TOWARDS THE END OF DEFLATION IN JAPAN?
MONETARY POLICY UNDER ABENOMICS AND THE ROLE OF THE CENTRAL BANK

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In this paper, I investigate the Bank of Japan's monetary policy effects under Abenomics at the initial stage. First, I describe briefly what is "Abenomics" and "New monetary policy under Abenomics" since April 2013. I also examine the causes of the sharp response of the yen and Japanese stock prices, the increase of consumer price index and the change of the public's expectations for economic activity and prices on surveys. In the second part I explain why the new monetary policy was effective in 2013, comparing the previous policy until 2012. Although there is not so big difference between monetary policies before and after 2012 theoretically, I point out the importance of the strong commitment by central bank, the cooperation with the government and "psychological impact" on public. The third part discusses the durability of the new monetary policy. The policy effects will be sustainable if a price becomes lastingly positive, which needs a durably positive output gap. Therefore, growth strategy by Abenomics plays an important role. I also point out that the BOJ has to perform the policy over side effects such as the impact on the government bond markets, the impact on other financial market and an outflow of money to overseas.

Keywords: Abenomics, monetary policy, interest rates, inflation target.

One year has passed since Prime Minister Shinzo Abe took power in late 2012. The economic policies of the Abe administration (so-called Abenomics, same hereafter) seem to have done well. There have been favorable developments spreading to financial

1. This paper is based on my lecture at a seminar entitled *Towards the end of deflation in Japan?: Monetary policy and the role of the central bank*, which was held at L'Institut d'Asie Orientale (IAO) at l'École Normale Supérieure de Lyon on May 31, 2013.

markets and the real economy, and the public's expectations for economic activity and prices are improving thanks to the Abenomics. Especially, the "New monetary policy under Abenomics" plays an important role in stimulating the economy. For 2013, Japan seems to have positively surprised the world.

The main purpose of this paper is to examine the potential benefits and risks of the Bank of Japan (BOJ, same hereafter)'s new policy under Abenomics, which has been labeled "monetary easing of a different dimension" according to BOJ themselves, and which has been described as a revolution of monetary policy in financial market.

This paper is divided into five sections. First, the section 1 surveys Abenomics and "New monetary policy" under Abenomics. It also assesses the effects of New monetary policy at the initial stage. Section 2 considers why the new monetary policy was effective, comparing the previous policy until 2012. Section 3 discusses the issues from a long-term viewpoint. The durability of the policy, the overcoming of deflation, and unexpected problems caused by the New policy are discussed. Section 4 examines the relation between the central bank and government. Finally, Section 5 provides conclusion.

1. New monetary policy under Abenomics

(1) Abenomics

The Prime Minister Abe advocates economic policy package plan to overcome deflation and achieve economic growth.[2] His policy consists of three policy arrows;[3] that is,

— The BOJ conducts "Bold Monetary Easing" to achieve the price stability target of 2 percent at the earliest possible time through the monetary easing. Further, in January 2013, the government and the BOJ issued a joint statement declaring

2. Prime Minister Abe intends to achieve a higher growth rate of GDP by around 3 percent in nominal terms and around 2 percent in real terms in the late 2010s.

3. It is a famous legend in Japan. During 16th century, prominent daimyo, Mōri Motonari had three sons, whom he encouraged to work together. In one instance, he handed each of his sons an arrow and asked each snap it. After each snapped his arrow, Motonari produced three arrows and asked his sons to snap all three at once. When they were unable to do so, Motonari explained that one arrow could be broken easily, but three arrows held together could not.

they would pursue “policy cooperation” to try to end deflation.

— The government expands public investment to create real demand and employment. Public investment has been increasing mainly on the back of the emergency economic measures that were based on the supplementary budget for fiscal 2012 enacted in February 2013, 10.2 trillion yen or about 2.1% of GDP.

— The government builds a “Growth Strategy Program” that promotes private investment. “Japan Revitalization Strategy” was released in June 2013. It sets many numerical targets for various sectors in terms of increasing income and promoting exports, etc.[4]

The first two “arrows” was acknowledged as Keynesian policy. They aimed at returning Japan's economy to the sustainable growth path by expanding the size of the aggregate demand. The fiscal stimulus has worked to stimulate growth in 2013. And monetary policy played an important role in stimulating economy. The third arrow aimed at raising the potential growth in Japan.

(2) New monetary policy under Abenomics

Abenomics influenced monetary policy before Mr. Abe became Prime Minister on December 26, 2012. On December 20, the BOJ decided to increase the size of its asset purchase by 10 trillion yen. In January 2013, the BOJ declared that it is targeting 2% CPI inflation. Also, the government and the BOJ issued a joint statement declaring they would pursue “policy cooperation” to try to end deflation.

In April 2013, under the direction of the newly appointed Governor Haruhiko Kuroda, the BOJ decided to introduce the “quantitative and qualitative monetary easing” (the QQE, same hereafter), to achieve 2% inflation target. It consists of the following 4 measures.[5]

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4. See Abe government, Japan Revitalization Strategy – JAPAN is BACK, overview set out on June 14, 2013.
5. See the Bank of Japan, Introduction of the *Quantitative and Qualitative Monetary Easing*, press release of April 4, 2013.

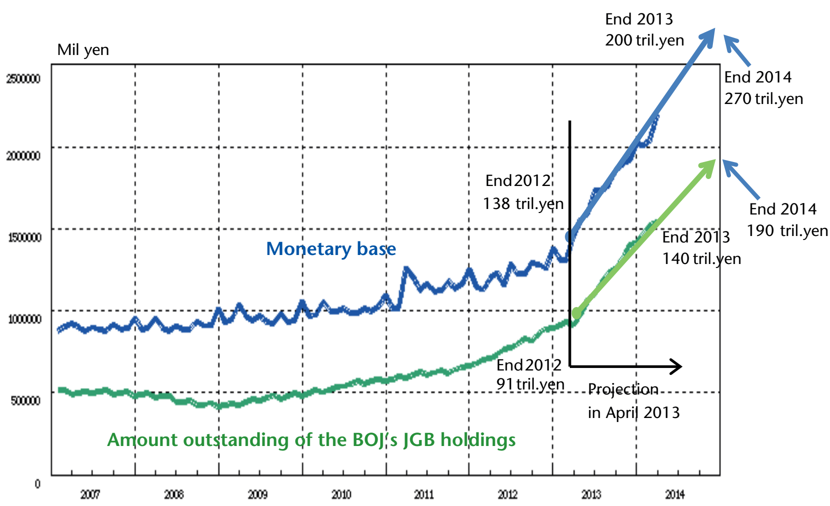
1) The monetary base will increase at an annual pace of about 60-70 trillion yen. As a result, the amount outstanding of the monetary base is expected to almost double in two years, from 138 trillion yen at end-2012 to 270 trillion yen at end-2014 (Figure1). The ratio of monetary base relative to GDP will amount to 60% of GDP in 2014, compared with figures of 17 to 18% for the euro-zone and US.

2) The BOJ increases Japanese Government Bond (JGB, same hereafter) purchases. The BOJ buys indirectly equivalent to 70% of government bond every month (Figure 1). Also, average remaining maturity of the bond extended from 3 to 7 years. Usually, this period is less than one year. It is because a risk becomes larger as a period becomes long.

3) The BOJ purchases directly risk assets such as ETFs (Exchange-Traded Funds) and J-REITs (Japan Real Estate Investment Trusts) to lower risk premium of asset price.

4) The BOJ promised to continue the policy as long as it is necessary for maintaining that target in a stable manner.

Figure 1. Monetary base in Japan and amount outstanding of BOJ's holdings



Source: The Bank of Japan.

Since April the BOJ has pursued the QQE as initially planned (Table 1). The monetary base has expanded and the amount outstanding of JGBs held by the BOJ has also increased to more than 140 trillion yen at end-2013. Also, the average remaining maturity of the JGBs purchased has extended to about seven years.

Table 1. Expansion in the monetary base and JGB holdings

Trillion yen

	Mar-2013 (Introduction of the QQE)	End-2013	
		Results	(initially planned)
Monetary base	146	202	200
the BOJ's JGB holdings	91	142	140

Source: The Bank of Japan.

This policy will create 4 transmission channels:

1) channel to the long-term interest rate (entire yield curve theoretically)
2) channel to stock prices and real estate prices
3) channel to portfolio adjustments and
4) channel to inflation expectations.

The main developments expected through the channels are as follows. Through the first channel, firms' and households' borrowing costs will be reduced. Through the second channel, there will be a rise in firms' capital raising and fixed investment, as well as in households' consumption and net exports. Through the third channel, there will be a shift from investment in government securities to banks' credit and investment in risk assets. Through the fourth channel, real interest rates will decrease and support spending activity in the economy. As a result, one could expect to see positive effects transmit to developments in economic activity and prices.

The new monetary policy has three features: drastic, political intervention, and good timing.

Firstly, this policy is "Drastic". It is drastic "Monetarism Solution". They change operation target from interest rate to monetary base. Whereas the deflation had continued for long time, the BOJ raised inflation target from 1% to 2% in January 2013. Moreover, their decision as a whole exceeded market expectations. The announcement of the policy surprised the financial market. According to Governor Kuroda, the BOJ took very drastic measures both in terms of the scale (quantity) and contents (quality) of its asset purchases.

Secondly, there is strong political intervention. Prime Minister Abe forced the BOJ to target an inflation rate of 2 percent within just two years. He insisted repeatedly that it would be necessary to proceed with revising the BOJ law if the central bank cannot produce results under its own mandate. He nominated advocate of aggressive monetary easing as Governor Kuroda and Deputy Governor Iwata.

Finally, the policy decision was made at the most effective timing. At the installation of new leadership, many people were observing the policy. Also, Japanese has much confidence in their quick action. In the financial market, stock price had remained too depressed for a long time compared with other countries. Consequently, if there was any good news, the stock price in Japan would have a room to go up. Regards to real economy side, business fixed investment had been restrained until last year because Japanese firms have postponed them. They also waited for the good news.

(3) Effects of new monetary policy

This section examines the effects of new monetary policy that have been observed in financial markets and economic activity.

Firstly, in the foreign exchange market, the yen's exchange rate against the U.S. dollar and Euro has been depreciating since November 2012 (before Prime Minister Abe took power), when it was around 80 yen to the dollar, 100 yen to the euro and has been around 100 yen to the dollar, 140 yen to the euro in December 2013. Monetary easing exerts pressure toward depreciation ceteris paribus. As for the stock price, Nikkei average rose from around 9,400 yen in November 2012 to the 15,100-16,300 yen level in December on the back of heightened expectations for economic improvement and of the depreciation of the yen. Finally, long-term interest rates rather rose a little since April. However, since June it have been almost flat low level at around 0.7 percent, even in the midst of rising overseas rates, due mainly to massive JGB purchases and flexible market operations by the BOJ.

With the view point of macroeconomic front, the Japanese economy has recovered. The GDP in Japan expanded in 2013 with an average annualized growth rate of 3 percent on a quarter-on-quarter basis, which was substantially above the potential growth rate that is estimated to be around 0.5 percent. Exports has been picking up during the process of adjusting the yen's appreciation. Consumption has been on a rising trend and housing investment increased. In Japan, we can usually see typical patterns in which the increase in export induces the capital investment and then it induces economic recovery as a whole. So, the development of export is very important. The BOJ issued optimistic economic forecasts, saying it expected GDP in fiscal 2013 will rise 2.7%.[6] In addition, IMF has kept revising up its growth projection for Japan while they have revised down its growth projection for the world.

As for consumer prices, while the year-on-year rate of change in the CPI (all items excluding fresh food, same hereafter) had been negative until the spring of 2013, it reached zero percent in May 2013 and turned positive since June, exceeded 1 percent at the end of year 2013, reflecting improvement in the economy and the yen's depreciation. The BOJ has been strongly committed to achieving the price stability target of 2 percent CPI inflation rate at the earliest possible time, with a time horizon of about two years: in April 2015.

According to the result in the Opinion Survey on the General Public's Views and Behavior conducted by the BOJ in June 2013, the share of respondents who expected that prices will go up one year from now, excluding the effects of the consumption tax hike, reached 80 percent. This suggests that the inflation expectations of households are picking up. Furthermore, according to a survey carried out by Nikkei Newspaper in May, 74% of the respondents praised the QEE policy.

At least during nine months after the start of new monetary policy, we can observe the positive reaction against the QEE.

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6. See "Outlook for Economic Activity and Prices." (October 2013).

2. Why was the monetary policy not effective until 2012

(1) The monetary policy until 2012

This chapter deals with the question why previous monetary policy (monetary policy until 2012) was not effective and why new monetary policy is effective.

a) Japan's economy after 1990

Before analyzing the issue, I provide an overview of Japan's economy after 1990. This period is called as lost two decades in Japan. Japan suffered from a prolonged recession. Over the same period, Japan suffered from negative output gap except from 2005 to 2008. Japan experienced the collapse of the bubble in real estate and stock prices in the early 1990s, the subsequent financial crisis in the second half of the 1990s, the bursting of the U.S. IT bubble in 2000, the Lehman shock in 2008, and the Great East Japan Earthquake in 2011. When we calculate an economic growth rate of Japan per ten years, the average growth rate falls greatly from 9% in the 1960s, and 3.5% in the 1980s to 1% since 1990s.

Concerning price, the increase rate of CPI gradually dropped and shifted to a continuous modest decline from 1998. In Japan, deflation continues for 15 years. What is worse, average wages were falling about 10% in the past ten years.

Under these circumstances, the BOJ started to lower the policy interest rate since 1990 and it reached at zero in 1999. Therefore, the BOJ faced a challenging situation. Under the zero interest rates it becomes difficult to further enhance economy with the ordinary policy. The BOJ had to take unconventional monetary policy. These policies can be divided into three phases.

- The first round of policy is called the quantitative easing (the QE, same hereafter). It started in 2001 and ended in 2006 because CPI changed plus temporary. That is, the growth rate of the CPI was within the range of 0-1 percent in 2006. Therefore, in March, the BOJ concluded to exit the policy since the conditions laid out in the commitment had been fulfilled.
- The second round of monetary easing, the so-called the comprehensive monetary easing (the CME, same hereafter), starts from 2010 until the end of 2012. This time, not only

the BOJ but other central bank in advanced countries implemented the same policy.

— The third monetary policy (the QEE) stared with Abenomics which have already been mentioned in the previous chapter.

The following part reviews the first two policies individually.

b) The QE policy

The QE policy consisted of the following three main elements. First, the main operating target was shifted from the interest rate to monetary base. The target was increased gradually through money market operations by expanding excess reserves for private banks. This policy contributed to rapid expansion of the monetary base. The monetary base was expanded from 9 percent of GDP in 1999 to 22 percent of GDP by 2006. Second, the BOJ made a clear commitment to maintaining this policy until the condition of the CPI zero percent was met. This innovative monetary policy tool is nowadays often referred to as "forward guidance". Thirdly, the BOJ increased the purchase of long-term JGBs, although a scale is not so large at the initial stage.

The overall assessment of the policy was made by Governor Fukui in 2006.[7] According to his conclusion, firstly, the policy stabilized the financial system through the ample liquidity provision at a time when there were strong concerns over its stability. As a result, it successfully avoided a repetition of the large-scale credit crunch that occurred during the previous financial crises since 1997. Second, the policy created and maintained a very accommodative environment that supported the recovery of Japanese firms. Meanwhile, the BOJ stressed that the policy leads a side effect. That is, owing to fewer arbitrage transactions and reduced demand for fund-raising from the money market, there was the shrinkage of the interbank markets. Thirdly, it was clear that such policy could not promote active lending activities by banks. This was mainly attributable to the size of negative shocks triggered by the bursting of the bubble in the early 1990s and their subsequent impact on the financial system. Policies for dealing with the deteriorating balance

7. Opening speech by Toshihiko Fukui, Governor of the Bank of Japan, at the 13th International Conference hosted by the Institute for Monetary and Economic Studies, Bank of Japan, June 1, 2006.

sheets of financial institutions caused by ample nonperforming loans were very slow. At the same time, the drag on aggregate demand was severe owing to the balance sheet problems of firms and three types of excesses; employment, investment, and debt.

Empirically, the effects of the QE policy can be examined by decomposing the transmission mechanism into the following two stages: the transmission mechanism from monetary easing to financial and capital markets (first stage); and the mechanism from the first stage to the real economy and prices (second stage). To summarize the research results,[8] on financial and capital markets front, the effect of the policy was traced mainly through the forward guidance policy by pushing the yield curve downward. Meanwhile, the portfolio rebalance effect had mixed results, depending on the types of assets. In particular, the purchase of JGBs had little impact on lowering risk premiums. However, some research analyses demonstrated the presence of the portfolio rebalance effect through the channel of cross-border capital flows. Namely, the QE policy induced capital outflows, whose funds were then reinvested in Japanese stocks by foreign hedge funds, and they contributed to raising those stock prices. With regard to the second stage, some demonstrated that an expansion of the BOJ's balance sheet had a limited impact on aggregate demand and prices. Other studies showed that there was a statistically significant positive impact on industrial production, but no statistically significant impact was found on the price.

c) The CME policy

After Lehman shock, many central banks in advanced economies introduced the same unconventional policy in order to support mal-functioning financial markets. Therefore, the second policy strengthened the previous policy not only quantitatively but also qualitatively. The reflection of previous policy was also reflected. The difference between two policies was as follows.

First, the BOJ buys a wider range of risk assets. This reflects the view that the direct purchase of various financial assets may

8. See to Ugai (2007) for details. It surveys empirical analyses concerning the effects of the quantitative easing policy.

encourage the further decline in longer-term interest rates and risk premiums through greater portfolio rebalance and signaling effects.

Second, the policy directly aims at lowering longer-term interest rates and risk premiums through an emphasis on asset purchases. This is a sharp contrast from the previous policy, where the main focus was on the size of the current account balance at the BOJ. It is important to note that the volume of monetary base is less emphasized. Instead, it is important to examine whether there is room for further monetary easing by encouraging a further decline in longer-term interest rates and risk premiums.

The effect of policy is almost same as a previous policy (Table 2). On one hand, we can observe positive effects on financial markets. Long-term bond yields had been declining. In particular, the yields on JGBs up to three years have declined and flattened. Similarly, yield spreads between corporate bonds and government bonds

Table 2. A effect of comprehensive monetary easing (CME) policy

	Assess-ment	Explanation*	Reference <2013/11>
Short-Term Interest Rates	○	Low, including those with longer maturities. O/N call rate: 0.113%(2010/9), 0.089%(2012/10)	<0.071%>
Long-Term Interest Rates	○	Yields on JGBs declined across all maturities. 3-year JGBs: 0.154%(2010/9) → 0.100%(2012/10) 10-year JGBs: 0.937%(2010/9) → 0.784%(2012/10)	<0.108%> <0.736%>
Issuing conditions for bonds	○	Yield spreads had been stable at low levels Spreads of Corporate Bond A-rated: 0.2 ～ 0.4%	<0.2 ～ 0.3>
Stock price	×	Stock price remains stagnant. Nikkei Stock Average: 9,369 yen (2010/9) → 8,928 yen (2012/10)	<15,662 yen>
Real estate investment trust	Δ	J-REITs Price: 935 (2010/9) → 1,052(2012/10) Trading volume: 2,242 (2009) → 2,664(2010)	<1,468> <8,780>
Economic activity	Δ	CME may be underpin Japan's economy Real GDP (the year-on-year rate): 0.3%(2011), 0.7%(2012)	(2013 OECD estimation) <1.8%>
Deflation	×	Consumer Price Index remained minus CPI (all less fresh food, the year-on-year rate) -0.2%(2011), -0.1%(2012)	<1.2%>
Bank lending	×	Bank lending continued to weak Bank lending (the year-on-year rate): -2.1%(2011), 1.2%**(2012)	<3.6%>

* The data in September 2010 and in October 2012 were used, because CME started in October 2010 and "New monetary policy" was expected since November 2012 when Prime Minister Noda stated that the diet would be dissolved.
** Loans to electric power companies have increased since the Great East Japan Earthquake of 2011.
Sources: Minister of Finance, Ministry of Internal Affairs and Communications, The Bank of Japan, The Japanese Bankers Association, Tokyo Stock Exchange, Inc. Nikkei Inc.

corporate yields decreased across investment grades. The prices of J-REITs surged and trading volume increased following the announcement of BOJ's CME policy. However, on the other hand, on economic activity side, the effects are very limited. Although CME policy contributed to underpinning Japanese economy, they failed to exit from a period of deflation. Also, firms' demand for external funds remained weak due to a decrease in firms' demand for funds.

(2) The difference between the previous policy and new policy

Theoretically, there is not so big difference between monetary policies before 2012 and that since 2013, even if there is a difference of a scale. Among four measures of the QQE, the "Quantitative monetary easing" in Japan has already adapted in 2001. The BOJ had already purchased not only Japanese government bond but also a wider range of risk assets including exchange-traded funds (ETFs) and Japan real estate investment trusts (J-REITs). In the past, the BOJ promised to continue the policy as long as it is necessary for maintaining that target in a stable manner. The BOJ also attached great importance to its communication with market participants. However, the previous policy did not lead to economic recoveries, whereas the new policy had big influence in the economy.

As for financial market, both investors and financial institutions investing in JGBs did not shift to risk assets such as stocks and foreign-denominated bonds until 2012. However, this "portfolio rebalancing effect" seems to begin to increase in 2013.[9] Consequently, the yen depreciated. It induces increase of export. Thus, in Japan, an economic virtuous circle is beginning to turn.

The current policy has a kind of "psychological impact". The Japanese are not usually interested in a monetary policy. According to opinion survey conducted by BOJ in June 2013, when asked about their interest in the BOJ, the proportions of respondents who stated that they were "interested" in accounted for only 24 percent. However, this time, the media cannot stop talking

9. Since long-term interest rate is too low, the financial institution cannot acquire a profit when they hold government bund.

about inflation. Japanese people seemed to come to get interested in deflation. It can be said that the strong will of the BOJ got across to people. In addition, the coordination with government may be very important.

Governor Kuroda pointed out the difference from a former policy in his first speech in April 2013. Firstly, in the past, the BOJ had taken its policy gradually while examining the effects of monetary easing. However, there have been no concrete results. Therefore, Governor Kuroda does whatever is necessary to overcome deflation. Secondly, previously the BOJ hesitated to commit inflation target, because they judged achieving 2% inflation target in two years remains quite difficult only without structural reform in Japan. Rather, they tried to avoid losing credibility from the financial market. This time Governor Kuroda made a clear commitment to achieving the price stability target of 2 percent at the earliest possible time, with a time horizon of about two years. Thirdly, Governor Kuroda showed its strong policy stance with clarity. In this point, the previous Governor Shirakawa tried to have a strong stance. However, regrettably, his strong feeling was not able to reach understanding from Japanese, because his explanation may rather be rested not on the facts but on theory or ideal.

(3) The cause of deflation

Fundamentally, there is the big difference concerning the recognition about the cause of deflation between current Governor Kuroda and Former Governor Shirakawa. The cause of deflation and the actions of central bank to solve the deflation has been a focus of policy debate in Japan,[10] since the experience of deflation combined with the zero interest problems was quite unique in postwar history.

Concerning the cause of deflation, there are some common understandings such as negative output gap, appreciation of yen and subsequent inflow of cheap imported goods, downward pres-

10. Nishizaki K., Sekine T., and Ueno Y. (2012) examine structural features that may explain Japan's chronic deflation, including the zero-lower bound on the nominal interest rate, public attitudes toward the price level, central bank communication, weaker growth expectations coupled with declining potential growth or the lower natural rate of interest, risk averse banking behavior, deregulation, and the rise of emerging economies.

sures on prices from deregulation and the streamlining of distribution systems, declining trend for wages.

However, about the fundamental factor of deflation, there was a big difference between them. Governor Shirakawa accepts the finance side as one cause of deflation. But he contended that the zero-interest-rate policy already furnished enough funds to the market. Therefore, he insisted that factors other than financial, that is, structural problem such as demographic changes might also influence deflation greatly. On the other hand, Governor Kuroda insists that insufficient amount of money was the fundamental cause as deflation is ultimately a monetary phenomenon. Consequently, monetary policy taken by the former Governor had been rather restrictive. Governor Shirakawa strengthened his monetary easing gradually while examining the effects. Instead of taking radical policy, he introduced a new facility to support access to lending for growth-oriented sectors.

Many critics were calling for the policy conducted under Governor Shirakawa to adopt more radical measure. They insisted that the BOJ took the policy "too little, too late,"[11] According to them, the government also made a mistake in the turn of a policy. Japanese should recover from deflation first, and then use a tax hike if necessary.[12]

The criticism that BOJ took the policy "too little, too late," may be right theoretically. However, in performing new policies or unorthodox policy, the BOJ could not but become prudent in fact. Unlike the theory at university, the BOJ is not allowed failure. Article 2 of BOJ Law indicated as follows,

> Currency and monetary control by the Bank of Japan shall be aimed at achieving price stability, with which Japan's economy will grow in a sustainable and balanced manner, thereby contributing to the sound development of the national economy.

Therefore, the policy of BOJ tends to be conservative. Unfortunately, by means of the gradual policy, the central bank could not change expectation of price among Japanese.

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11. See for example Ito T. and Mishkin, F. (2006). They insisted BOJ can easily purchase CPs, EFTs, REITs, and foreign currency denominated bonds.
12. A bill was passed in 2012 to raise Japan's consumption tax from 5% to 8% by April 2014 and to 10% by October 2015. Hamada (2013) blamed the policy.

3. The durability of the new monetary policy

(1) Sustainability of the new monetary policy

Theoretically, it takes about one year before a monetary policy exerts an effect. This time, the QQE, with various economic measures by Abenomics, has already started to exert effects as mentioned in the previous chapter. The economic improvement in Japan has continued more than the scenario of a central bank at least until December 2013. As a result, many Japanese expect the effect of Abenomics. It has been only nine months since the BOJ introduced the QQE. That is, the QQE was still in its early stages. Therefore, it is important to make this policy effect sustainable.

The main goal of BOJ is to overcome deflation. The BOJ clearly commits to achieve the price stability target of 2 percent CPI inflation rate with a time horizon of about two years. However, another important goal of BOJ is to have Japan's economy return to sustainable growth with price stability around 2%. The most significant contribution that central bank could make is to provide accommodative financial conditions from the financial side. Therefore, starting from dispelling deflationary expectations, the BOJ intends to create and embed an economic virtuous cycle of a moderate rise in prices, an increase in sales and profits, an increase in wages, a boost in consumption, and a moderate rise in prices. That is, the QQE policy effects will be sustainable if a price becomes lastingly positive, which needs a durably positive output gap.

In this point, one concern is the fact that "Growth Strategy Program" of Abenomics remains weak. As the two consumption tax hike is scheduled in Japan,[13] the government may ask the BOJ about the need for additional monetary easing because of "policy cooperation". However, an economic stimulus that is entirely reliant on monetary easing will cause unexpected problems. Lending activities have remained moderate under new monetary policy. This mainly reflects a shortage of credit demand arising from sluggish economic activities. In order to heighten the effect of monetary policy, it is necessary for the government to carry out bold structural reform like revolutionary monetary policy. Japan

13. The consumption tax hikes are scheduled for April 2014 and October 2015, from 5 percent to 8 percent and 10 percent, respectively.

must remove obstructing factors in economic, institutional, and social areas. In addition to that, the following must be attained with the result of reform: Firms should embark on new challenges in broaden areas. And workers should move more smoothly into businesses and industries with high growth potential in the labor market. The Bundesbank also warned that the effects of Japan's current economic policy would only be temporary unless more specific reforms are carried out.

(2) The overcoming of deflation

While the economic expansion in 2013 was real, there is yet a little evidence that the two decade long deflation is over. The year-on-year rate of change in the CPI turned positive since May 2013. It is in the range of 0.5-1.0 percent in summer 2013. In November 2013, consumer prices rose at a somewhat accelerated pace to positive 1.2 percent. However, the recent pickup in prices attributes mainly to a rise in energy prices and food prices on the back of the yen's depreciation. The change in the CPI that excludes food and energy stood still at low level of 0.3 percent. It is not certain whether the rise of CPI will accelerate further.[14] Moreover, even if the BOJ achieves its inflation target, it could not be appreciated as a success if it is the result of the devaluation of the yen. If Japanese start to anticipate higher prices and modify their behavior accordingly, inflation could become a reality. However, if price inflation is not accompanied by wage inflation, the pass-through from inflation expectations to consumer spending may be broken.

The BOJ has made a clear commitment to achieving the price stability target of 2 percent with a time horizon of 2015. Also, the BOJ estimates that CPI will reach 1.9 percent in 2015.[15] Governor Kuroda shows strong confidence in the estimation. However, we should also observe that the forecasts of the nine board members ranged widely from 0.9 percent to 2.2 percent. It is true that among deflationary factors, appreciation of yen stopped. Output gap has been reduced. However, downward pressure from deregulation and distribution system seems to continue. We are yet to see any

14. According to the monthly survey by the Cabinet Office's Economic Planning Association in January 2014, Economists on average expect core CPI to increase only 0.97% in fiscal 2015 and wages to increase only 0.3% in fiscal 2014.
15. See “Outlook for Economic Activity and Prices.” (October 2013, the Bank of Japan).

notable upturn in the wage growth, especially in the manufacturing sectors. Therefore, achieving 2% inflation in two years remains yet uncertain.

We might not adhere to inflation 2% of a level. There has been no in-depth discussion about the level of target in fact. If people's expectations change from deflationary to inflationary, their behaviors change, and developments in the economy as a whole would start to change. It can be assessed that this policy is successful if Japanese economy goes into orbit of sustainable growth.

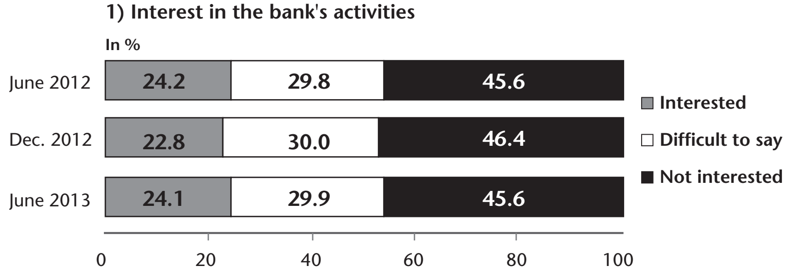
As for inflation expectation, the most important point of the QEE is to dispel the deflationary expectations that had been firmly embedded after nearly 15 years of deflation, and to generate mild and stable inflationary expectations. Many indicators suggest that inflation expectations have been picking up in the market, as well as among firms and households. Deputy Governor Iwata insisted as the following.[16]

> Intrinsically, monetary policy can elicit its effects through the public's expectations. In the initial stage of the QEE, the important key is for the public to expect that prices will go up. Going through this process, demand will increase and prices will start to rise in reality toward the price stability target of 2 percent. This in turn will reinforce the public's expectations that prices will rise stably in the future, thus contributing to low and stable expected real interest rate.

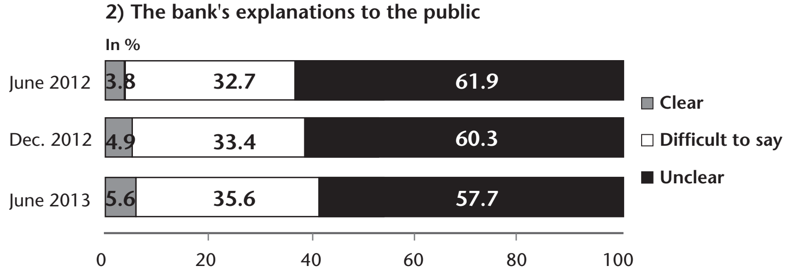
Until December 2013, Japanese economy has improved as the BOJ explained. However, according to results of Opinion Survey on the General Public's Views and Behavior in June 2013, the proportions of respondents who stated that they were “interested” in the activities of BOJ accounted for 24 percent in June 2013, increasing only 1% from 23 percent in December. In addition, the proportion of respondents who described the explanations to the public by BOJ as “unclear” and “clear” accounted for 58 percent and 6 percent respectively (Figure 2). We can see little improvement in this field. It is true that the expectation of inflation changed among some investors. However, at a present stage, it cannot be confirmed whether the expectation of inflation has spread among Japanese.

16. See Iwata, (2013).

Figure 2. Results of the opinion survey on the general public's views and behavior (June 2013)



Notes: "Interested" comprises the choices "interested" and "somewhat interested" that are found in the questionnaire. "Not interested" comprises "not interested" and "not particularly interested."



Notes: "Clear" comprises the choices "clear" and "somewhat clear" that are found in the questionnaire. "Unclear" comprises "unclear" and "somewhat unclear."

Source: the Bank of Japan.

(3) Unexpected problems caused by the new policy

The QEE entails some risks. This section considers the issues such as the impact on the government bond markets, the impact on other financial market and an outflow of money to overseas.

a) An impact on the government bond markets

First is a formation of a bubble on the government bond markets. It is well-known that Japan has the highest debt to GDP ratio in advanced economy, much higher than some European countries such as Greece and Ireland, which have been in sovereign debt crisis since 2010.The government bonds and borrowings in Japan has increased sharply from 643 trillion yen in 2002 to 997 trillion yen in 2012[17] due to the increase in growing spending

17. They include "Government bonds" (812 trillion yen), "Fiscal investment and loan program bonds" (113 trillion yen) and "Borrowings" (54 trillion yen).

to fund the rising social security costs and the falling tax revenues resulting from economic downturn. The International Monetary Fund published the report in 2010 saying that Japan's government debt would reach 250% of GDP in 2015. However, yields on 10 year JGBs remains low at a historical low level of 0.7 percent in 2013. There are mainly two reasons. First, there is no safest asset in Japan than JGBs. Secondly, large-scale JGB purchases by the BOJ under QQE has exerted downward pressure.

In Japan, more than 90% of JGBs are held by domestic investors. Japan's household financial assets (at 1,590 trillion yen in June 2013) are the second largest in the world after the United States. However, it has increased by only 178 trillion yen in the past 10 years. As a result, if government debt in Japan continues to increase at the present pace, it will be difficult for domestic investors to purchase further JGBs in the near future. Concerning the sale of JGBs, Japan will be forced to depend on foreign investors.[18] Another possibility is the holdings of JGBs by the central bank. However, the current money policy has already been extraordinary in that the BOJ buys more than 70 percent of government bonds issued every month. If the BOJ were to further increase the volume of government bonds it purchases, it could cause market functions to fail, lead to the interpretation that the central bank is forced to make up for the budget deficit, and eventually cause the credit rating of Japanese government bonds to decline. This could end up sharply increasing interest rates. In order to avoid a doubt regarding the BOJ's increasing purchases of JGBs as financing fiscal deficits, it is necessary for the government to clearly show the future course of fiscal consolidation and steadily make progress to reform the fiscal structure.

Even if these problems do not occur, the financial market price in 2013, that is the combination of depreciation of yen, a low long-term interest rate and the rise of stock prices, did not have compatibility. Theoretically, long-term interest rates (i_l) are considered to be determined mainly by two factors: first, the forecast of future short-term interest rates or the future inflation rate (p^e), and

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18. Foreign investors have already increased their JGB holdings. China became the largest holder of JGB since 2010 (18 trillion yen in 2011).

second, an extra interest rate required for risk associated with long-term bond (*riskp*).

$$i_l = p^e + riskp$$

In 2012, the prices of Japan had been minus 0.1%. The long-term interest rate was 0.7%. As a result, it is guessed that a risk premium had been around 0.8%. On the other hand, suppose if the BOJ attains 2% of inflation target in two years, and if the policy actions by the BOJ are intended to lower interest rates at the current 0.7% level, risk premium should be minus 1.3%. It is not sustainable. When a central bank purchases government bonds in the bond market and absorbs the amount of bonds in circulation, the bond price will rise and the yield will decline. However, the risk premium cannot become minus for a long time. From April to June 2013, the higher inflation expectation leaded to the rising of long-term interest rates.[19]

If the government bond market crashed, fiscal deficit will get worse. The BOJ holds a massive portfolio of JGBs. It raises doubts about the viability of the BOJ's balance-sheet problem. Also, it is private financial institutions that hold a massive portfolio of JGBs. Therefore, large losses on the profit will arise for financial institutions again. Governor Kuroda said in May 2013 that estimates by the BOJ showed a rise in interest rates by around 1-3 percentage points would not cause major concerns over Japan's financial system, as long as the rise is accompanied by improvements in the economy. However, there is another forecast by think-tank that Japanese banks will lose profit if the rise in interest rates is not accompanied by improvements in the economy and is driven by heightened concern over Japan's fiscal deficit.[20]

b) An impact on other financial market

The financial markets may become unstable if the QEE is based on the market's illusion.

19. In this point, Krugman (2013) insisted that as long as Japanese short-term rates are up against the zero lower bound, long-term JGB rates does not rise much as a result of expected inflation, and they might even fall slightly if the BOJ gets perceived as less ready to raise rates in future.
20. See BNP Paribas, (2013).

As for exchange rate, the yen depreciated by 30% against a dollar and a Euro in 6 months. Theoretically, according to Purchasing Power Parity calculated by the Japan-U.S. consumer price index ratio, one dollar corresponds in the second half of the level of 90 yen.[21] The exchange rate of the yen was around 100 yen per dollar in December 2013. It can be judged that the current exchange rate of the yen stands within appropriate range. Rather, the Japanese yen is bought too much in a foreign exchange market until 2012. That may be why the BOJ often use the expression "the process of adjusting the yen's appreciation" instead of the depreciation.

As for the stock price, after two "lost decades", it surged by more than 60% during one year since the beginning of the year 2013. We can see some analysis that saying there are many foreigner's stock trade transactions during the period. The volatility (model free implied volatility; MFIV) of Japanese stock prices has remained at a high level in 2013 relative to volatility in overseas markets.[22] Although it is dependent on the Japanese economy of the future, stock market seemed overheat in 2013. In fact, the stock market repeated fluctuation since June 2013. Also, in the J-REIT market, prices rose substantially after end-2012 against the background of an improving outlook for conditions in the business office market. After a correction phase entered in May 2013, the market picked up again in September thanks to Tokyo's selection to host the 2020 Olympics. The Tokyo Stock Exchange REIT Index delivered a 35.9% price return in 2013, their highest annual returns in the index's history.

On the other hand, the real estate market remains stable as a whole, although the monetary easing is gradually raising land prices in some urban areas such as Tokyo, Osaka and Nagoya. In July 2013 it fell by 1.8% in residential areas and 2.1% in commercial areas from figures posted the year before. Japanese people remain prudent in real estate deals by experience of the collapse of the 'bubble' economy in 1990.

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21. PPP is calculated using Ministry of Internal Affairs and Communications, "Consumer Price Index" and U.S. Bureau of Labor Statistics, "Consumer Price Index."
22. See in detail BOJ, (2013).

c) An outflow of money to overseas

The QEE policy does not only cause stock price and JGB in Japan to sharply rise. It could also increase risks pertaining to overseas markets. Japanese investors started to increase holdings of overseas debt since 2013. Investors in US intend to borrow yen in order to buy higher yielding assets. In fact, junk-bond markets overseas have been expanding since April 2013. The U.S. central bank has warned about such invisible risks.

Moreover, it seems that the money in Japan is flowing also into Asian countries mostly by way of the U.S. There are few signs of asset bubbles forming in Asia due to Japan's massive monetary easing. As far as recovery in the Japanese economy is expected, the currency wars don’t occur. The BOJ's monetary policy is focused on achieving the domestic objective to lead Japan's economy toward overcoming deflation. Achieving this goal will eventually provide the global economy with favorable effects. It seems that the international community shares a common understanding on these points. However, the BOJ should monitor whether its monetary easing could have an unintended spillover effect on emerging economies carefully.

4. Independence of the Central Bank

When we consider the role of a central bank from a long-term viewpoint, the issue of the independence of a central bank is important. Actually, the BOJ law grants the central bank independence from the government. Historical experience shows that central bank independence is of crucial importance for lasting price stability and growth. For example, the lesson from Bank of England shows that wide operational and financial independence given to monetary and credit policy in the public interest subjects the central bank to incentives detrimental for macroeconomic and financial stability. An independent central bank needs the double discipline of a priority for price stability and bounds on expansive credit initiatives to secure its promise for stabilization policy.[23] Against those backdrops, central banks are nowadays granted formal independence. If central banks are to pursue price stability,

23. See Goodfriend M., (2012).

they should be able to conduct monetary policy from a medium to long-term perspective, away from short-term concerns. This is legally secured by recognizing the independence of central banks in national laws. Moreover, no central bank of advanced economies loses independence.

However, Japan has not been able to escape from a vicious cycle of deflation and stagnant economic activity for the past 15 years. Therefore, Prime Minister Abe repeated it would be necessary to revise the BOJ law if the central bank cannot produce results under its own mandate. At the time of deflation, the aim towards the overcoming the deflation is in the same direction between the government and the central bank. However, at the time of inflation, the government focused on growth, whereas the central bank should focus on price stability. The BOJ says repeatedly that they carefully examine risk factors such as market conditions and developments in economic activity and prices. However, the concern that the policy measures of the BOJ would be delayed remains. Once the independence is thrown into doubt, the prevailing expectation formation processes may undergo fundamental change to a bad direction of inflation.

5. Conclusion

It has been 9 months since the BOJ introduced the QQE. Overall, the QEE under Abenomics has already provided a considerable stimulus to the economy. Taking into account Japan's current situation of protracted deflation, it might be confirmed that this kind of policy should be effective. There has been a favorable turn not only in financial markets and corporate finance but also in the public's expectation. In a real economy side, not only public spending but also export and personal consumption has increased. A cause of bold monetary easing, the real interest rate fell and it caused a weak yen. Consequently, the export increased. The psychological impact of the monetary policy has played the large role in increasing in personal consumption. At least until January 2014, the scenario of aiming to achieve 2 percent CPI inflation materializes in line with the intended path. The public gradually senses this development and raises its level of confidence regarding the economic activity and price outlooks.

For the QQE to actually exert effects, the BOJ express its strong commitment that it is responsible for achieving the price stability target of 2 percent, and that this is accompanied by concrete measures underpinning such a commitment. In addition, the QEE is performed in cooperation with the government. In order to revitalize the economy which has fallen into this vicious cycle of deflation and a decline in aggregate demand, it showed that the bold monetary easing is effective at least in the short run as a means of stopping the continued fall in prices and bringing economic activity to the level that should have been achieved.

However, there is also a limit in a monetary policy. The base money supplied by the BOJ would be more effective if the government proceeds an accelerated depreciation scheme for capital investment or a bold plan for deregulation. To maintain positive output gap, growth strategy plays an important role. Abenomics, which consists of three policy arrows, is an appropriate policy package. However, among three arrows, while monetary policy and fiscal policy are already being implemented, the third have been slow in coming. The obstacles of government restrictions, anticompetitive laws and regulations, bureaucratic interference and inflexibility, relatively high taxes have weakened profitability, international competitiveness, and growth from vasst swaths of Japan's economy. If these obstacles cannot be substantially lowered or removed, it will be hard to see how Japan can avoid further economic marginalization.

It is expected that many side effects arise by the present policy. The BOJ has to perform the policy over side effects. Among some issues, most concerned is the adherence of inflation target of two percent. The BOJ promises to achieve an inflation target of 2% in April 2015. If the BOJ continues to stick to its 2 percent inflation target strictly, the central bank may not only lose its flexibility in its policy implementation. The goal is to produce real growth not to produce inflation. It is true that the change of deflation anticipation is mostly important. However, if Japanese get the growth, the aim is attained. Then, it should be reversed as soon as the sustainable growth is achieved. The BOJ would lose its credibility as the central bank if it lets its desire to much to achieve the inflation target of 2 percent.

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