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*<BOJ's ETF Purchases >**BOJ's ETF Purchases Expanding Steadily**– How long will the BOJ hold risky assets with no maturity?**Ikuko FUEDA-SAMIKAWA (Principal Economist)<sup>1</sup>**Tetsuaki TAKANO (Economist)<sup>2</sup>*

The Bank of Japan has recently announced that its total assets, including Japanese government bonds (hereinafter referred to as “JGBs”) and exchange-traded funds (hereinafter referred to as “ETFs”), exceeded 500 trillion yen at the end of May for the first time. This amount is now comparable to Japan’s nominal Gross Domestic Product (GDP), and the ratio is far higher than those of other major central banks. Under the current “inflation-overshooting commitment,” the BOJ is expected to expand the monetary base until the year-on-year rate of increase in the observed consumer price index (CPI) exceeds the price stability target of two percent and remains above the target in a stable manner, but it still appears to take time to reach the goal. Will the Bank face a purchasing limit or any risk in expanding its balance sheet? Following the May 23 report on the BOJ’s purchases of JGBs, the Bank’s holdings of ETFs will be considered in this report. What are the implications of the central bank’s holdings of ETFs? Since maturity or redemption does not come to ETFs, their credit risk and price fluctuation risk appear to be relatively high. Is there any risk of the BOJ facing difficulty in the process of “monetary normalization,” i.e. the exit from the current unconventional monetary policy?

**Unlike JGBs, the Pace of Increase in BOJ’s Holdings of ETFs is Expanding Steadily**

The BOJ changed its operational target from quantity to interest rate under the current monetary policy “Quantitative and Qualitative Monetary Easing with Yield Curve Control” introduced in September 2016. Regarding the purchase of JGBs, although the annual pace of increase in the outstanding balance of about 80 trillion yen is still treated as the bond-buying pledge, the increasing amount slowed to about 70 trillion yen in June (Figure 1 - left)<sup>3</sup>.

In contrast to JGBs, the BOJ is steadily increasing its purchase of ETFs. It has been a year since the Bank announced that it would double its purchase amount of ETFs to about 6 trillion yen in July 2016. The BOJ’s ETF holding is 14.3 trillion yen at the end of June, and the annual amount of increase from

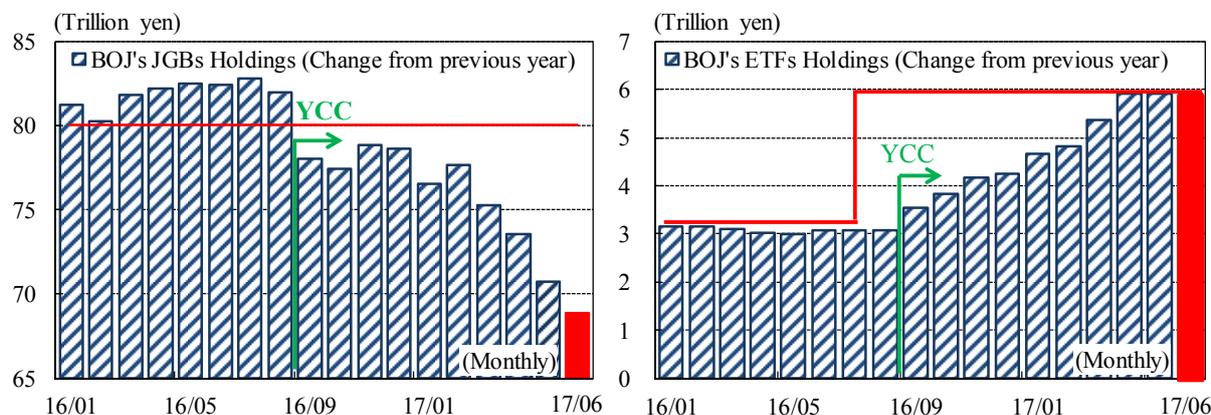
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<sup>3</sup> “Pace of Increase in BOJ’s Holding of JGBs Slowing -Does the purchase limit risk still remain?,” May 23, 2017.  
[https://www.jcer.or.jp/eng/pdf/170523\\_report\(eng\).pdf](https://www.jcer.or.jp/eng/pdf/170523_report(eng).pdf)

the previous year has now reached 6 trillion yen (Figure 1 - right). According to The Investment Trusts Association, JAPAN, the ETF market size (total net asset value) was 24,082 billion yen as of the end of May. The Bank already holds 60% of the market.

Fig. 1 BOJ's Holdings of JGBs and ETFs (Increase from Previous Year)

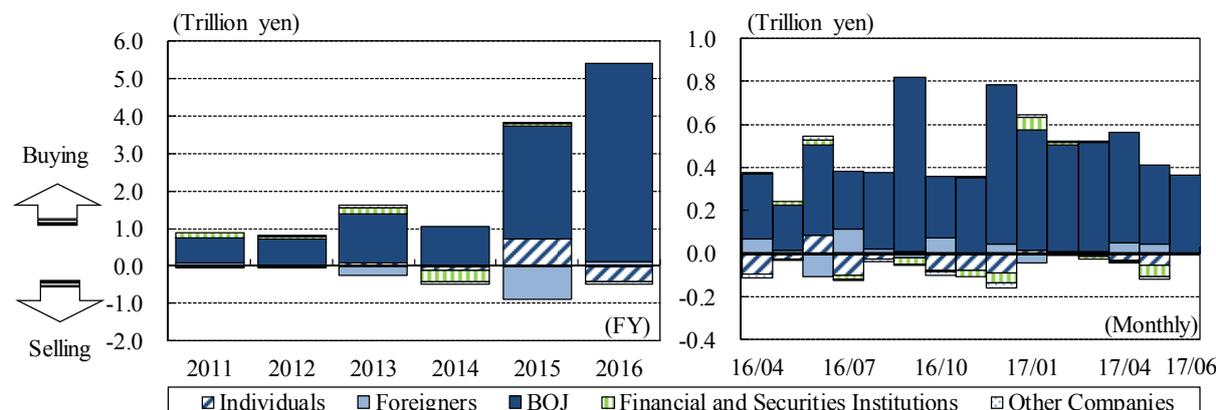


Note: Each red line indicates the BOJ's guideline for the annual pace of increase in the amount outstanding of its JGB and ETF holdings, respectively.

Source: Bank of Japan

In addition to JGBs, the BOJ is the biggest buyer of ETFs. Looking at the net buying and selling of ETFs by investment sector, the BOJ's purchase amount far exceeds those of other entities (Figure 2). In September 2016, when the BOJ's purchase amount was the largest, it hit a record high of over 800 billion yen. Along with the rise in the Bank's ETF holdings, its influence on price formation is expected to increase. It has been pointed out recently that given the BOJ's purchases, stock price falls are becoming less likely, and that the market appears to be government-oriented.

Fig. 2 ETF Trading by Investment Sector



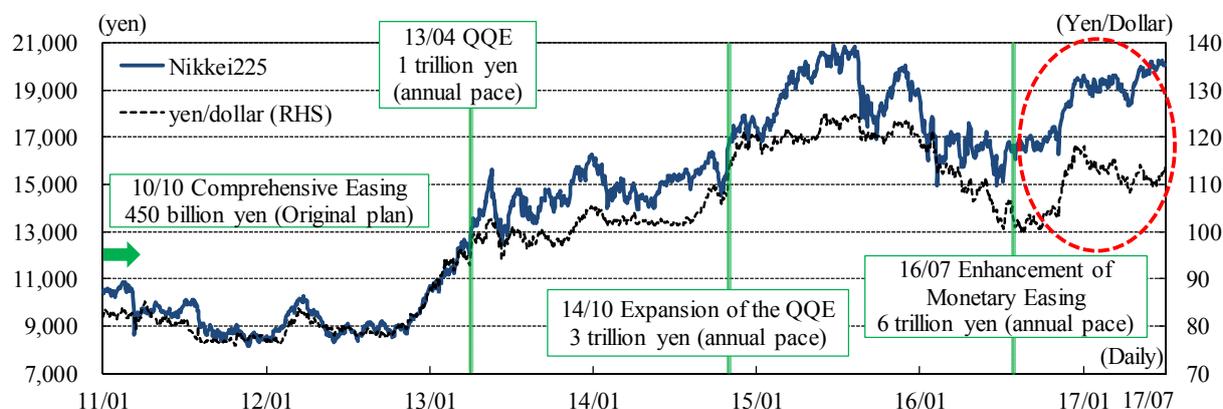
Note: 1. Data for June 2017 is only for the Bank of Japan.

2. Data excludes ETFs that support firms proactively investing in physical and human capita.

Source: Tokyo Stock Exchange, Bank of Japan

Bank of Japan Governor Haruhiko Kuroda said at a press conference held on June 16 after the monetary policy meeting that ETF purchase is “a policy that is necessary for realizing the 2% target of price stability as soon as possible” and that “we are not implementing it to realize such a level with specific stock price levels in mind.” However, when plotting the trends of the stock price and the yen-dollar exchange rate, the divergence between the two has expanded since July 2016 when the ETF purchase amount was raised. Even when the Japanese yen appreciated against the US dollar, the price of the Nikkei 225 Stock Average often rose (Figure 3). The market capitalization of the First Section of the Tokyo Stock Exchange was 593 trillion yen at the end of June, which is now 110 percent of Japan’s nominal GDP. But even in the huge market, the influence of the BOJ is gradually increasing.

Fig. 3 Changes in Nikkei 225 Stock Average and Yen-Dollar Exchange Rate



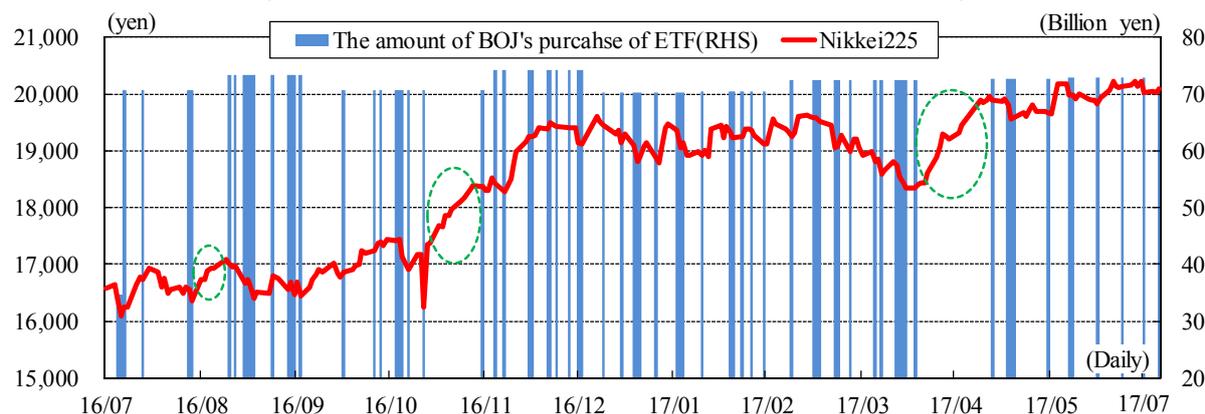
Note: 1. The labels on the graph show the amounts of the BOJ’s purchases of ETFs and decision timing.

2. Data is until July 5, 2017.

Source: Bank of Japan, *Statement on Monetary Policy*, NEEDS-FinancialQUEST

The amount of BOJ’s purchase of ETFs has been stable at around 70 billion yen per business day (bar graph in Figure 4). Looking at the purchase frequency, however, while the BOJ continues to buy ETFs for several days during the phase of stock price decline, it tends to stop buying when the stock price rises sharply. While the purchase of ETFs by the central bank appears to prevent Japanese stock prices from falling, it could take up opportunities for arbitrage trading from market participants, and this may impair market function or the soundness of Japan’s stock market.

Fig. 4 BOJ's ETF Purchases and the Nikkei 225 Stock Average



Note: 1. Data excludes ETFs that support firms proactively investing in physical and human capita.

2. Data is until July 5, 2017.

Source: Bank of Japan, NEEDS-FinancialQUEST

### Is BOJ's ETF Purchase Necessary to Attain the 2% Target?

What does the situation mean where the stock prices are becoming less likely to fall due to the BOJ's purchase? Let us look at how the BOJ began to purchase ETFs. The history dates back to the term of office of the former BOJ Governor Masaaki Shirakawa. In October 2010, the BOJ announced the “Comprehensive Monetary Easing” and started to buy financial assets such as commercial papers, corporate bonds, ETFs and investment equities issued by real estate investment corporations (hereinafter referred to as “J-REITs”). In order to encourage the reduction of the risk premium, the policy whereby the central bank incurs the credit risk on its own and purchases risky assets such as ETFs was said to be extremely unusual at that time. The risk premium is the discount price based on the risk, or to put it in another way, the excess rate of return to compensate for the risk. When future uncertainty becomes low, investors can invest their money in stocks, and companies can raise more funds by issuing smaller numbers of stocks.

In April 2013, the BOJ introduced the “Quantitative and Qualitative Monetary Easing” (QQE) under the new regime of Governor Kuroda, and announced that it would double the amount of ETFs to purchase. “The purchases of JGBs, ETFs, and J-REITs will encourage a further decline in longer-term interest rates and lower risk premia of asset prices. This will increase firms’ credit demand through a decline in funding costs.” The purchase amount of ETFs was tripled to 3 trillion yen per year with the additional easing in October 2014. This time again, the keyword was “risk premium.”

The BOJ further doubled the ETF purchase amount in July 2016, to 6 trillion yen per year. At the press conference, Governor Kuroda was asked by reporters why there was no further cut in the negative rate or additional quantitative easing by raising the target amount of the monetary base. He replied that the BOJ decided to double the pace of ETF purchases because, “Due to the Brexit issue in

the UK and the slowing of emerging economies, uncertainty in overseas economies is rising and global financial market instability continues. The BOJ intends to prevent such uncertainty from causing a deterioration in the confidence of companies and households.”

The current purchase amount of ETFs is 6 trillion yen annually, which is six times larger than it was at the beginning of QQE. The Nikkei 225 recently recovered to the 20,000-yen range, and uncertainties have now lessened compared with a year ago. But there are queries about whether it is necessary for the central bank to continue purchasing ETFs at the current pace. At the press conference on June 16, however, Governor Kuroda said that the ETF purchases are “from the perspective of working on the risk premium on the stock market” and that “it is a necessary policy for achieving the 2%” target for price stability “as soon as possible,” and showed a cautious approach to the reduction of the purchase amount.

Regarding the effect of the BOJ’s purchase of ETFs, comprehensive consideration will be given to (1) how much the risk premium was compressed, (2) the extent to which the reduction of the risk premium brought about the demand for funds by corporations, and (3) whether ETF purchases were really necessary policy for the BOJ to achieve the 2% price stability as early as possible. As we saw in Figure 3, Japan’s stock price commenced an upward trend at the start of Abenomics and QQE, but the cash and deposit ratio of companies has remained high and the rate of increase in consumer prices has not reached 2%.

### **BOJ’s Purchase of ETFs—Affecting Management Decisions of Corporations**

As a result of continuing to purchase a large amount of ETFs, the BOJ has become the de facto largest shareholder in a number of companies already. Since the BOJ purchased ETFs through trust banks, the Bank does not exercise voting rights at the general meetings of shareholders, but there is a possibility that the BOJ may have influenced a company’s management judgment to a considerable extent through the decline of the corporate governance function. The presence of the silent and largest shareholder involves the risk of the survival of so-called “zombie companies.”

Through the purchase of the ETFs, the BOJ already has more than 5% of the outstanding shares in 83 corporations. The BOJ’s holding ratio of Fast Retailing shares handling “UNIQLO” already exceeds 15%. The ratio is far higher on a floating share basis. If the number of floating shares decreases due to the BOJ’s purchase, the market liquidity of individual stocks may decline sharply and incur the price discovery function of individual stocks.

### **Fiscal Policy? How Long Will the BOJ Continue Purchasing ETFs?**

In 2010, when discussing whether to buy ETFs, the BOJ said that monetary policy was approaching the area of fiscal policy, “The Bank has thoroughly considered a grave issue of to what extent those policies should be pursued based on a central bank’s own independent judgment in a democracy.” The

eventual loss would not only lead to taxpayer burdens, but the central bank would also be deeply involved in allocating resources to individual companies and industries. It has been more than six years since then, and the BOJ's holdings of ETFs are still increasing rapidly. It seems to be necessary to consider the effects and risks of the BOJ's purchase of ETFs once again.

### 20% Stock Price Fall will blow the BOJ's Unrealized Profits from ETFs

Figure 5 shows the ETF holding status published in the BOJ's financial statement for FY2016. As of the end of March 2017, the BOJ holds ETFs of 13.1 trillion yen. As the term-end market valuation is 15.9 trillion yen, the Bank currently has unrealized profits. The unrealized profits are estimated at about 3.6 trillion yen as of the end of June. In addition, the BOJ, by holding ETFs, received distribution income of 172 billion yen in FY2016, contributing to the Bank's earnings. However, if the ETF price declines significantly in the future, the BOJ will have to make a provision for the losses. The larger the Bank's holding amount of ETFs, the higher the provisions the Bank has to set aside. At this time, if losses related to the holding of JGBs or foreign currency-denominated assets increase, the BOJ's profits could be significantly shaken. This could damage the Bank's capital. The BOJ's ordinary profit in FY2016 was 1,095 billion yen, net assets were 3,665 billion yen, and the capital base including the provision account was 7,847 billion yen. According to an estimation by the authors, when the stock price falls by 20%, all the unrealized profits arising from the BOJ's holding ETFs will be blown off. If the stock price rises, the provisions can be withdrawn, but as the ETF holdings increase, the BOJ's profits and losses can be more volatile.

Fig. 5 BOJ's ETF holding status

(Billion yen)			
End of the month	Purchased Amount	Valuation at Market Prices	Profits and Losses
March 2011	204	202	-2
March 2012	874	959	85
March 2013	1,573	2,123	550
March 2014	2,869	3,866	997
March 2015	4,572	6,964	2,392
March 2016	7,568	8,766	1,198
March 2017	13,161	15,930	2,769
Jun 2017	14,082	17,664	3,582

- Note: 1. Only the figures for June 2017 are estimated values. The estimations are made as follows. We assume that the purchase prices are allocated proportionally according to the market prices of each stock at the end of the previous month before the purchase execution date, and are purchased at the closing prices. The number of stocks is 20 at the end of June 2017.
2. We assume that the BOJ does not make direct ETF purchases through the stock exchanges, and that it does not sell any of the ETFs it has purchased.
3. The data do not take into account the differences between each ETF's operational performance and stock index, dividends and various fees.

Source: Bank of Japan, NEEDS-FinancialQUEST

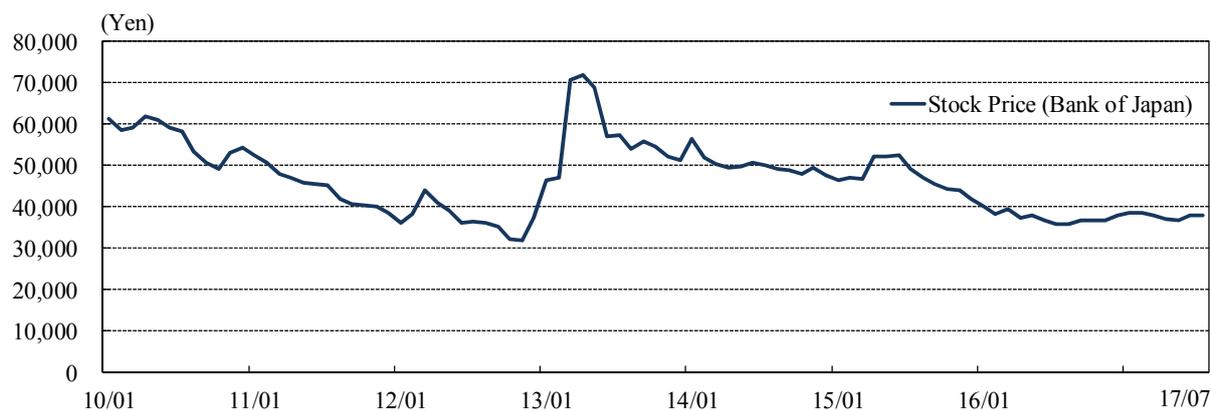
If the BOJ continues to purchase ETFs at an annual amount of 6 trillion yen, the amount outstanding will reach 19 trillion yen at the end of March 2018 and 25 trillion yen at the end of March 2019. In the exit, the BOJ will need to face not only the price fluctuation risk but also the risks arising from holding such a massive amount.

### **ETF Holdings Expose the BOJ to Extensive Risks—Ultimately a National Burden**

When Japan was suffering from serious non-performing loan problems, the BOJ purchased individual shares from private financial institutions. The purchase from November 2002 to September 2004 was to prevent Japan's entire financial system from malfunctioning. The BOJ bought individual shares again from February 2009 to April 2010 to avoid the negative impact of the global financial crisis on the Japanese financial system. The cumulative purchase of individual shares amounted to about 2.4 trillion yen. Although it was an exceptional measure as a central bank, at that time it was implemented as a macro-prudential policy to stabilize the financial system, not as a monetary policy. In addition, at the policy committee meeting on December 17, 2015, the Bank decided to sell its individual shares over the following 10 years by the end of March 2026<sup>4</sup>. The BOJ's holding of ETFs is significantly higher than individual stocks. If the BOJ announces its intention to sell the ETFs on the market at the future exit stage, it could shake the stock price to a significant extent, and considering the current holding size, the possibility of selling ETFs is likely to continue for a long time. Meanwhile, the BOJ's finance will be subject to price fluctuation risk and credit risk. How will the BOJ handle its ETFs with no maturity? The BOJ's communication strategy with the market becomes increasingly important in terms of the problem that could ultimately be a national burden. The BOJ has issued subscription certificates. Of its 100 million yen capital, 55% is invested by the finance minister, and the remaining 45% is invested by the private sector. The subscription certificates are listed on the JASDAQ and traded on the market. Figure 6 shows the BOJ's stock price, which soared at the beginning of QQE in April 2013. Having entered its fifth year of QQE, however, the price has fallen to the same level as at the end of former Governor Shirakawa's term. Although investors are not permitted to exercise voting rights, the BOJ's stock price may be said to be a kind of "expectation" for its monetary policy.

<sup>4</sup> The Bank of Japan to Postpone Completion of Sales of Stocks Purchased from Financial Institutions, Dec. 18, 2015. [https://www.boj.or.jp/en/announcements/release\\_2015/rel151218b.pdf](https://www.boj.or.jp/en/announcements/release_2015/rel151218b.pdf)

Fig. 6 BOJ's Stock Price Now at the Level Before QQE



Note: Data is until July 5, 2017.

Source: NEEDS-FinancialQUEST

<Reference>

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