Daiwa's View

Requirements for successful reduction in negative interest rates

➢ Diligent advance preparations necessary

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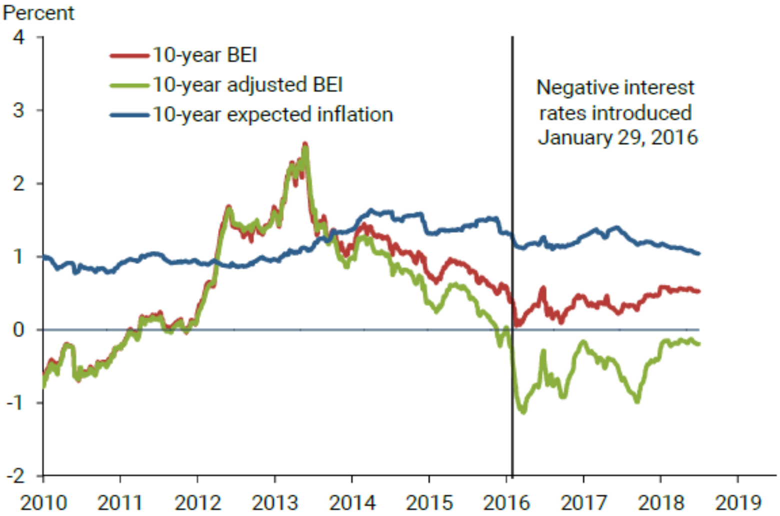
Diligent advance preparations necessary

On 26 August, San Francisco Fed staff released an analysis report with a skeptical view of the BOJ's negative interest rate policy,[1] which is garnering market attention. The report concludes that "the reaction stresses the uncertainty surrounding the effectiveness of negative policy rates as expansionary tools when inflation expectations are anchored at low levels." This suggested using caution when considering the efficacy of negative rates as expansionary policy tools[2].

In this report, the authors estimated inflation expectations by adjusting the estimated values of inflation risk premiums and floor value by using the BEI of inflation-indexed bonds. We learn that the inflation expectation has been quite stable in comparison with the BEI and the floor value-adjusted BEI. In particular, the adjustment of the floor value in the BEI is large, typically 0.5-1 percentage point, and quite volatile. That said, the report pointed out that other inflation expectation readings also declined immediately after the BOJ introduced the negative interest rate.

Chart: 10-year Inflation Expectations



Source: Extract from Jens H.E. Christensen and Mark M. Spiegel (2019). "Negative Interest Rates and Inflation Expectations in Japan."

[1] Jens H.E. Christensen and Mark M. Spiegel (2019). *Negative Interest Rates and Inflation Expectations in Japan*.
[2] As Fed's policy implications, report also justified preemptive measures, stating that "Japan's experience also illustrates the desirability of taking preemptive steps to avoid the zero interest rate bound."

They also analyzed the change (immediate response) in inflation expectations during a one-day event window on the announcement day of the BOJ's negative policy rates on 29 January 2016, by using high-frequency data. Data showed that the introduction of negative rates caused the rapid decline in the floor value-adjusted BEI. Based on this result, the authors reached a skeptical view about the effect of negative rates.

However, this report does not explain the mechanism—how the BOJ's negative interest rate led to the decline in inflation expectations. In other words, it concluded that the negative interest rate itself was not effective without examining whether (1) the decline in inflation expectations after the introduction of the negative interest rate policy was caused by the policy itself, (2) it reflected the economic condition at the time of introduction of the policy, or (3) it mirrored the market's shocked reactions owing to the surprising policy introduction against market expectations. Therefore, the conclusion appears to be somewhat premature.

Probably because the authors recognize this point, they say that "the changes in the market's expectations could have been responses to economic deterioration rather than to the policy change. In other words, it is possible that the decline in medium- and long-term inflation expectations in the data might have been even steeper if the BOJ had not moved into negative policy rates" in the conclusion.

The text also states that "the discrepancy between adjusted and unadjusted BEI increased dramatically on the announcement date, reflecting the increased value market participants placed on the deflation protection enhancement. Essentially, the market appeared to treat negative rates as bad news, perhaps because investors were concerned that the BOJ's unprecedented move meant that economic conditions were worse than they thought."

For reference, this report is an updated version of a working paper entitled *Assessing Abenomics*[3] released in May 2019 by the same authors (section of study on negative rate events). Although this paper did not attract market attention, it examined market reactions (inflation expectations) to major changes to monetary policy since Abenomics. The analysis shows that policy changes, other than the introduction of QQE in April 2013, were unable to gain much of a favorable market reaction, stating that the most notable case was the introduction of negative interest rates in January 2016.

In the Summary of the 2019 BOJ-IMES Conference[4] announced by the BOJ last week, there was this remark:

◆ ***Central Bank Design under a Continued Low Inflation and Interest Rate Environment*** (Summary of 2019 BOJ-IMES Conference)

・Beechey explained Sweden's experience with the introduction of a negative interest rate policy. She stressed that communication with the public about the negative interest rate had been particularly difficult, as the public viewed the negative interest rate as a signal that the economy was still in crisis. Wakatabe noted that the situation was similar in Japan, adding that its negative connotation seemed to have misguided the public understanding of the policy.

We are unable to deny the possibility that inflation expectations declined especially in Japan as a result of the fact that the surprising introduction of the negative rate policy caused negative market reactions (stronger yen/lower stock prices).

In particular, stock prices declined led by bank shares as financial institutions were expected to face earnings compression. This may have created deflation effects (decline in inflation expectations).

Recently, we often see event studies using high-frequency data like this (between monetary policy shocks and responses of bank stock prices). For example, the Fed recently

3 Jens H.E. Christensen and Mark M. Spiegel (2019). *Assessing Abenomics: Evidence from Inflation-Indexed Japanese Government Bonds*.
4 BOJ (2019). *Central Bank Design under a Continued Low Inflation and Interest Rate Environment: Summary of the 2019 BOJ-IMES Conference*.

announced a paper entitled [*Monetary Policy and Bank Equity Values in a Time of Low and Negative Interest Rates*](), in which the response of eurozone bank stock prices to the interest rate cuts was analyzed by using a high-frequency event study methodology[5].

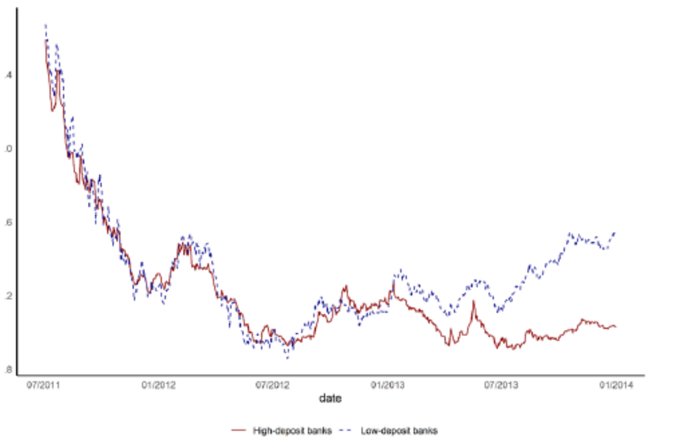
This paper also concluded that surprise reductions in interest rates usually have a positive impact on bank equity values, but the impact reverses to negative after interest rates fall to zero and lower. In short, the result showed that bank equity values should be emphasized. In fact, it is well known that bank stock prices in the eurozone precede lending trends.

The paper showed that specifically deposit-intensive banks exhibit much larger declines in their equity values upon surprise policy rate cuts in the low/negative rate period, compared to banks that rely less on deposit funding. This indicates that such a situation is more applicable to Japanese banks, whose fundraising mostly relies on deposits, unlike European banks.

Chart: Loans to Nonfinancial Corporations and Bank Stock Price in Eurozone

Source: ECB, Bloomberg; compiled by Daiwa Securities

Chart: Evolution of Stock Prices of High- and Low-deposit Banks



Source: Extract from Miguel Ampudia and Skander J. Van den Heuvel (2019). Monetary Policy and Bank Equity Values in a Time of Low and Negative Interest Rates.

These studies show a possibility that the surprise introduction of negative interest rate led to the decline in inflation expectations via paths of shocking market responses and lower bank stock prices in anticipation of erosion of earnings at financial institutions.

Conversely, this implies that these paths may be cut off if policymakers conduct careful communications with the market and measures to address side effects on bank earnings at the time of the introduction of negative interest rates (or further reduction in negative rates).

In the aforementioned *Summary of the 2019 BOJ-IMES Conference* announced by the BOJ, participant Meredith Beechey (Sveriges Riksbank) praised the analysis of the reversal rate by Professor Markus Brunnermeier, describing it as “an excellent proof of concept of the reversal rate with a model that captured various mechanisms examined in the banking literature.” She then showed methods to secure the scope of additional rate cut as follows:

◆ ***Central Bank Design under a Continued Low Inflation and Interest Rate Environment*** (Summary of 2019 BOJ-IMES Conference)

・Beechey commented that loosened financial constraints and central bank policies to ease the net worth problem could increase the scope of policy rate cuts. She then conjectured that the reversal rate might “creep down” since banks would take on more maturity mismatch and would rely more on market funding, suggesting that a cross-country estimation of the reversal rate might be useful.

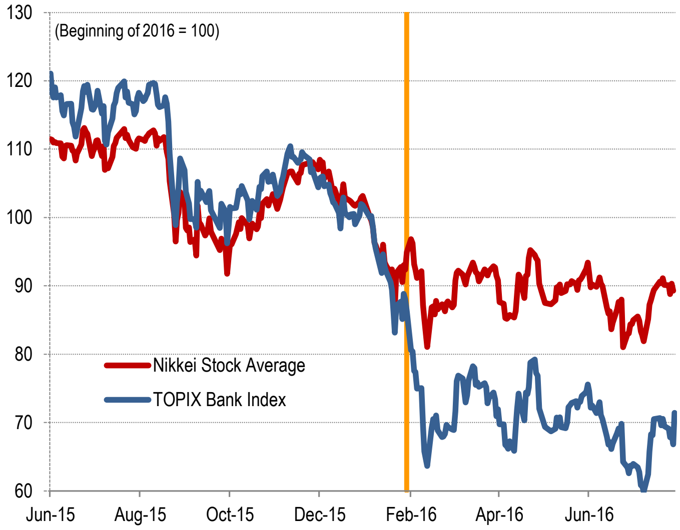
[5] One author of this paper is ECB staff. Study initially announced in ECB Research Bulletin in Jan 2019. We thus see this paper as important, also in forecasting ECB's policy operations.

This week, the *Nikkei* suddenly posted a speculative article regarding the BOJ's policy operations, which also attracted market attention[6]. It said that "in the case that the BOJ implements additional easing such as deepening negative rates, the bank is poised to consider schemes to reduce side effects" in an assertive tone. We do not know the article's real intention and whether it is accurate. However, we can say that the aforementioned ways to "nudge down" the reversal rate are indeed "measures to address side effects."

If the BOJ deepens the negative interest rates as an additional easing measure, the implementation of this measure alone would highly likely cause negative market reactions, similar to those in 2016 (if it entails surprise, impact would intensify).

In that sense, in the case of a further reduction in negative interest rates, the BOJ would definitely formulate packaged measures to weaken financial system burdens to address the side effects. In addition, the BOJ may send out messages ahead of the implementation of a rate cut to avoid surprises like the current ECB's stance. From this viewpoint, we intend to continue to closely watch media reports and messages from the BOJ.

Chart: Nikkei Stock Average and TOPIX Bank Index at Around Introduction of Negative Interest Rate



Source: Bloomberg; compiled by Daiwa Securities

[6] Nikkei (27 Aug 2019): BOJ to conduct two-step easing; decline in long-term rate to be accepted first and measures to address side effects to be conducted in case of additional easing.

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■ Credit Rating Agencies

[Standard & Poor's]

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[Moody's]

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[Fitch]

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May 2018

IMPORTANT

Notification items pursuant to Article 37 of the Financial Instruments and Exchange Law

If you decide to enter into a business arrangement with our company based on the information described in this report, we ask you to pay close attention to the following items.

• In addition to the purchase price of a financial instrument, our company will collect a trading commission* for each transaction as agreed beforehand with you. Since commissions may be included in the purchase price or may not be charged for certain transactions, we recommend that you confirm the commission for each transaction. In some cases, our company also may charge a maximum of ¥ 2 million (including tax) per year as a standing proxy fee for our deposit of your securities, if you are a non-resident.
• For derivative and margin transactions etc., our company may require collateral or margin requirements in accordance with an agreement made beforehand with you. Ordinarily in such cases, the amount of the transaction will be in excess of the required collateral or margin requirements**.
• There is a risk that you will incur losses on your transactions due to changes in the market price of financial instruments based on fluctuations in interest rates, exchange rates, stock prices, real estate prices, commodity prices, and others. In addition, depending on the content of the transaction, the loss could exceed the amount of the collateral or margin requirements.
• There may be a difference between bid price etc. and ask price etc. of OTC derivatives handled by our company.
• Before engaging in any trading, please thoroughly confirm accounting and tax treatments regarding your trading in financial instruments with such experts as certified public accountants.

* The amount of the trading commission cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

** The ratio of margin requirements etc. to the amount of the transaction cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

When making an actual transaction, please be sure to carefully read the materials presented to you prior to the execution of agreement, and to take responsibility for your own decisions regarding the signing of the agreement with our company.

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