Daiwa's View

Another policy normalization topic: Current accounts structure after ending negative interest rates

- Handling macro add-on balance will be issue when ending negative interest rates
- Two-tier structure of 0.0% and +0.1% seen as possible option

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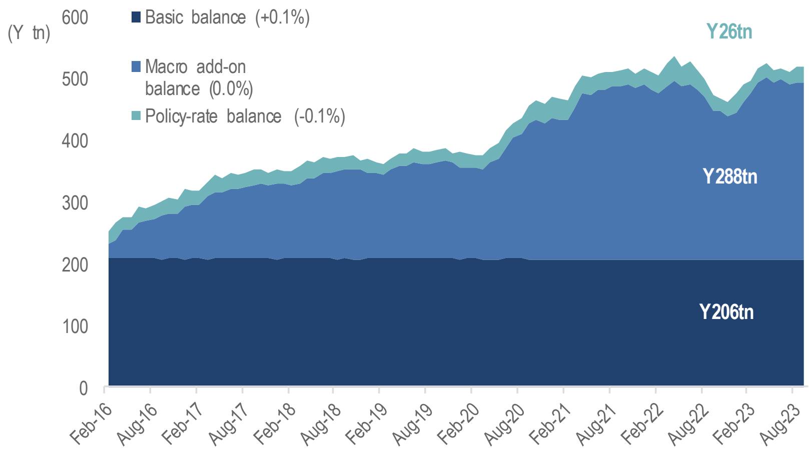
There has been a flurry of speculative reports regarding further YCC revisions ahead of the BOJ's 30-31 October Monetary Policy Board meeting. Our current focus is still on the management of the Bank's long-term interest rate operations, but we cannot overlook ending negative interest rates as an important topic related to monetary policy normalization. Currently debate on the pros and cons of ending negative interest rates and the exact timing has been gaining momentum, but opportunities to discuss specific operations, such as how to best revise the current accounts structure and the interest rates to be applied to current accounts, seem to be somewhat limited, including information provided by the BOJ.

Therefore, in this report we will try to examine possible operation approaches once negative interest rates are ended, taking into account issues that should be considered when changing policy. We will start by stating our conclusion. The essential point is how to handle the interest rates applied to the BOJ's macro add-on balance. We can assume that a two-tier current accounts structure consisting of 0.0% and +0.1% interest rates as an operational measure is one option.

Chart 1: BOJ's Current Account Balance



Source: BOJ; compiled by Daiwa.
Note: Figures in charts show average balances in Sep 2023.

Short-term financial markets provide an important channel through which policy rates spill over into the real economy, but the actual situation, including the current accounts structure, seems somewhat difficult to understand. Therefore, we want to again confirm the present current accounts structure in order to better consider operations once negative interest rates are ended. In particular, the macro add-on balance has many components and a certain portion is tied to other policies. We can point out that this is an area likely to face challenges once negative interest rates are ended (explained in later section).

Chart 2: Three-Tier System of Current Accounts

Tier	Subject to calculation	Applied interest rate
① Basic Balance	Benchmark Balance (average outstanding balance for 2015) – Required reserves	+0.1%
② Macro Add-on Balance	Benchmark Balance × Benchmark Ratio[1]	0.0%
	Balances associated with the Bank's various fund-provisioning measures[2] (Loan Balance 1)[3]	
	Increase in balances associated with the Bank's various fund-provisioning measures compared with at end-March 2016 (Loan Balance 2)	
	Amount based on the special rules for money reserve funds[4] and those for new institutions[5]	
	Amount added/reduced in the calculation of the limit of the Macro Add-on Balance[6]	
	Required reserves	
③ Policy-Rate Balance	Amount obtained by subtracting (1) and (2) from current account balances	-0.1%

Source: BOJ; compiled by Daiwa.

The BOJ established a three-tier structure for current accounts when introducing negative interest rates (above chart). In a Working Paper, the BOJ said, “The three-tier system applied to current accounts is a framework that has been introduced to realize negative interest rates while taking the impact on financial institutions’ earnings into consideration” (underlining by author). Furthermore, that “consideration” is largely shouldered by the macro add-on balance mentioned earlier. In other words, the macro add-on balance functions to mitigate the side effects of negative interest rates on the earnings of financial institutions. Without the macro add-on balance, all excess reserves would have been subject to a negative interest rate, which would have resulted in significant downward pressure on the earnings of financial institutions.

The key factors that define the upper bound of the macro add-on balances are (1) benchmark average balance multiplied by the benchmark ratio and (2) portion corresponding to balances used for various BOJ operations. The latter is a measure whereby the financial institutions’ macro add-on balance upper bounds are increased twice as much as the outstanding amount they borrowed through the various operations. Therefore, an increase in the balance would reduce the policy-rate balance, which is the source of negative interest rate transactions, while providing institutional incentives to use the operations.

1 Ratio equally applied to all financial institutions.

2 The Bank's measures include the Stimulating Bank Lending Facility, Growth-Supporting Funding Facility, Funds-Supplying Operation to Support Financial Institutions in Disaster Areas (including the funds-supplying operations to support financial institutions in disaster areas of the Great East Japan Earthquake and of the 2016 Kumamoto Earthquake, before they were abolished), the Special Operations in Response to COVID-19, and the Funds-Supplying Operations to Support Financing for Climate Change Responses.

3 With a view to providing incentives to use various fund-provisioning measures (excluding fund-provisioning against government-supported loans through the Special Operations in Response to COVID-19), balances of those measures (Loan Balances 1) as well as the increase in balances compared with those at the end of March 2016 (Loan Balances 2) are included in the calculation of the Macro Add-on Balance limit.

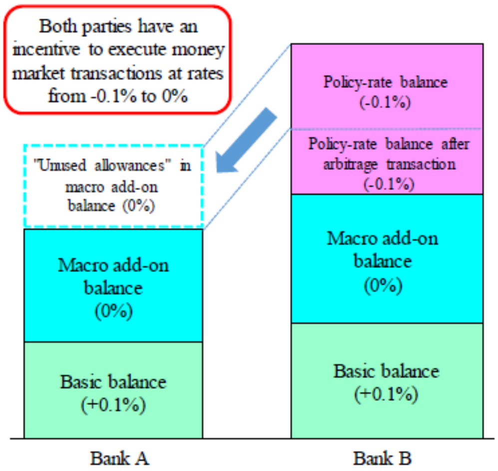
4 The smaller of the average amount outstanding of money reserve funds entrusted to an institution during the reserve maintenance periods from January to December 2015 (on a net asset basis; including the amount that was not deposited in the current accounts at the Bank as a result of investment) and that entrusted to an institution during the designated reserve maintenance period (on a net asset basis; excluding the amount that was not deposited in the current accounts as a result of investment).

5 The balance obtained by multiplying the benchmark ratio by the Deemed Benchmark Balance based on the "Special Rules regarding Calculation of Interest of Complementary Deposit Facility for New Institutions."

6 Amounts added to or reduced in the calculation of the limit of the Macro Add-on Balances introduced in light of the Bank's Assessment in March 2021. For details, see "Appendix 4: Operation of the Complementary Deposit Facility" ("Revision regarding 1." and "Revision regarding 2.") of the "Assessment for Further Effective and Sustainable Monetary Easing (The Background)" released on March 19, 2021.

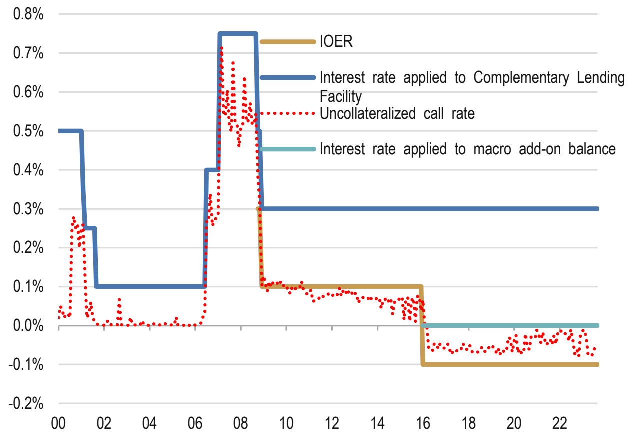
Macro add-on balances also serve to encourage arbitrage trading among current accounts held at the BOJ. For example, there are incentives for arbitrage trading between -0.1% and 0.0% among (1) entities whose current accounts have exceeded the macro add-on balance upper bound and who wish to avoid negative interest rates and (2) entities that have "unused allowances," which means their current account balance falls below the upper bound (Chart 3). In other words, the current uncollateralized call market is a corridor formed by the difference in interest rates applied between the tiers within the current accounts structure (Chart 4).

Chart 3: Arbitrage Transaction



Source: Reprinted from BOJ materials.

Chart 4: Trends of Short-term Interest Rates



Source: BOJ, Bloomberg; compiled by Daiwa.

◇Issues when ending negative interest rates

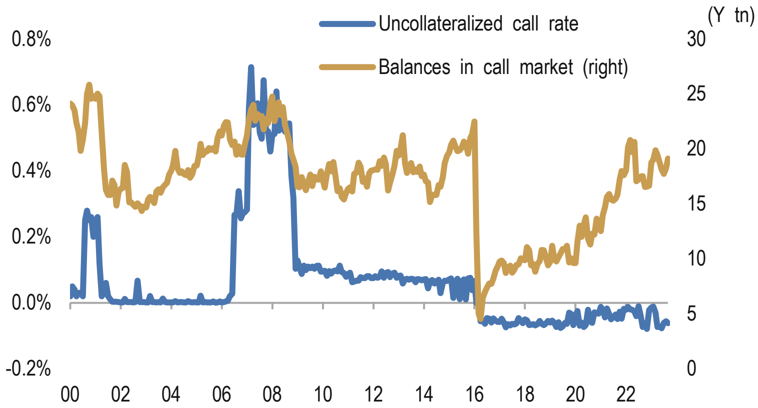
One issue to be addressed when ending negative interest rates is the positioning of the macro add-on balance, which provides an incentive for using BOJ operations (discussed above) and encourages arbitrage trading among banks. Suppose, for example, that the interest rate applied to the policy-rate balances is raised to 0% and the interest rate applied to the macro add-on balance is maintained at 0%. At that time, the costs associated with accumulating policy rate balances would decline, reducing the incentive to use BOJ operations aimed at raising the macro add-on balance upper bound.

In addition, when arbitrage trading opportunities that had been in place are lost and low policy rates persist, call market functioning will decline due to the reduced incentive to trade in the interbank market. There would be concerns about the negative impact on the real economy as funds liquidity at financial institutions declines[7]. In fact, looking at past trends, we can see how call transaction balances declined significantly while the uncollateralized call rate remained at around 0% (Chart 5). This point was raised by former BOJ Governor Masaaki Shirakawa in his book (see BOX on page 5).

Accordingly, for the above two reasons, it is likely that there will continue to be tiers for the interest rates applied within the current account system (difference in rates applied to the policy rate balance and macro add-on balance, when using current system as an example), which is the heart of the current system.

[7] The role of demarcating the upper bound of the uncollateralized call rate at this time may be taken over by the loan rate applied to the complementary lending facility. The following description can be found on the BOJ's website: "In addition to financial market regulation through operations, there are other mechanisms that can affect the uncollateralized call rate (overnight). For example, the complementary lending facility is a one-day loan program that the BOJ passively implements upon receiving an application for use from a financial institution. The lending rate applied for this facility serves to set the upper limit for the uncollateralized call rate (overnight)." Also, the lower bound was described as "Under the complementary deposit facility, interest will be applied to the so-called 'excess reserves.' This applied interest rate is expected to play a role in demarcating the lower limit of the uncollateralized call rate (overnight)."

Chart 5: Uncollateralized Call Rate, Call Transaction Balances

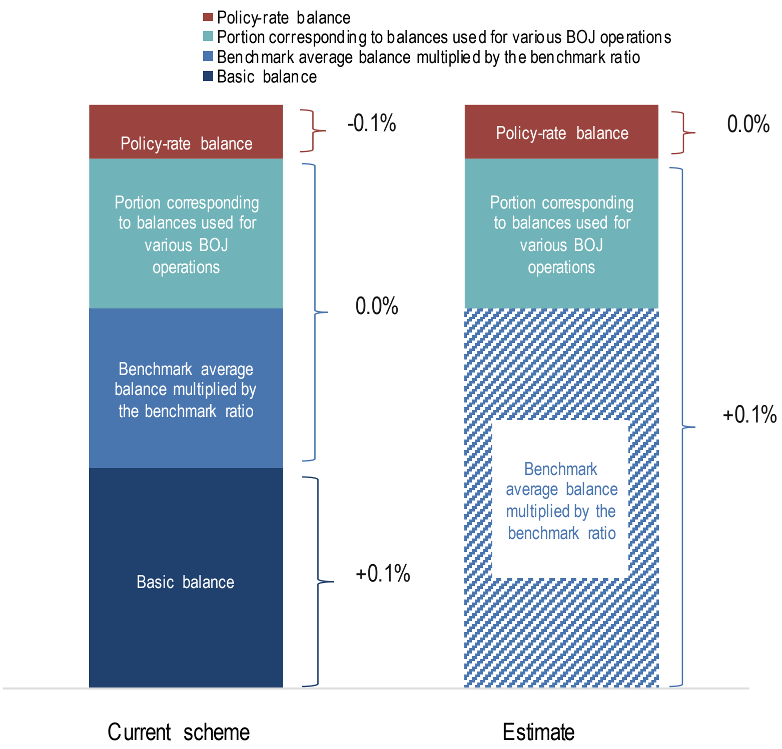


Source: BOJ, Bloomberg; compiled by Daiwa.

Here, we will discuss the interest rate of +0.1% applied to the basic balance. The upper limit is calculated based on the average balance in 2015, specifically the current account balance before the introduction of negative interest rates. In other words, it is responsible for guaranteeing that a +0.1% interest rate is applied to the original current account balance when negative interest rates are introduced. Accordingly, based on the flow of events, the basic balance framework could be eliminated at the time of an interest rate hike.

Taking the above points all into consideration, a potential operation when ending negative interest rates would be to raise the interest rate applied to the policy rate balance (from -0.1% to 0.0%) and apply an interest rate of +0.1% to the macro add-on balance or equivalent framework, as shown in the chart below. Of course, other operations can be considered, but we assume that some action will be taken to address the above-mentioned issues when ending negative interest rates.

Chart 6: Current Accounts Structure After Ending Negative Interest Rates (estimate)



Source: Compiled by Daiwa.

BOX: Current Account System in Memoirs of Former Governor Shirakawa
Shirakawa, who was BOJ governor when the complementary deposit facility system was introduced in 2008, wrote about the purpose of introducing the facility in his book "Central Bank." This book includes many useful references. The following is an edited and summarized version of the relevant sections for a reference. Please refer to the original book for further details.

> After the start of the global financial crisis triggered by the collapse of Lehman Brothers, the BOJ actively supplied funds to maintain financial system stability. Private banks would release excess funds, now in excess reserves, into the interbank market, bringing the level of short-term interest rates down to zero. The problem is that there is no guarantee that the level of interest rates realized as a result of ample money supply from the perspective of maintaining financial system stability will necessarily coincide with the optimal level of interest rates from the perspective of macroeconomic stability. This is where the system of applying interest rates to current accounts came into play.
>
> One of the reasons that introducing the new policy (complementary deposit facility) was judged as necessary was that during the quantitative easing policy period that began in March 2001, it was decided that the optimal short-term interest rate level for macroeconomic stability was not literally zero, but a slightly positive level. At that time, the overnight rate was at the extreme zero interest rate level of 0.001%, which eliminated the incentive to trade in the interbank market when transaction costs were taken into account. As a result, there was the problems of extremely thin trading and a deterioration of interbank market functioning. There was the possibility that the stimulative effect of monetary policy could have shifted from positive to negative if short-term interest rates fell beyond a certain threshold due to a drop in the liquidity of funds at financial institutions.

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