

## Introduction

The BOJ released a small piece of research on May 1, and its English version is posted at the website of the BOJ ([http://www.boj.or.jp/en/research/wps\\_rev/rev\\_2015/data/rev15e03.pdf](http://www.boj.or.jp/en/research/wps_rev/rev_2015/data/rev15e03.pdf)). It so far seems to attract little attention, probably due to its timing to release. Nevertheless, if the readers are interested in the prospects of the QQE, it is one of the must-read items.

## First half of FY2016

Before discussing its details, I have a caveat here. This research piece should be read as the official review by the executives of the BOJ, because it is written by "Monetary Affairs Department". Readers may note that this is not written by specific researchers at the BOJ nor members of the board.

In contrast, in the US for example, this kind of important task would be conducted by a speech by Chair (or Vice Chair) of the Board, with reference to a number of studies by the staff. In fact, this BOJ's piece is apparently based on a number of empirical analyses by the staff, as its discussion suggests.

It is of course natural for the BOJ to review the QQE now, especially in light of its original commitment to achieve the 2% target in two years time (since the introduction of the QQE in April 2013). Moreover, the executives of the BOJ may feel necessary to share the understanding of the QQE with the markets and general public, in terms of its effects and transmission for the purpose of better communication policy.

One possible option (in light of its timing) was to include this piece in the semi-annual review of economic outlook, of which full-version was released on the same day. In addition to its less appeal to the audience, it would require a hard task for the executives of the BOJ to seek consensus among members of the policy board. Readers may recall the diversification of their opinions at the additional stimulus in last October.

## Transmission mechanism

The first part of the piece discusses the transmission mechanism of the QQE. Interestingly, it appears to be in line with the traditional one, especially once successfully stimulating inflation expectations by the economic agents.

According to the explanation, lowering long-term yields by JGB purchase results in lower real interest rates, which stimulates aggregate demands. Narrowing gap of aggregate demand/supply drives up the actual inflation and inflation expectations (in an adaptive manner).

In terms of the initial process of reduction in real rates, this research piece refers to a rise in inflation expectation triggered by a strong policy commitment by the BOJ. And it also refers to positive reactions of financial markets and "portfolio rebalancing effects", but only as a reflection of improvements of fundamental economic activities.

All in all, readers would have an impression that the transmission of effects of the QQE through the market dynamics have been downplayed. One possible reason would be its less than expected positive impacts on consumption and business investments. As discussed at a series of press conferences, consumption has been lackluster in spite of substantial increase in net worth of household wealth. Similarly, growth in business investment has been weaker than expected in spite of record-high level of corporate profits.

We might have to wait for some more time before the QQE would have full-fledged effects on our fundamental economy, if the transmission mechanism would be such a traditional one. Readers may like to recall that it was a rule of thumb in Japan that there is 12 to 18 months lag on the effects on economy. At the same time, however, it should also be noted that a break of effects from the markets to the fundamental economy has been one source of views among major politicians about another round of additional stimulus.

## Empirical estimation of the effects

The BOJ's research piece finally discusses the policy effects based on the two stage analyses.

First, it estimates the impacts on real interest rates. Hardest part is apparently the estimation of the impacts on inflation expectation, because they could not be directly observed. It tries four methods of estimation (based on survey data, Phillips Curve, direct estimation of yields, and term-structure models), and claims to have a coherent result. That is: the QQE effectively lowered real long-term yields by 80bp (30bp by nominal terms and 50bp by inflation expectations).

Readers may remember that the estimated effects of each round of "QE" in the US mostly range from 20bp to 50bp (according to the table presented with Vice Chair Fischer's speech in February 2015). While it should be noted that they are nominal terms, they appear to be consistent with the BOJ's estimation (regardless of the differences of scales).

Second, it estimates the impacts on fundamental economy using the BOJ's macro-economic model (Q-JEM). Here, the market dynamics again have interesting implications.

According to the research piece, reduction in real rates only shows substantial under-estimation of economic impacts actually observed in two years. It estimates 1.1% reduction in GDP gap (vs 2.0% in reality) and 0.6%pp improvement in CPI inflation rates (vs 1.0% in reality). At the same time, however, if they take account of the actual performances of stock prices and foreign exchange rates, the impacts are then over-estimated (3.0% reduction in GDP gap and 1.0%pp improvement in inflation).

As the research piece insists, financial markets have also been driven by factors other than the QQE. We could still argue, however, the market dynamics have played an important positive role for our economy.

## Conclusion

Some readers of the BOJ's research piece might be disappointed at the fact that there is no clear reference to the role of massive injection of reserve money. In my view, the line of discussion in this research piece could rather have an implication for the rationales for another round of additional stimulus and the normalization in the end.

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