs because costs of negative interest will be passed on to its purchasing prices of JGBs (or yields on JGBs purchased by the Bank) so that the prices will be higher (or the yields will be lower). The European Central Bank has been implementing a combination of its Asset Purchase Program and a negative deposit facility rate. The Bank will conduct JGB purchases while paying due attention to the impact of a negative interest rate on the JGB market.

Q3. Will a negative interest rate cause a decrease in financial institutions' earnings?
A. When central banks aim at boosting the real economy through monetary easing measures, these measures can negatively affect the earnings of financial institutions which function as financial intermediaries. In deciding the introduction of a negative interest rate at the Monetary Policy Meeting held today, the Bank also decided to adopt a three-tier system in which a positive interest rate or a zero interest rate will be applied to current account balances up to certain thresholds in order to make sure that financial institutions' functions as financial intermediaries would not be impaired due to undue decreases in financial institutions' earnings. It should be noted that overcoming deflation as soon as possible and exiting from the low interest-rate environment lasting for two decades is essential for improving the business conditions for the financial industry.

Q4. Will a negative interest rate be effective under the three-tier system, given that the negative rate will be applied partially?
A. Transaction prices in financial markets (e.g. interest rates, stock prices, and exchange rates) are determined by marginal losses or gains made in a new transaction. Although a negative interest rate is not applied to the total outstanding balances of current accounts, costs incurred with an increase in the current account balance brought by a new transaction will be minus 0.1
percent if it is applied to a marginal increase in the current account balance. Interest rates and asset prices will be determined in financial markets based on that premise.

Q5. How far into negative territory can the interest rate be moved?
A. With regard to potential problems associated with negative interest rates, the following can be mentioned: (1) if the decrease in financial institutions' earnings due to negative interest rates become sizable, it could impair their functions as financial intermediaries; and (2) if financial institutions reduce their outstanding balances of the central bank's current accounts with which a negative interest rate is charged and significantly increase their cash holdings which yield zero interest, the effects of negative interest rates will be lessened.

The Bank of Japan's framework is designed to address these potential problems. With regard to (1), the Bank has adopted a three-tier system in order to mitigate a concern over undue impact on financial institutions' earnings. With regard to (2), if a financial institution increases its cash holdings significantly, the Bank will deduct an increase in its cash holdings from the zero interest-rate tiers of current account balance. Thus, a negative interest rate will be charged on the increase in its cash holdings. Similar multiple-tier systems are adopted in countries where the size of negative interest rates is relatively large, including Switzerland (minus 0.75 percent as of January 29, 2016), Sweden (minus 1.1 percent as of January 29, 2016), and Denmark (minus 0.65 percent as of January 29, 2016).

Q6. Given that the interest rate on current accounts at the Bank becomes negative, don't you think financial institutions will stop using the Fund-Provisioning Measure to Stimulate Bank Lending, the Fund-Provisioning Measure to Support Strengthening the Foundations for Economic Growth, and the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas affected by the Great East Japan Earthquake? (Amended on April 28, 2016)
A. The Bank judges that these measures are playing an important role and it is not desirable that a negative interest rate on current accounts at the Bank would provide a disincentive for financial institutions to use these facilities. On this basis, the Bank decided to cut its lending rates for these facilities to zero percent and also to allow the sum of the latest amounts outstanding of the Bank's provision of credit through these facilities and the increase in the amounts outstanding of these facilities since the end of March 2016 to be included in the tier of current account balances to which a zero interest rate will be applied (namely, twice as much as the increase in the amounts outstanding of these facilities is included). Therefore, while the outstanding balances of current accounts which financial institutions hold at the

Bank will increase due to the use of these facilities, these financial institutions will not incur a negative margin and thus will not be discouraged to use them.

The amounts outstanding of the Bank's provision of credit through the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake will be treated in the same manner above.

Q7. Please explain why the Bank will adjust the tiers of current account balances, to which a zero interest rate will be applied, in the future. (Amended on April 28, 2016)
A. As the monetary base will grow at an annual pace of about 80 trillion yen in line with the Bank's current guideline for money market operations, the outstanding balances of current accounts at the Bank will increase on an aggregate basis. In this situation, the Bank will accordingly increase the tiers of financial institutions' balances of current accounts to which zero interest rates will be applied in principle every three reserve maintenance periods so that the balances to which a negative interest rate will be applied will remain at adequate levels.

Q8. How much is the amount of financial institutions' current accounts at the Bank, to which a negative interest rate of minus 0.1 percent will be applied? Also, give us some idea about how the Bank will adjust the amount of the Macro Add-on Balance in the future. (Added on February 3, 2016 and amended on March 15, 2016)
A. Let us explain, in order, the amounts of three tiers on an aggregate basis -- that is, the amount of current accounts at the Bank for all financial institutions that have current accounts at the Bank. First, the total amount of current accounts, to which a positive interest rate of 0.1 percent will be applied, is about 210 trillion yen. This amount is calculated as subtracting the amount of the required reserves held by financial institutions subject to the Reserve Requirement System, which is about 9 trillion yen, from the amount of the Basic Balance -that is, the average outstanding balance of current accounts that all financial institutions held at the Bank during the one-year period of last year -- which is about 220 trillion yen. A zero interest rate will continue to be applied to the required reserves as part of the Macro Add-on Balance. Second, the initial amount of the Macro Add-on Balance, to which a zero interest rate will be applied, is about 40 trillion yen. This amount is calculated as the amount of required reserves, which is about 9 trillion yen, plus the total amount of the Bank's provision of credit through the Loan Support Program and the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas affected by the Great East Japan Earthquake, which is about 30 trillion yen. Third, assuming that the total amount of current accounts at the Bank will be 260 trillion yen during the February 2016 reserve maintenance period that commences
from February 16, 2016, the initial amount of the Policy-Rate Balance, to which a negative interest rate of minus 0.1 percent will be applied, is about 10 trillion yen -- specifically, 260 -210-40 = 10 trillion yen. It should be noted that this is an aggregate amount for all financial institutions that have current accounts at the Bank. Given the fact that the amounts of the Basic Balance, the Macro Add-on Balance, and the Policy-Rate Balance held by individual financial institutions differ, the actual amount of the Policy-Rate Balance, to which a negative interest rate of minus 0.1 percent will be applied, is larger than 10 trillion yen in total.

Going forward, assuming that the Bank will continue with the current guideline for money market operations, the pace of increase in the total amount of current accounts at the Bank for all financial institutions, which is roughly equal to that in the monetary base, will be about 80 trillion yen annually. This means that it will increase at a quarterly pace of about 20 trillion yen. Without any adjustment of the Macro Add-on Balance -- for example, keeping it at the initial balance of about 40 trillion yen -- all of the increase in the current account balances at the Bank will result in an increase in the Policy-Rate Balance. In that case, the amount of the Policy-Rate Balance will be about 30 trillion yen -- an increase of 20 trillion yen from the initial amount of about 10 trillion yen -- three months later.

If the Bank is to add to the Macro Add-on Balance by about 20 trillion yen in total -- which corresponds to 10 percent of the amount outstanding of the Basic Balance held by individual financial institutions -- three months later, its amount will increase to about 60 trillion yen from the initial amount of about 40 trillion yen. This in turn will bring the amount of the Policy-Rate Balance back to about 10 trillion yen, which is the same level as this February. It should be noted that current account balances in Japan are susceptible to seasonal changes and thus their monthly pace of increase is not constant.

The above numerical example -- in which the amount of the Macro Add-on Balance will be increased by about 20 trillion yen every three months and that of the Policy-Rate Balance will remain in the range of about 10-30 trillion yen -- is provided for illustrative purposes and intended to help create an understanding of the Bank's thinking about how to adjust the Macro Add-on Balance. Taking account of conditions such as those of short-term money markets in Japan after the introduction of the negative interest rate, the Bank will adjust the Macro Add-on Balance in principle every three reserve maintenance periods (in June, September, December and March). As explained in our answer to Q4, if a negative interest rate of minus 0.1 percent is applied to a marginal increase in current account balances, the Bank will be able to lower the short end of the yield curve and to affect prices of other financial assets. Thus, in theory, even if the amount of the Policy-Rate Balance is small, the negative interest rate will have intended effects. That said, since there are various frictions in financial markets,
the Bank needs to judge how large the amount of the Policy-Rate Balance should be for the negative interest rate policy to fully exert its intended effects on financial markets after implementing this policy. Taking both its effects on market interest rates and its impact on financial institutions' earnings into consideration, the Policy Board will decide on how to adjust the Macro Add-on Balance.

