

# Monetary Policy under Zero Inflation: A Response to Criticisms and Questions Regarding Monetary Policy

Kunio Okina

*The Japanese economy has recently been faced with massive nonperforming assets and a large output gap. Thanks to the historically unprecedented accommodative monetary policy of the Bank of Japan (BOJ), prices have generally been stable and severe deflation has been avoided. Despite this, the BOJ has been questioned and criticized regarding its conduct of monetary policy. For example, why doesn't it adopt inflation targeting? Why has the BOJ stubbornly refused to increase the outright purchase of long-term government bonds? Why does the BOJ implement fund absorption operations in the middle of monetary easing? This paper tries to evaluate questions and criticisms regarding the conduct of the BOJ's monetary policy under zero inflation by using the following two criteria: (1) the BOJ will take measures necessary to achieve the sound development of the national economy through the pursuit of price stability in the long run; however, (2) the BOJ will not take such measures if the side effects are deemed greater than the effects, which makes it difficult to achieve the objective in (1).*

Key words: Monetary policy; Zero interest rates; Long-term interest rates; Inflation targeting; Outright purchase of government bonds; Quantitative easing; Excess reserves; Base money; Balance sheet problem; Liquidity trap

Director, Institute for Monetary and Economic Studies, Bank of Japan

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## I. Introduction

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### A. Questions Regarding the Conduct of Monetary Policy

The Japanese economy has recently been faced with massive nonperforming assets and a large output gap. The experience of the U.S. during the Great Depression has made not a few suggest that the Bank of Japan (BOJ) should have done more in terms of monetary policy given the extremely difficult situation.

However, in Japan, both the consumer price index (CPI) and the GDP deflator have so far been stable, and we have managed to avoid a rapid price decline (deflation) as was experienced in the U.S. during the Great Depression (Figure 1).

Specifically comparing interest rates and money supply between the two countries, under the BOJ's historically unprecedented accommodative monetary policy, interest rates in Japan have recently declined more rapidly and to a lower level than in the U.S. during the Great Depression (Figure 2). Hence, it cannot be denied that such a policy has prevented monetary contraction and deflation (Figure 3).

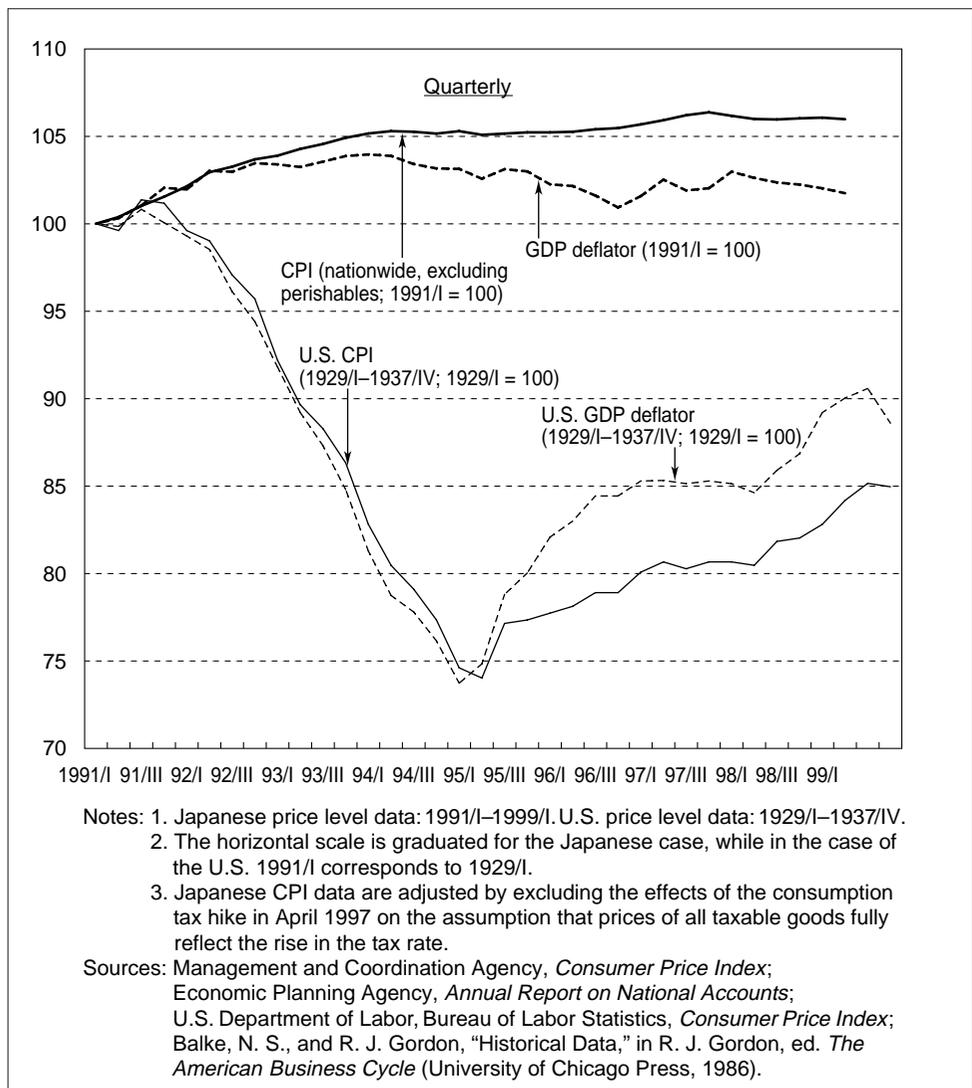
Despite this, the BOJ has been questioned and criticized regarding its conduct of monetary policy. While some of the questions and criticisms are not necessarily based on a full understanding of the extent of monetary easing as described above, others may contain several points worth examining such as the following:

- (1) **Given that the BOJ aims at achieving a situation which is neither inflationary nor deflationary, why does it not adopt inflation targeting as a policy framework?**
- (2) **Is it not the case that the BOJ is concerned more about inflation in the remote future than deflationary risk at present?**
- (3) **To reduce deflationary risk and achieve price stability, isn't it necessary to effect quantitative monetary expansion? If so, why has the BOJ stubbornly refused to increase the outright purchase of long-term government bonds?**
- (4) **Since the BOJ is implementing a zero interest rate policy, why doesn't it effect quantitative monetary expansion by suspending fund absorption operations?**

The BOJ has responded to such questions and criticisms. However, since they intertwine with each other and involve technical points, it is not easy to deduce the BOJ's basic thinking from summing up the respective responses. As a result, dissatisfaction seems to prevail among the public that **the BOJ's thinking is not necessarily understandable in a consistent manner**. Some may go even further to **attribute the prolonged stagnation of the economy to the BOJ's unwillingness to take what they consider to be necessary measures**. Despite the fact that to date the BOJ has been successful in avoiding severe deflation by implementing an unprecedented accommodative policy, it appears not yet to have been given the confidence it deserves.

Based on such an observation, it is deemed necessary that the BOJ explain in detail the pros and cons of various policy measures in an easy-to-follow framework. Since Monetary Policy Meeting decisions are by majority vote, it is not necessarily automatically guaranteed that they exhibit the same kind of consistency as is observed in the decision making of an individual.<sup>1</sup> In this paper, I will discuss the BOJ's conduct of monetary policy from my own viewpoint, not that of the "collective will of the BOJ."

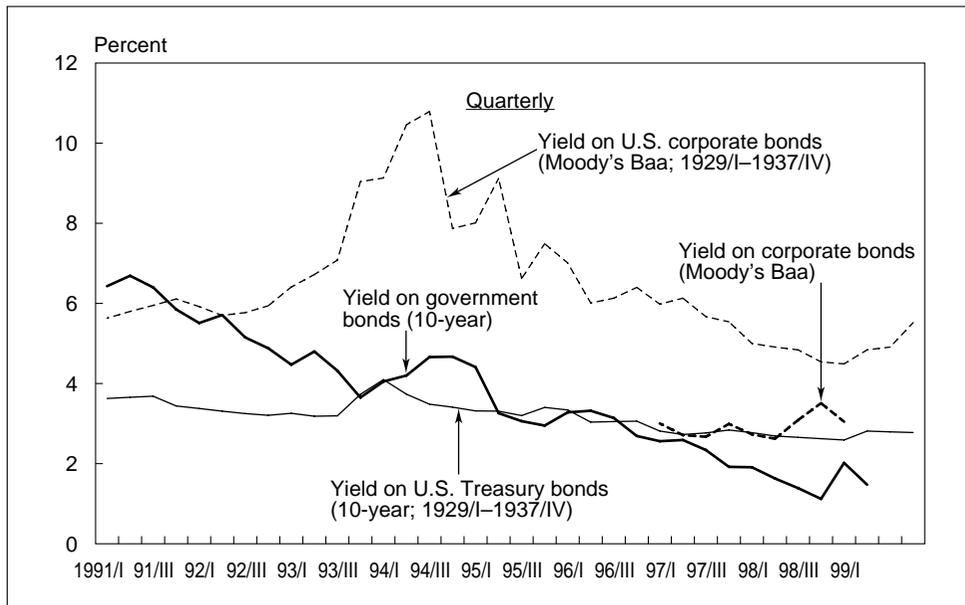
**Figure 1 Comparison of Price Level (Between the 1990s in Japan and the Period of the Great Depression in the United States)**



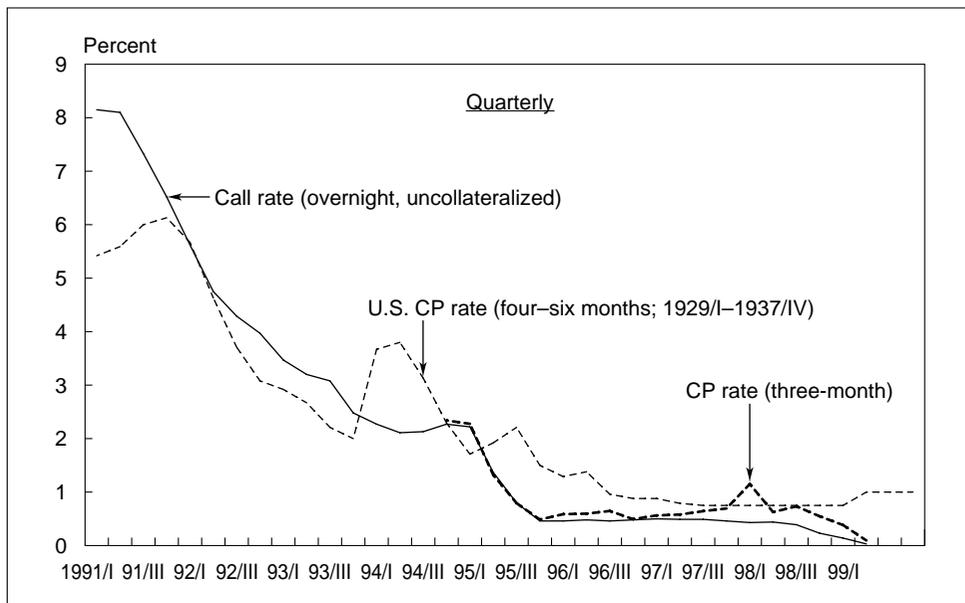
1. In retrospect, as a result of thorough discussions at each Monetary Policy Meeting to reach a decision, it is true that one can trace a certain continuity with respect to fundamental decisions, which can be termed the "collective will of the BOJ."

**Figure 2 Comparison of Interest Rates (Between the 1990s in Japan and the Period of the Great Depression in the United States)**

[1] Long-Term Rates



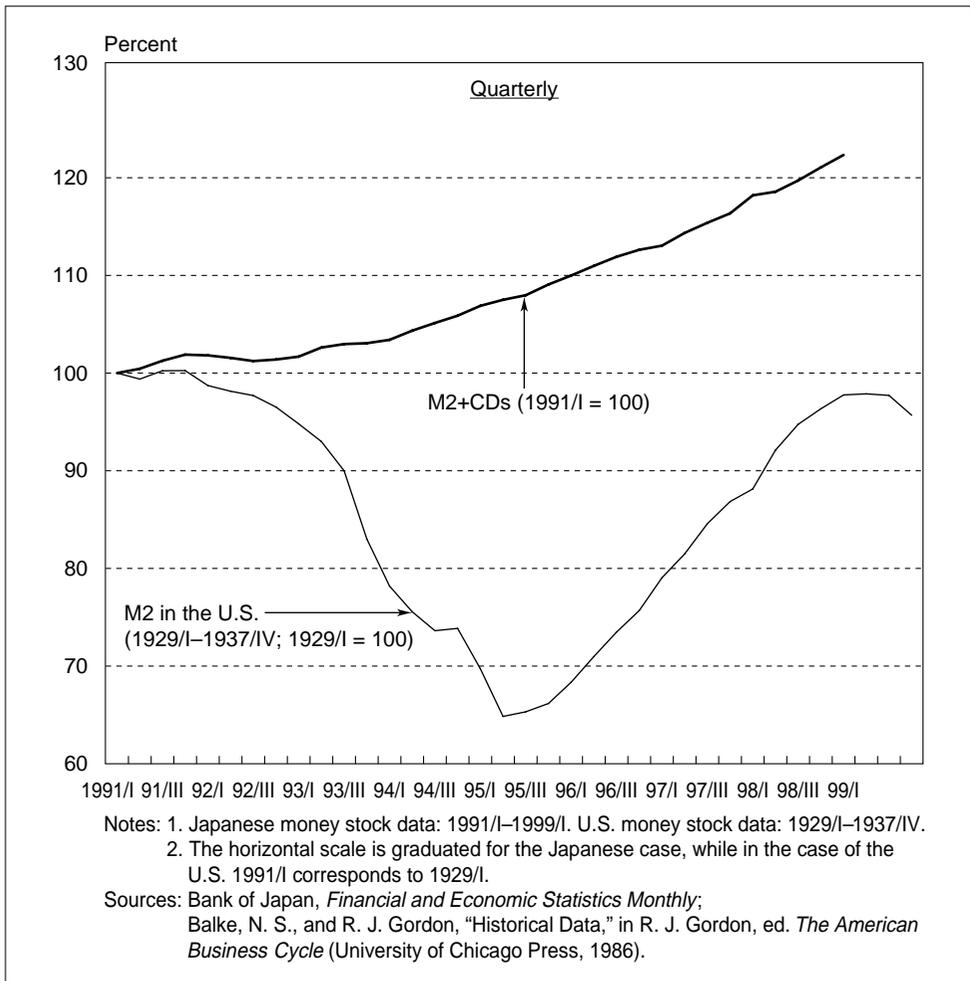
[2] Short-Term Rates



Notes: 1. Japanese interest rates: 1991/I–1999/II. U.S. interest rates: 1929/I–1937/IV.  
 2. The horizontal scale is graduated for the Japanese case, while in the case of the U.S. 1991/I corresponds to 1929/I.

Sources: Bank of Japan, *Financial and Economic Statistics Monthly*;  
 Balke, N. S., and R. J. Gordon, "Historical Data," in R. J. Gordon, ed. *The American Business Cycle* (University of Chicago Press, 1986);  
 Federal Reserve Board, *Financial and Business Statistics*.

**Figure 3 Comparison of Money Stock (Between the 1990s in Japan and the Period of the Great Depression in the United States)**



## B. Framework for Discussion

### 1. A monetarist's prescription

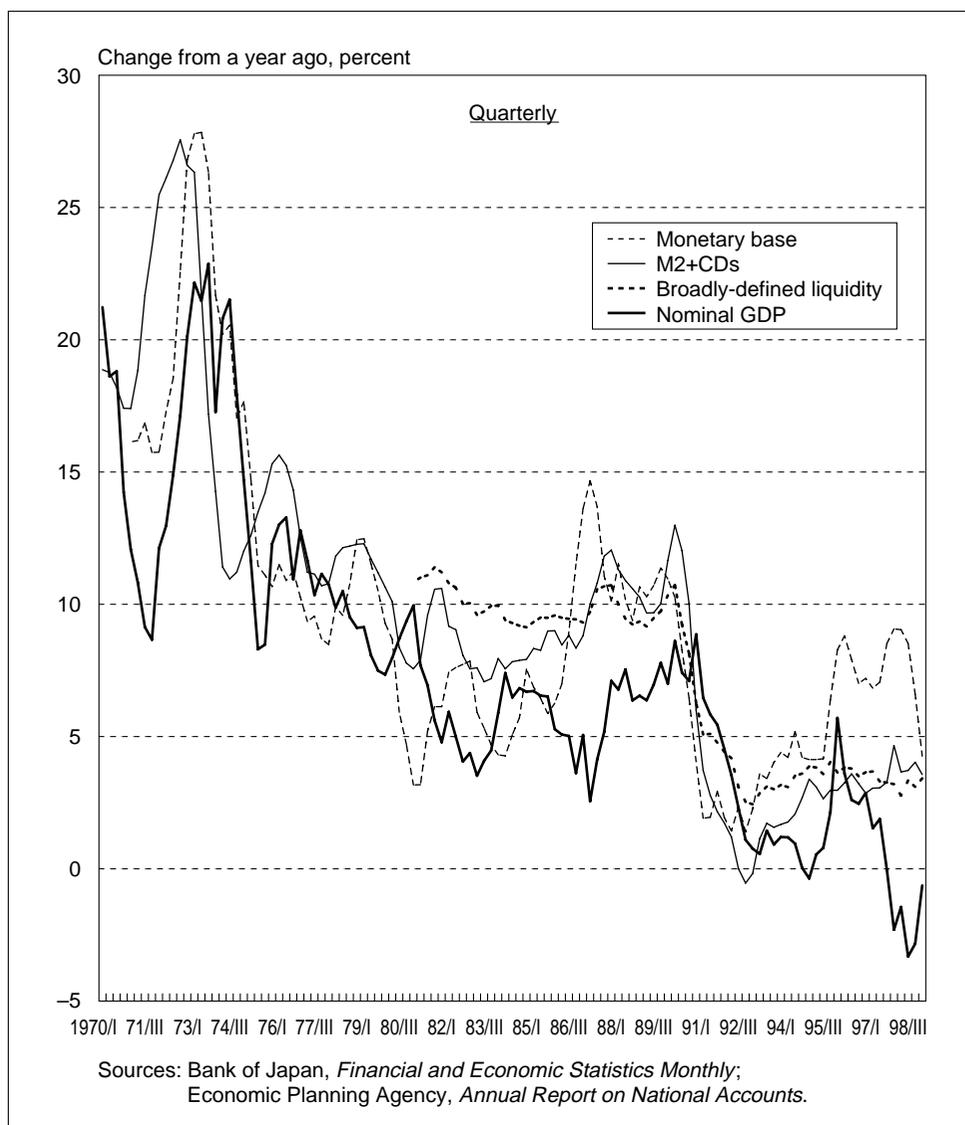
What would be a natural framework for examining the conduct of monetary policy in an economy experiencing deflationary pressures? Generally speaking, the natural choice would be that of a monetarist who would immediately come up with the following policy prescription: **under deflationary pressures, money supply needs to be increased in the interest of price stability, and for that purpose ample reserves should be provided.** When there are serious worries over deflation, this simple prescription would most likely win the support of most macroeconomists.

If I were a researcher studying outside a central bank, I would have also subscribed to the monetarist's prescription. However, as a central banker and one who monitors policy operations from the inside, I am not fully convinced that such a prescription would automatically solve the problem.

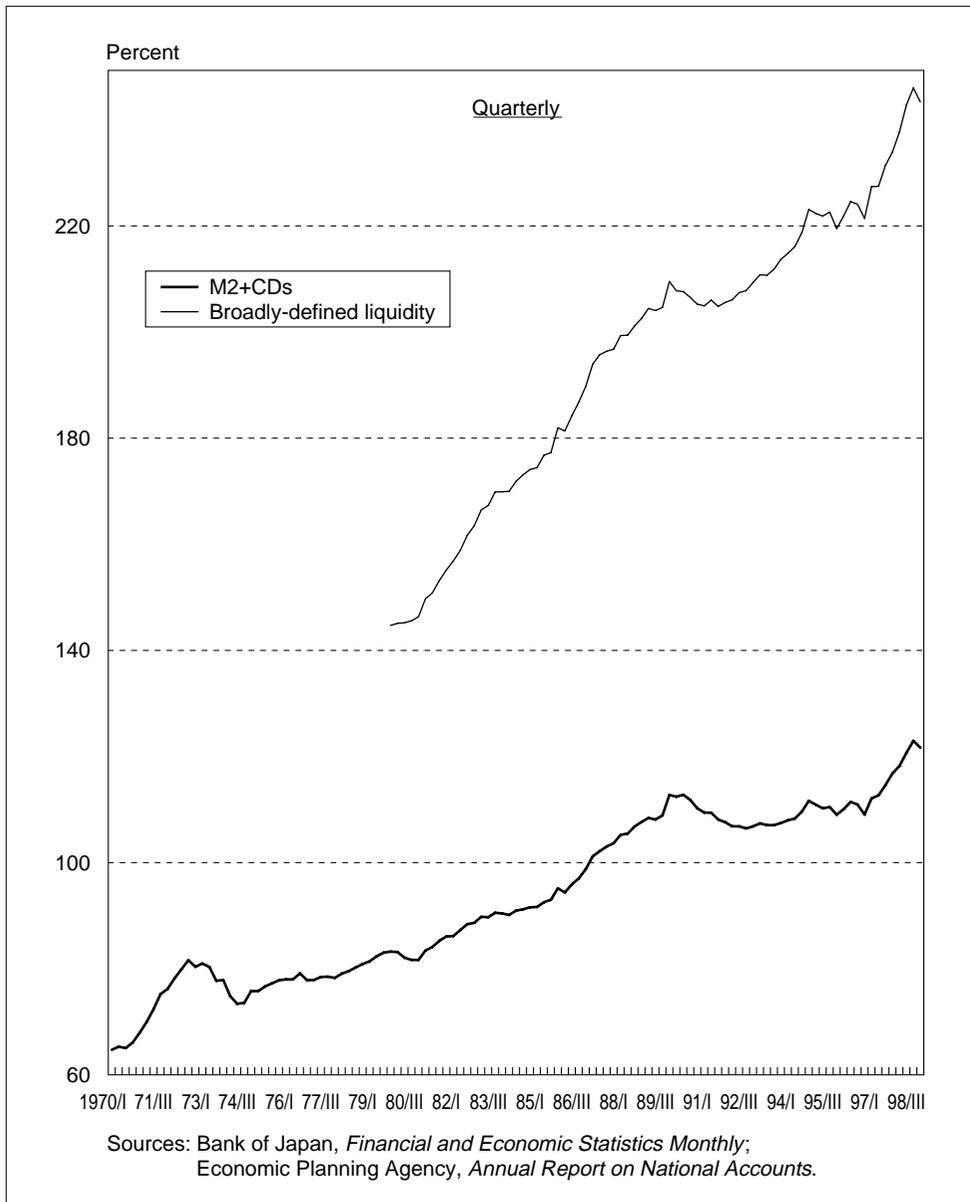
As a result of the BOJ's accommodative monetary easing, money supply growth exceeds nominal GDP growth (Figure 4). The ratio of money supply growth to nominal GDP growth, Marshallian  $k$  (an inverse of the velocity of money), has been increasing rapidly, thus preventing the general price level and stock prices from falling (Figure 5).

However, despite the unprecedented accommodative monetary policy, it is true that various indicators regarding the growth of monetary aggregates have been considerably lower than past averages (Table 1). Such a contrast seems to imply that factors other than short-term interest rates and reserves, both of which are controllable by a central bank, have contained the growth of monetary aggregates.

**Figure 4 Monetary Aggregates and Nominal GDP**



**Figure 5 Ratio of Money Stock to Nominal GDP**



**Table 1 Average Annual Growth Rate of Monetary Aggregates**

Percent

	Monetary base	M2+CDs	Broadly-defined liquidity
1970s	15.2	16.4	N.A.
1980s	7.9	9.1	9.9
1990s	5.5	3.6	4.3
1970–98 (CY)	9.5	9.8	7.1

Source: Bank of Japan, *Financial and Economic Statistics Monthly*.

## 2. Framework of a central bank

In evaluating the validity of policy options under such circumstances, this paper uses the following two criteria:

- (1) The BOJ will take measures necessary to achieve the sound development of the national economy through the pursuit of price stability in the long run.
- (2) However, the BOJ will not take such measures if the side effects are deemed greater than the effects, which makes it difficult to achieve the objective in (1) above.

The first criterion is exactly the BOJ's mandate as stipulated in Article 2 of the Bank of Japan Law. The second criterion requires comparing effects with side effects in accomplishing the mandate. In weighing the effects and side effects, proper evaluation of the economy is essential for making an appropriate policy decision.

## II. A Response to Criticisms and Questions Regarding Monetary Policy

### A. Price Stability as a Mandate

#### 1. Inflation targeting

Inflation targeting is one effective approach in the conduct of monetary policy, and an increasing number of countries have adopted it recently. At the moment, the BOJ has not adopted this approach because of (1) the difficulty in setting a target; and (2) the difficulty in achieving it.

Let me elaborate on the first difficulty. When we examine inflation targeting in light of the first criterion which says that "the BOJ will take measures necessary to achieve the sound development of the national economy through the pursuit of price stability in the long run," it boils down to the following difficult question: do we have a good reason to believe that the sound development of the national economy will be attained if we maintain the rate of increase in specific price indicators at a certain level? Price indicators such as the GDP deflator, CPI, and Wholesale Price Index (WPI) often move differently. Even when these indicators exhibit the same movement, the extent to which the sound development of the national economy will be achieved may depend on such factors as whether property prices are stable or rising sharply.

Furthermore, even if we commit ourselves to a specific price indicator, the changes in it may reflect not only factors related to monetary policy but also those not directly related to monetary policy like a sudden rise in prices due to drought or the dramatic decline witnessed in the prices of computers due to technological innovation. In other words, we need to solve such issues as to how to grasp an inflation trend that could be addressed by monetary policy, and to what extent we should incorporate biases and measurement errors of the price index when analyzing the changes in it.<sup>2</sup>

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2. For example, see Shiratsuka (1999).

With regard to the first difficulty in setting a target, there is the following counterargument: **since many countries have already adopted inflation targeting, there cannot be any excuse for not adopting it in Japan.** In principle, this argument is correct, but in the case of Japan there are some special difficulties that will be made apparent in the following paragraphs.

Countries that have experienced high inflation have adopted inflation targeting as a measure geared toward disinflation. For example, both New Zealand and the U.K. suffered from almost double-digit inflation for a long time and introduced targeting as a way to combat it. In such a case, biases and measurement errors of the price index on the order of a few percent do not matter much. Initially, one can introduce inflation targeting by setting a tentative target with some range, for example 1 to 4 percent, and then once the inflation rate becomes low enough, one can reset a more specific target level and its range.<sup>3</sup> However, since inflation is about zero percent in Japan, we cannot take such a two-stage approach. Moreover, the possibility that the effectiveness of inflation targeting in achieving sustainable growth may depend on such factors as property prices seems to present particular difficulties in setting a target, since most of today's problems in the Japanese economy were triggered by asset inflation including the rise in property prices.

It appears that in Japan many of those who believe in inflation targeting suggest its adoption from the viewpoint that it could substantially raise inflationary expectations. A criticism typically made from this standpoint is as follows: **since deflationary expectations are an issue at the moment, the BOJ should adopt inflation targeting to directly work on expectations.**

Against this criticism, the BOJ argues, as is recorded in the minutes of Monetary Policy Meetings, that "since we cannot explicitly show the way to achieve the desired inflation rate, such action would most likely result in the BOJ losing credibility."

Such a view is deemed not a rejection of inflation targeting per se, but rather reflects the current extraordinary state of the Japanese economy. The issue here is also the difference in the state of the economy between the countries that adopted inflation targeting and Japan. Since the countries suffering from high inflation adopted inflation targeting as a disinflationary measure, there seemed to exist a clear policy path for achieving the goal, i.e., raise interest rates and pursue a tight monetary policy. In contrast, both the inflation rate and short-term interest rates are virtually zero percent in Japan; there is no room left for further interest rate reduction in the current situation to raise inflationary expectations. Thus, the BOJ's Policy Board members face the problem of whether they should consider the possibility of exploring innovative measures beyond the current policy framework, such as so-called "quantitative easing," to effect additional monetary easing.

Let me turn to the effectiveness of working directly on expectations by adopting inflation targeting, but not necessarily specifying a concrete path to achieve it. This intends to work through an announcement effect, but such effect may or may not work to raise inflationary expectations.

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3. For an explanation regarding the economies of countries that introduced inflation targeting, see Bank of Japan (1995).

Whether to take a particular course of action, the result of which is uncertain, seems to be a balancing act between a position emphasizing that we should take whatever action if there is a slight possibility of achieving the desired effects and one emphasizing that we, as a responsible body, should not just make an announcement unless there is clear and concrete policy action to follow. Taking into account the current state of the Japanese economy, introduction of inflation targeting would most likely result in impairing the BOJ's credibility.

Of course, comparison of the effects and side effects does not always lead to the same conclusion. If a pessimistic view such that the Japanese economy is about to enter a deflationary spiral as was experienced in the U.S. during the Great Depression prevails among Policy Board members, it may well be the case that the position emphasizing the effects becomes dominant. Nevertheless, so far such thinking has not dominated at Monetary Policy Meetings.

The BOJ's stance of not adopting explicit inflation targeting so far may lead to the following criticisms: **The BOJ has an anti-inflation bias in conducting monetary policy. When prices were rising, the BOJ stated its strong commitment to preventing inflation but never referred to the future concern of deflation. On the other hand, when prices were falling, the BOJ often stated that there should be neither inflation nor deflation and mentioned the future concern of inflation. Thus, the BOJ's stance is biased. Once the BOJ announces its objective of price stability with specific figures, it will have to deal with inflation and deflation in a symmetrical manner.** This criticism can be interpreted as a request for the BOJ to devise ways to explicitly show under what conditions it would depart from its current zero interest rate policy. Unless such a request is met to a sufficient degree, the BOJ will not be able to dispel the concern of market participants regarding the continuity of its policy stance.

## **2. Ways to reduce uncertainty regarding monetary policy operations**

It appears that there has been a subtle change in how the BOJ announces its policy operations. The statement of the Policy Board on February 12, 1999 noted that "the Bank of Japan has judged it appropriate to provide, through monetary policy operations, the utmost support for economic activity in order to avoid possible intensification of deflationary pressure and to ensure that the economic downturn will come to a halt." In this statement, there is no mention of continuity regarding the BOJ's current policy. It is unclear from the discussion revealed in the minutes of that Monetary Policy Meeting as to how long the virtual zero interest rate policy will last. This may be the reason why the market began looking for subsequent operational targets once it saw that the unsecured overnight call rate had become virtually zero percent.

About two months later, on April 13, Governor Hayami explicitly referred to the continuity of current policy by saying that "until we reach a situation in which deflationary worries subside, we will continue the current policy of providing necessary liquidity to guide the unsecured overnight call rate down to virtually zero percent while paying due consideration to maintaining the proper functioning of the market. This is the consensus of the Monetary Policy Meeting on April 9."

### 3. Can we go a step further?

If the BOJ were to go further, it could announce something like “we will not tighten our policy, that is, maintain the overnight call rate at zero percent, until the trend growth rate of CPI reaches  $X$  percent.”

Such a statement does not specify a targeted inflation rate like in inflation targeting. In this case, for example, the BOJ specifies a trend inflation rate of CPI as a reference point for policy changes. Then, we need to check whether or not the chosen reference point is effective in light of the following lesson that we learned from the “bubble” period: in the “bubble” period, monetary tightening came too late because the rise in general prices considerably lagged the steep rise in asset prices, thus leading to a large swing in the subsequent business cycle.

All considered, there is no definite answer to the question as to whether or not an explicit commitment to a specific inflation rate as a quantitative reference point would be an effective measure in conducting monetary policy given the current state of the Japanese economy.

## B. Needs and Effects of the Outright Purchase of Government Bonds

### 1. Can we increase money supply by increasing reserves?

Since inflation is a monetary phenomenon, it is necessary to maintain money supply growth at a level high enough to fight deflationary pressures. To this end, interest rates should be lowered and ample reserves provided. But if it is judged desirable to increase money supply, the question remains whether we will be able to automatically increase it by injecting reserves. If the main constraint on the expansion of money supply is not related to reserves, it is natural that money supply will not grow significantly by providing ample reserves and reducing banks’ funding costs to around zero percent. At present, banks are contributing to money supply growth by purchasing government bonds and other assets instead of providing loans, thereby helping to avoid deflation (Figure 6).<sup>4</sup>

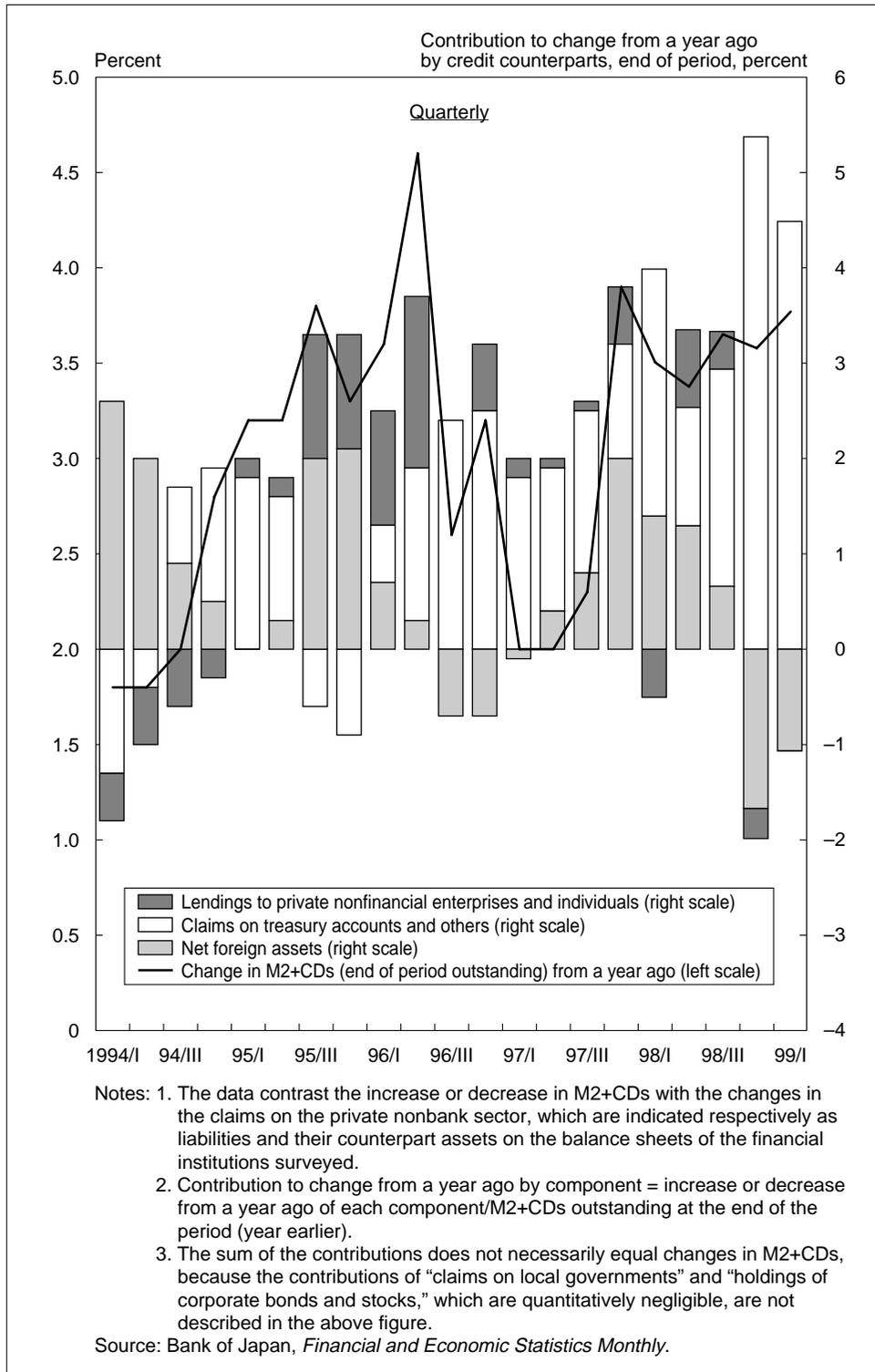
Constraints on the expansion of bank loans include such problems as (1) the decline in the risk-taking ability of banks resulting from the erosion of their capital due to nonperforming assets; (2) the lack of profitable projects; and (3) the inability of many firms to borrow money because of the debt incurred on previous projects. Even if firms can borrow money for a profitable project, they have to first repay the debt on other projects. Unless such problems are solved through appropriate measures corresponding to the respective constraints, the provision of funds will not result in the expansion of bank lending. For example, if the constraint is a decline in banks’ risk-taking ability due to capital shortage, public funds need to be injected to strengthen banks’ capital positions.

In a situation where the constraints remain, whether or not we continue to provide excess reserves needs to be determined by comparing the effects and side effects of such an operation.

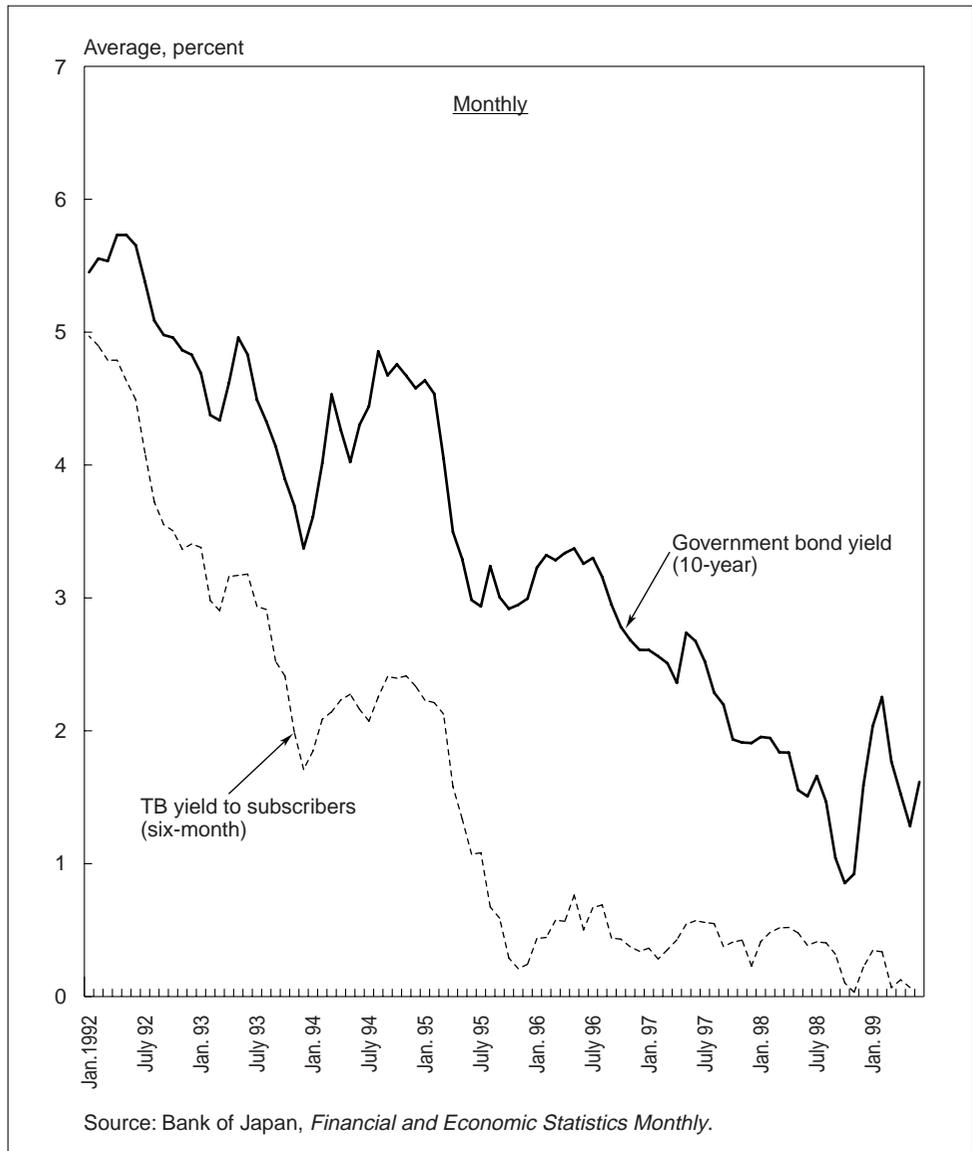
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4. Given the market condition, it is unlikely that the provision of reserves will trigger a rapid increase in money supply. This is because, for example, long-term government bonds entail a large price volatility risk and the yield on short-term government bills with small price volatility risk is declining (Figure 7).

**Figure 6 Changes in Money Stock (M2+CDs) and Credit**



**Figure 7 Interest Rates**



## 2. A controversy regarding the BOJ's outright purchase of government bonds

In relation to so-called quantitative easing, many economists both at home and abroad<sup>5</sup> criticize the BOJ, saying that **an increase in the outright purchase of long-term government bonds is deemed effective for quantitative easing. The reason the BOJ is reluctant to increase outright purchase, which is not legally forbidden like underwriting, is because it is overly conscious of its independence and prestige, thereby tying its hands from taking effective policy measures.**

5. See, for example, Hamada (1999).

To such a criticism, the BOJ has pointed out that (1) in the end it would essentially be the same as underwriting, which is prohibited by the Fiscal Law; (2) most central banks in industrialized countries mainly conduct the outright purchase of short-term government bills for monetary operation purposes; (3) it would impair fiscal discipline; and (4) it might increase long-term interest rates.

For example, the BOJ contends that, based on its historical experience, once outright purchase by a central bank is built-in as an automatic funding source for the government, it would become extremely difficult for both the government and the central bank to exit from it. Against this, there is the following counterargument regarding the loss of fiscal discipline: **as long as the BOJ is an independent central bank, it can suspend outright purchase or conduct open market selling operations at its own discretion. Hence, the BOJ's outright purchase at the present juncture may not necessarily put future fiscal discipline at risk.** To date, this point is still an inconclusive controversy.

There appears to be some confusion in the argument regarding the outright purchase of long-term government bonds because the implicit assumptions in the conduct of monetary operations are not necessarily clear. I will try to put to rest such confusion in the following section.

### **3. Relation with long-term interest rates: comparing with exchange rates**

There are those who suggest that the BOJ should conduct the outright purchase or underwriting of long-term government bonds because they believe such an operation would have a strong effect in containing long-term interest rates. With regard to this contention, two underlying questions have to be examined: one is whether or not the BOJ should consider long-term interest rates as its policy objective, and the other is whether or not the BOJ can control long-term interest rates by purchasing long-term government bonds.

Regarding these questions, the BOJ has stated that long-term interest rates are important indicators, though they are neither its policy objective nor controllable. I personally believe that it may be possible in theory to control long-term interest rates but not feasible in practice, and that they should be regarded in the same way as the foreign exchange rate under a floating exchange rate system.

Under a floating exchange rate system, the foreign exchange rate can be temporarily influenced if the authorities intervene in the market unexpectedly or in concert, though the effect of such "shock therapy" diminishes over time. After all, the foreign exchange rate cannot be controlled at will simply by affecting the supply and demand of foreign exchange through intervention. If the authorities should seriously wish to control the foreign exchange rate, they will need to switch to a policy framework that fundamentally alters the expectations of market participants, such as assigning monetary policy to foreign exchange rate stability and returning to a fixed exchange rate system.

The same applies to long-term interest rates. They cannot be controlled simply by the outright purchase of government bonds. If the BOJ dares to control long-term interest rates, it will have to completely alter the expectations of market participants by a fundamental shift in its policy framework similar to returning to a fixed exchange rate system.

Under a fixed exchange rate system, freedom to assign monetary policy to the domestic policy objective is completely lost. Similarly, in a policy framework in which monetary policy is assigned to controlling long-term interest rates, freedom to achieve the mandate stipulated in the Bank of Japan Law would be completely lost. Like the case of a fixed exchange rate system where the authorities tend to maintain the exchange rate until it diverges from the level warranted by economic fundamentals to an intolerable extent, a policy framework that commits to long-term interest rates would most likely cause considerable and intense reaction and have dire consequences for the economy when it finally breaks down. In other words, while there might be some immediate effects temporarily, large side effects would materialize before long.

In the 1940s, U.S. monetary policy was geared to containing long-term interest rates, but resulted in the collapse of the government bond market due to inevitable pressure for a rise in interest rates.<sup>6</sup> Because of this, in the 1950s the Federal Reserve Board (FRB) concluded an Accord with the Treasury which stated that the FRB was not responsible for the movement of long-term interest rates. Though this is an experience in the U.S., I believe it is a valid historical lesson for Japan and constitutes part of the background to the BOJ's argument that it cannot control long-term interest rates.

Against this argument, there will be the following criticism: **recognizing that long-term interest rates are not controllable over time as is the case with the foreign exchange rate, the BOJ intervenes in the foreign exchange market based on the judgment that short-term volatility is not desirable. Why can't the BOJ intervene in the market with respect to long-term interest rates? When adverse effects on the economy are anticipated, why doesn't the BOJ allow a small increase in the outright purchase of long-term government bonds as a smoothing operation, similar to its intervention in the foreign exchange market?**

Regarding this criticism, one reason why the BOJ cannot make such a response becomes obvious if we presume the following situation where an increase in the purchase of government bonds is not as effective as expected in controlling long-term interest rates: suppose the market demands an increase in the purchase of government bonds. If the BOJ did not respond, long-term interest rates would rise from disappointment. Even if the BOJ did respond, there is no guarantee that long-term interest rates could be controlled. And, if they could not be controlled, which is most likely the case, continuing outright purchases in the hope they would be effective would eventually be the same as a change in policy framework. Among industrialized countries, a fixed exchange rate system is a viable option for a small country, but no country, large or small, has a fixed long-term interest rate system. It seems much more difficult for a central bank to fix long-term interest rates than to fix the foreign exchange rate. Thus, a central bank cannot easily take up such an option unless it stands ready to fundamentally alter its policy framework.

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6. See Eichengreen and Garber (1999).

### C. Holding of Government Bonds and the Balance Sheet Problem

With respect to the purchase of long-term government bonds, there is an opinion that **even if effects on long-term interest rates and inflation are small, the outright purchase of government bonds helps to improve the fiscal balance. Thus, the BOJ should increase outright purchase operations.** The well-known macroeconomist Professor Fumio Hayashi of Tokyo University supports this opinion.<sup>7</sup> Whether the BOJ should pursue such a policy depends on how the market views the impact of a huge increase in government bond holdings on the BOJ's balance sheet.

#### 1. Is an "amalgamation approach" reasonable?

Many macroeconomists employ an approach that implicitly integrates the government with the central bank (amalgamation approach) saying **it could be profitable for the "integrated government" to exchange interest-bearing government bonds with interest free reserves through the central bank's purchase of government bonds.**

In this regard, we need to examine the actual financial relationship between the Japanese government and the BOJ. A clause in the old Bank of Japan Law whereby the government was obliged to compensate for any losses incurred by the BOJ was deleted in compiling the current Bank of Japan Law. Under the current Bank of Japan Law, any profits are transferred to the government coffers, while any losses incurred are borne by the BOJ.

The reason why central bank independence is respected under the current Bank of Japan Law may be to avoid large mistakes resulting from the ambiguity of responsibilities between the government and the central bank under the name of "integrated government." In this context, costs incurred by the action of a central bank should naturally be borne by the central bank itself, thus evidencing its responsibility.

#### 2. Are government bonds risk-free?

Those who consider government bonds the safest asset claim that **even if the amalgamation approach, which integrates the government with the central bank, is not applicable, government bonds are the most creditworthy asset available, certainly much safer than commercial paper (CP). Therefore, they would not impair the central bank's balance sheet regardless of the amount purchased.**

It is true that from the viewpoint of issuer credibility, government bonds are the safest. However, it is not only credit risk that accompanies the holding of assets. Price volatility risk must also be taken into account. Suppose we purchase 10-year government bonds yielding 1 percent at ¥100. If the long-term interest rate rises to 5 percent, the theoretical price of the bonds purchased will decline to ¥70. With regard to this point, there will be the following counterargument: **the BOJ should change its accounting standard to the cost method, which assumes that government bonds purchased are held to maturity. It should make use of bills drawn for sale and short-term government bills when absorbing reserves.**

The BOJ has so far been conducting the outright purchase of long-term government bonds in amounts roughly consistent with the trend growth of banknotes issued, but has never sold government bonds. If the BOJ were to hold

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7. See Hayashi (1998).

government bonds in excess of the amount warranted by the trend growth of banknotes issued, it would be desirable if it could sell them to absorb reserves when necessary. If there is a possibility of selling bonds, the accounting standard must be marked to market.<sup>8</sup> The cost method, if adopted, would conceal losses, which leads to lack of transparency. On the other hand, if bonds could not be sold, they would become quite illiquid, and hence not necessarily a prime asset from the viewpoint of the central bank.

### 3. Is the BOJ's balance sheet special?

Of course, the BOJ can conduct monetary operations even though it is unable to sell government bonds. For example, it can absorb reserves by selling bills drawn for sale while holding government bonds. This operation will inevitably expand both assets and liabilities on the BOJ's balance sheet. Recently, the BOJ has often found that the expansion of its balance sheet tends to bring its financial soundness into question in markets both at home and abroad.<sup>9</sup>

With respect to the BOJ's balance sheet, we encounter the following criticism: **since price volatility risk is large for government bonds, holding them on a marked to market basis would incur a loss when interest rates are rising. However, as most central bank liabilities consist of banknotes that bear no interest, we should not treat a central bank's balance sheet in the same way as the balance sheet of a corporation in terms of price volatility risk.**

Another almost opposite argument can be made if we apply the soundness criterion of a financial institution in general to a central bank's balance sheet: **to protect the national economy, the BOJ should tolerate the erosion of its balance sheet to the extent the economic situation warrants.**

Both arguments have some validity. What is important is how market participants at home and abroad would view the erosion of the BOJ's balance sheet and how it would affect confidence in the Japanese economy.<sup>10</sup> Since the soundness of the BOJ's balance sheet has attracted considerable attention from both domestic and foreign market participants, the BOJ must examine its operations involving government bonds, keeping in mind that the erosion of credibility due to the impairment of its balance sheet runs the risk of having an adverse impact on confidence in the Japanese economy.

At the close of this section, I would like to emphasize again that the following simplistic view is wrong: "The BOJ is reluctant to increase the outright purchase of government bonds, even though it is not legally forbidden, because it is overly conscious of its independence and prestige, which ties its hands from taking effective policy measures."

Since the BOJ is not legally constrained from increasing the purchase of government bonds, it is not impossible that the Policy Board could decide to do so.

8. From the standpoint of securing financial soundness so as to maintain currency credibility, the BOJ has adopted the lower of cost or market method since the latter half of 1968.

9. The expansion of the BOJ's balance sheet has led to suspicion regarding not only its financial soundness but also other aspects. For example, "Addressing the U.S. Bubble" in the *Financial Times* of April 22, 1998, was one of the first articles to focus on the "expansion" of the BOJ's balance sheet and said that not only did such expansion fail to buoy up the Japanese market but it also created bubbles elsewhere in the world.

10. For recent literature that deals with the central bank balance sheet problem, see Stella (1997).

Nevertheless, if it should ever arise that such a decision had to be considered, Policy Board members would certainly have to clear a significantly higher hurdle than just the BOJ's prestige.

#### **D. Quantitative Indicators as a Guideline for Monetary Operations**

##### **1. Why does the BOJ absorb funds?**

The BOJ is currently committed to providing ample liquidity to the short-term money market and hence it may be natural to raise the following question: **the BOJ takes the stance of providing ample liquidity to the short-term money market and has reduced the unsecured overnight call rate down to virtually zero percent. Given that the outright purchase of government bonds can be conducted in a limited amount, why doesn't the BOJ pursue quantitative easing by not conducting fund absorption operations?**

In fact, according to the minutes of the Monetary Policy Meeting on February 12, 1999, a couple of Policy Board members had raised a similar question.<sup>11</sup> The BOJ's current directive for monetary operations is to provide reserves just sufficient for the overnight call rate to be reduced to virtually zero percent. If the BOJ adopts a new directive to flood the market with excess reserves, such provision of reserves should be conducted not in a disorderly manner, but rather in an orderly manner using some additional indicators as criteria. Specifically, this will lead to such suggestions as (1) making quantitative indicators operational targets; and (2) controlling the amount of reserves with some reference to short-term interest rates with maturity longer than overnight.

##### **2. Attractiveness and weakness of base money targeting**

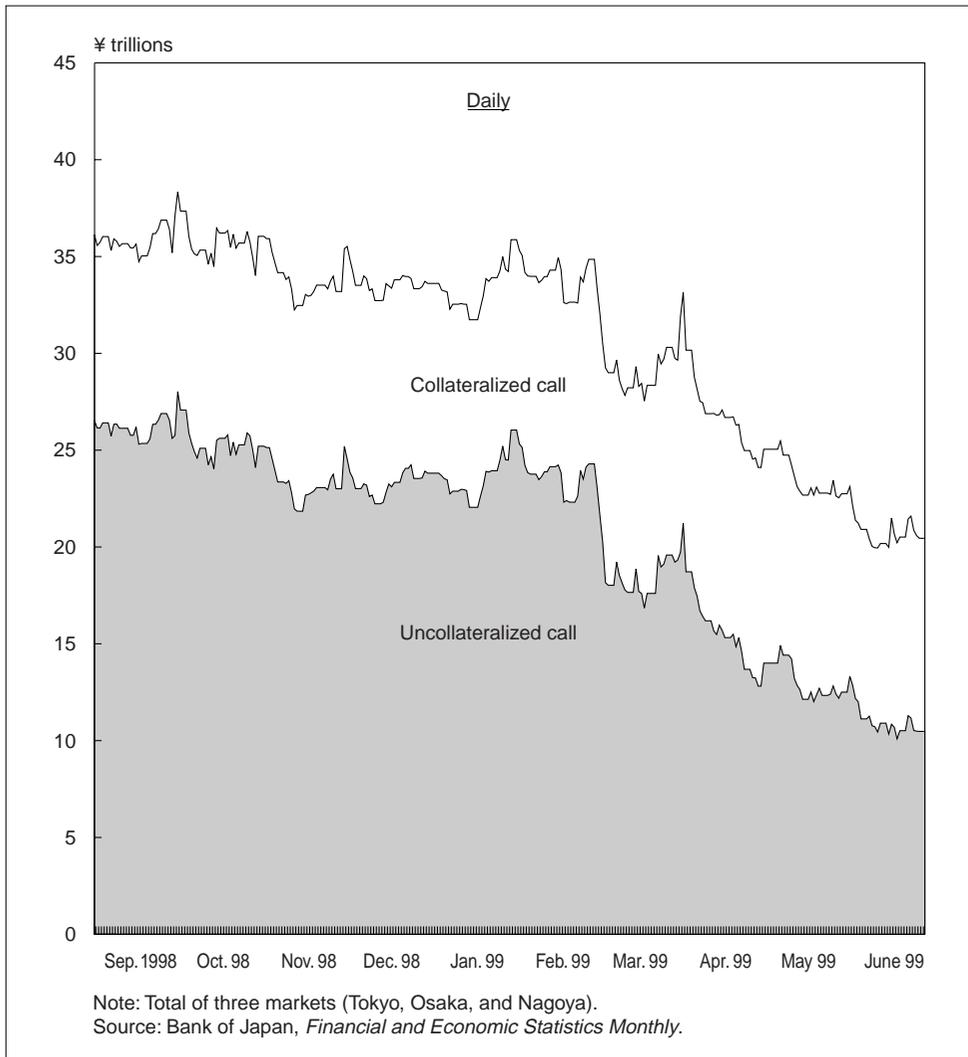
The most popular candidate for quantitative indicators seems to be base money, which is the sum of currency in circulation and reserves. Since base money is mostly composed of currency in circulation (recent figures show currency in circulation totals about ¥50 trillion and reserves about ¥5 trillion), it has the advantage of being easy for the public to understand. A commitment such as increasing cash in circulation at a certain rate literally gives a picture of quantitative easing, and thus is quite attractive as a message to the public.

Since a central bank cannot control the amount of cash in the purse of the public, all operations of the central bank have to be geared toward reserves to implement base money targeting. Accordingly, the balance of reserves would become very volatile in a framework of base money targeting.

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11. "A third member mentioned that, faced with unstable economic conditions, firms had to do their best to continue business by somehow acquiring necessary funds. The member stated that, therefore, the Bank's [BOJ's] injection of ample funds into the market was essential. The member expressed the view that one option might be to hold back as much as possible from absorbing funds in its daily operations. On the Bank's [BOJ's] operations for absorbing funds, another member questioned what might happen in the money market if the Bank [BOJ] ceased its bill-selling operation." In this context, we first of all need to examine whether or not any problems arise if the overnight call market contracts as a result of the zero interest rate policy. In fact, since February 1999, the overnight call market has contracted rapidly (Figure 8). If there were a shortage of funds in the market, the BOJ would likely be asked to substitute for the market function to provide the necessary funds. However, while official institutions can complement the market function, they cannot substitute for it to a sufficient degree, thus the side effects of call market contraction must be carefully examined.

**Figure 8 Amount Outstanding in the Call Money Market**



For example, when demand for banknotes increases due to financial system instability, reserves must be reduced to contain the growth rate of base money within a targeted range. This would result in making the money market quite tight. Furthermore, since the balance of reserves is at most one-tenth of banknotes and it cannot be negative, there may be a situation where keeping the target becomes impossible. In this context, a historical example that made a strong impression on me is the financial depression in Japan in 1927, when at the peak of financial uncertainty banknotes increased by an amazing 38 percent compared with the previous day and the BOJ was forced to issue ¥200 banknotes that had been printed on only one side.<sup>12</sup>

12. The balance of banknotes was ¥1,679 million on April 20, 1927, but increased to ¥2,318 million on April 21 when the Jugo Bank suspended business, and further to ¥2,660 million on April 25. See Bank of Japan (1983).

Even as recently as 1997, when financial system uncertainty increased following the collapse of the Hokkaido Takushoku Bank and Yamaichi Securities, the growth rate of the balance of banknotes (end month, year-on-year basis) increased rapidly from 6.5 percent in September, to 8.3 percent in October, and 13.6 percent in November. In contrast, when financial system stability has been restored and depositor trust in financial institutions is increasing, the growth rate of base money will decline under monetary easing. In this case, a central bank must inject reserves to already-eased markets in order to meet the target for base money. Subsequent periods after the financial depression of 1927 as well as after the Hokkaido Takushoku–Yamaichi shock of 1997 witnessed a decline in demand for base money under monetary easing.

These examples imply that the constant growth rate of base money does not necessarily mean that the central bank is maintaining a constant monetary easing stance. While base money has a great advantage of being easy for the public to understand monetary easing, it has a big weakness in that it does not necessarily reflect the true extent of monetary easing.

### **3. Effects of excess reserve targeting**

The next possible candidate as a quantitative indicator is reserves. Reserve targeting aimed at total reserves or non-borrowed reserves (i.e., central bank borrowing is deducted) has been tried in the U.S., but as far as I know, in recent discussions in Japan, there has been no suggestion that this kind of targeting should be introduced.

Professor Mitsuhiro Fukao of Keio University rejects base money targeting because of its large seasonal fluctuations and suggests that the BOJ adopt excess reserves, which is obtained by subtracting required reserves from total reserves, as an operational target and increase it by ¥500 billion a month (¥6 trillion a year).<sup>13</sup>

Excess reserves is a technical concept, and is not easy for the public to understand as an indicator compared with interest rates or banknotes. On the other hand, the possibility of meeting the target appears, in principle, to be higher in the case of excess reserves than that of base money.<sup>14</sup> However, the idea contains a few problems.

The first is what kind of function can be expected of excess reserves since they earn no interest as long as they remain in the accounts held at the central bank. Whether or not excess reserves will produce profits depends on investment opportunities. In this regard, the simplest money multiplier theory in finance textbooks assumes a world where banks cannot lend enough due to reserve requirements though they have infinite lending opportunities. In this world, a central bank's provision of reserves immediately results in the expansion of bank lending, which in turn increases required reserves and then reduces excess reserves to zero. However, in a situation where there are permanently excess reserves, and reserve requirements and funding costs no longer bind the behavior of banks, or in a situation where it is not the reserves of banks but their own capital positions or borrowers' creditworthiness

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13. See Fukao (1999).

14. One of the reasons I said "in principle" is because, during the recent monetary easing period, the current accounts at the BOJ held by institutions that were not subject to reserve requirements increased substantially compared with those held by financial institutions, thus "excess reserves" did not increase that much.

that constrain their lending, the accumulation of excess reserves does not warrant an increase in bank lending.<sup>15</sup>

Of course, the assets in which banks would invest are not confined to loans. Therefore, if excess reserves accumulate beyond the needs of banks, there will arise pressure for banks to invest the excess reserves in risky but profitable assets such as stocks and bonds. So far, with interest rates staying at virtually zero percent and opportunity cost being quite low, banks have tried to avoid holding excess reserves as much as possible, and a phenomenon has been observed whereby the funds which banks find unnecessary at 5 p.m. (market closing time) accumulate in the accounts of dealers (*tanshi* companies) held at the BOJ. Thus, it has been difficult to evaluate the effect the BOJ's operations have had on the investments of banks in stocks and bonds.

The second problem with excess reserves is reliability as an indicator for monetary easing. Since the opportunity cost of holding excess reserves under zero interest rates is quite low, demand for excess reserves, that is, to what extent banks want to hold excess reserves, varies considerably depending on such factors as financial system stability. Thus, it is very uncertain, as was the case with base money, as to what extent monetary conditions would be further eased by keeping the level and/or growth rate of excess reserves constant. To evaluate the extent of monetary easing, it is, after all, not sufficient to fix the level and/or growth rate of excess reserves, and we most likely need additional criteria to judge the impact. As an additional criterion, for example, we could examine the shape of the yield curve. This is similar to shifting the operational target from the overnight call rate, which has reached zero percent, to term interest rates.

The third problem relates to an operational hurdle. If we receive a directive to accumulate a considerable amount of excess reserves when term interest rates are at quite a low level, there would be a possibility that existing tools for providing liquidity with short maturity such as repos, bills, and CP might not be sufficient to fulfill the directive. For example, the auction bid rate sometimes becomes zero percent in the current situation, whereupon the BOJ has to expand its short-term operations to include those with a longer maturity that carry positive interest. If the BOJ continues such expansion, it will finally lead to increased purchases of long-term government bonds. And if the BOJ sets a target to increase excess reserves regardless of the movement of term interest rates, we cannot deny the possibility that down the line it will be forced to simultaneously solve two issues, one regarding increasing the purchase of government bonds, and the other regarding its balance sheet.

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15. When banks hold excess reserves, it will be natural to modify the money multiplier formula, taking into account that such excess reserves will leak from the multiplier process, and redefine base money as  $M = kH^*$ , where  $H^*$  is base money after deducting excess reserves,  $M$  is money supply, and  $k$  is the money multiplier as a function of the reserve ratio and cash-deposits ratio.

## E. Effective Monetary Policy under a Liquidity Trap

If it is possible to conduct monetary policy using quantitative indicators such as excess reserve targeting through regular bill-selling operations or short-term government bills operations, what will be the effects and side effects? To examine this question, it is useful to discuss the effectiveness of monetary policy under a liquidity trap, a situation in which monetary policy is deemed least effective.

### 1. Liquidity trap and the depreciation of the yen

A central banker would typically comment that, under a liquidity trap, regular monetary policy operations to provide liquidity are not effective at all. However, a prominent monetarist, Professor Allan Meltzer of Carnegie-Mellon University, argues as follows. **Suppose that with overnight interest rates virtually at zero percent, the BOJ announces a target for the yen exchange rate to fall by 50 percent and that it is prepared to print yen to buy U.S. dollars until it achieves the target. Is there any doubt that the yen would depreciate or that the depreciation of the yen would affect spending, output, and prices in Japan?** In this way, he rejects the ineffectiveness of monetary policy under a liquidity trap.<sup>16</sup>

So far, the fixing of long-term interest rates through the unlimited purchase of long-term government bonds seems to follow a similar argument. However, the big difference between the unlimited purchase of U.S. dollars and the unlimited purchase of long-term government bonds lies in their consequences over the long term. If the central bank provided liquidity through the unlimited purchase of U.S. dollars, it would be consistent with the depreciation of the yen even if inflation later ensued. But if the central bank provided liquidity through the unlimited purchase of long-term government bonds, it would not be consistent with rising pressure on long-term interest rates if inflation later ensued.

Looking at this problem from the viewpoint of a central bank's balance sheet, since the unlimited purchase of U.S. dollars would lead to a rise in its value, the central bank's balance sheet would carry unrealized profits if such operations were successful. To the contrary, the unlimited purchase of long-term government bonds would run the risk of impairing a central bank's balance sheet even upon successful achievement of the objective.

In an economy with near zero interest rates, unlimited intervention in the foreign exchange market (i.e., a return to a fixed exchange rate system, although Professor Meltzer did not go so far as to suggest it) will be an attractive option if a central bank seriously hopes that monetary policy will have permanent effects while avoiding the erosion of its balance sheet that leads to loss of market credibility.

In a situation with short-term interest rates at around zero percent and long-term interest rates at the 1 percent level, if additional effects are expected from monetary policy there are no policy options other than the one that induces a substantial depreciation of the yen, putting aside the question of whether or not to directly intervene in the foreign exchange market. In this regard, it is consistent for Professor Meltzer to claim that the BOJ should aim at higher growth of money supply, and at the same time emphasize "the BOJ can use whatever measures to increase money

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16. Meltzer (1999).

supply, and foreign exchange intervention is the best measure,” and “the only way to stop deflation is for the yen to depreciate.”<sup>17</sup>

Is it really possible for a large economy like Japan to virtually return to a fixed exchange rate system? Such an idea would not only provoke strong opposition from the U.S. government and industry but also be criticized as a beggar-thy-neighbor policy by other Asian countries that compete with Japan in trade. Professor Meltzer himself shrugs off these criticisms by saying that “it is natural for the currency of a weak economy to depreciate” or “there will be no significant recovery in Asian economies until Japan recovers.” However, it is our pragmatic judgment that even if such a policy is deemed effective, the central bank could not easily adopt it in view of the strong side effects it entails.

## **2. Quantitative easing and the depreciation of the yen**

By comparing the suggestion of putting pressure on the yen to depreciate and virtually returning to a fixed exchange rate system with that of quantitative easing through excess reserve targeting using regular market operations, what can we say in terms of their effectiveness and side effects under a liquidity trap?

First, there is a relatively big question mark with respect to the effectiveness of quantitative easing. Liquidity provision by the central bank has hardly any effect and only results in accumulating excess reserves. However, even if there is no effect in the short run, it will be possible, in principle, for the central bank to continue quantitative easing. Such behavior of the central bank might have a slight chance of inducing positive effects through raising the expectations of market participants regarding continuity of the BOJ’s monetary easing.

What about the side effects? Since quantitative easing does not appear to have significant short-term effects, it does not cause immediate side effects, unlike the intentional depreciation policy in the foreign exchange market, which brings such side effects as immediate opposition from trading partners. The worst scenario might be that the effects of previous monetary easing through the massive provision of excess reserves may finally materialize just when the economic environment changes, i.e., real economic growth and inflationary expectations are beginning to trend upward, and monetary tightening becomes necessary. In this case, the side effects will appear later in the form of accelerated inflation caused by a delayed shift to monetary tightening.

## **3. Interest rates as additional criteria**

If we emphasize the side effects described above, discussions will likely focus on whether there is room for using interest rates as additional criteria even when overnight interest rates are virtually at zero percent.

What we can think of first is that, after guiding overnight interest rates down to zero percent, the BOJ may be able to use longer-term interest rates as its target. However, for the period during which zero overnight interest rates are expected to continue, term interest rates would also decline to around zero percent except for the risk premium. Hence, it is difficult, in theory, to guide term interest rates to a desirable level different from virtually zero percent.

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17. In an interview with the *Nihon Keizai Shimbun*, August 2, 1998 (in Japanese).

Looked at from a different viewpoint, it may not be utterly meaningless to have term interest rates as a target. Allowing term interest rates to decline to around zero percent could imply that the BOJ is committed to the average level of overnight interest rates until the end of the periods covered by term interest rates. This policy of tying one's hands deprives monetary policy of its flexibility. In the current economic situation, the loss of flexibility may have a signaling effect with respect to the BOJ's policy and could be an effective communication tool vis-à-vis market participants. For example, if the BOJ holds a strong view that inflation will not be an issue for at least one year and it is necessary to continue guiding overnight interest rates virtually at zero percent, it could adopt a policy of guiding term interest rates of up to one year down to zero percent.

It should be noted, however, that there is a subtle difference in the content of monetary policy commitment between the case where term interest rates up to one year become virtually zero percent and the case where the same development is realized as a result of announcing that the current policy will be continued until deflationary worries subside. In the former case, the BOJ is committed to such monetary policy for a period of up to one year. In the latter case, what is realized is a reflection of the expectations of market participants who translated the announcement into the prospect for interest rates.

### III. Conclusion: Principles and New Questions

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#### A. Principles

The basic principles regarding the conduct of monetary policy are as follows:

##### 1. Price stability as a mission

The BOJ has a mission to contribute to the sound development of the national economy through the pursuit of price stability. Therefore, it should take the utmost efforts to avoid deflation. In this context, it will not alter its policy stance toward tightening until deflationary worries subside (i.e., the unsecured overnight call rate will stay at virtually zero percent).

##### 2. Provision of liquidity

Since inflation is a monetary phenomenon, it is necessary to maintain the stable growth of money supply to avoid deflation. To this end, the BOJ will provide any necessary reserves.

##### 3. Additional directives for monetary policy operations

When it becomes necessary to adopt a new criterion (inflation targeting, excess reserves targeting, term interest rate targeting, etc.) to reduce uncertainty regarding monetary policy, the BOJ will make a decision by comparing the effects and side effects. It is extremely important to make a comparison in the context of the state of the Japanese economy.

## B. New Questions

This paper has examined a framework for monetary policy and the principles derived from it. Reaching this point, readers may be left with two interrelated questions.

The first question is: **if the BOJ conducts monetary policy based on the principles described above, can the Japanese economy achieve sustainable growth?** Unfortunately, this remains, in my view, an open question. What monetary policy alone can do is limited. As the Japanese economy is exposed to strong structural adjustment pressure including the disposal of nonperforming assets, the BOJ has taken the utmost efforts to promote monetary easing. As a result, Japan has so far been successful in avoiding deflation, but monetary policy alone cannot guarantee a return of the economy to a sustainable growth path. To this end, it is essential to solve structural problems.<sup>18</sup> Monetary policy can only prepare an environment conducive to structural adjustment, it is not a remedy.

The second question is: **as a criterion in formulating principles regarding monetary policy, this paper claims that the BOJ should not adopt a policy where the side effects are greater than the effects. Couldn't the current low interest rate policy cause some harm?** The answer is yes. It could cause some harm.

Strong medicine has strong side effects. As recorded in the minutes of Monetary Policy Meetings, there have been minority opinions regarding the side effects of extremely low interest rates. In relation to the first question, low interest rates as a pain-reliever may induce a further delay in the progress of structural adjustment. For example, if interest rates are high, it will be costly to hold excess equipment, excess inventory, and nonperforming assets. However, if interest rates are close to zero percent, financing costs of the above excesses will become quite small. When the economy recovers, nonperforming loans could become collectable, excess inventories could be sold, and excess equipment could become operational. In anticipation of such developments, the current situation of extremely low interest rates gives an incentive for corporate management to postpone the resolution of these excesses.

It is desirable to maintain current monetary easing despite the side effects. This is the decision made by the BOJ's Policy Board, which believes that under current conditions it is the most supportive policy for economic recovery.

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18. See Murayama (1999).

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# Comments on “Monetary Policy under Zero Inflation”

**Ronald I. McKinnon**

William D. Eberle Professor of International Economics, Stanford University

Since the bursting of Japan’s bubble in stock and land prices in 1991, the Bank of Japan (BOJ) has been under severe criticism—both domestic and foreign—for not doing more to halt the economy’s deflationary slump. Most recently, in 1999, the critics have focused on whether the BOJ should or should not sterilize foreign exchange interventions designed to halt another upward surge in the yen—a surge that further aggravates the deflationary pressure impeding recovery.

Specifically, in 1999 the BOJ intervened several times without success to slow the yen’s rise from ¥120 per U.S. dollar in early June to ¥104 by late September. However, the BOJ chose to sterilize the monetary impact of these interventions. Yet the Ministry of Finance wanted the interventions to be unsterilized, i.e., for the monetary base to expand by the domestic value of the large increase in foreign reserves, in order to be more effective and to stimulate the flagging economy. Subsequently, at a meeting of the G-7 finance ministers in Washington, D.C., on September 24 and 25, they too put pressure on the BOJ to be more “expansionary” as a condition for securing potential future international cooperation to contain the yen’s rise.

As Okina (1999) correctly emphasizes, this particular criticism (and several others) of the BOJ is misplaced. Short-term interest rates are already trapped at zero with the monetary base “overexpanded” in a liquidity trap. As long as expectations governing the exchange rate and interest rates on yen assets remain unchanged, the BOJ cannot itself affect the exchange rate or domestic output no matter whether its interventions are sterilized or unsterilized. However, joint intervention with foreign central banks to contain the yen’s rise could change these expectations.

In these comments, I shall consider each of Dr. Okina’s main points, rebutting the critics of the BOJ, from the alternative theoretical perspective developed in McKinnon and Ohno (1997, forthcoming) and in subsequent research papers. So first comes a brief synopsis of this alternative theory.

## **McKinnon-Ohno in Brief**

The key to understanding Japan’s monetary dilemma, i.e., pressure for yen appreciation in a low-interest rate trap, is the expectation that the yen is likely to be higher 10, 20, or 30 years from now than it is today. McKinnon and Ohno (1997) argue that this long-term expectation can only be damped by a strong signal from the United States—such as (sustained) joint intervention by the Fed and the BOJ—to prevent the U.S. dollar value of the yen from drifting ever upward.

The expectation of an ever-higher yen is not new. Since 1971, when the exchange rate was ¥360 to the U.S. dollar, yen appreciation in nominal terms averaged about 4 percent per year through 1999, when the rate is now about ¥104 per U.S. dollar. From 1971 through April 1995, when the yen peaked out at ¥80 to the U.S. dollar, we posited that the yen appreciation arose largely from mercantile pressure from the United States—often associated with trade disputes between the two countries. The United States focused on its deteriorating trade position, and Japan was the United States' largest and most aggressive trading partner.

In mid-1995, U.S. policy changed. The U.S. Treasury announced a “strong dollar” policy, and since then the yen has come down from its peak. Nevertheless, the unbalanced political economic interaction between the two countries instills the fear that this relief is only temporary. Indeed, the great burgeoning of the U.S. trade deficit (and Japanese trade surplus) in 1999 reinforces the expectation that U.S. mercantile pressure will return.

But mercantile pressure from the United States is not the whole story. There exists a second complementary channel for upward pressure on the yen. For about 20 years, Japan has run current-account surpluses with the rest of the world. Apart from official capital outflows from Japan, much of this cumulative current-account surplus has been financed by Japanese financial institutions—banks, insurance companies, trust funds, and so on—adding to their stocks of U.S. dollar claims. True, U.S. dollar assets carry much higher nominal yields than yen assets. But the currency risk, i.e., the possibility of capital losses from yen appreciation, seen by these institutions is now much higher than it was 20 years ago. Because their existing stocks of U.S. dollar claims are greater, Japanese financial institutions are more reluctant to continue acquiring dollar claims in the late 1990s. And without such financial cover, today's current-account surplus will itself drive the yen upward—apart from any direct mercantile pressure from the United States. And this possibility inhibits Japanese private investment.

Not surprisingly, this persistent upward pressure on the yen was recognized in the financial markets more than 20 years ago. Following the principle of open interest parity, Japanese interest rates at all terms to maturity have averaged about 4 percentage points less than American rates since 1978. And this differential has not diminished in the late 1990s, even in periods when the yen took the markets by surprise and fell against the U.S. dollar. The market expectation that the yen will rise in the future, even when it is (surprisingly) weak in the present, remains remarkably robust.

In the 1970s and 1980s when U.S. nominal interest rates and expected inflation were quite high, having lower interest rates and correspondingly lower wholesale price inflation was not a problem for Japan. In the mid-1990s, however, inflationary expectations in the United States diminished and U.S. interest rates came down to more moderate levels. Then, Japanese interest rates, having to be 4 percentage points or so less by the expectation of ongoing yen appreciation, were forced toward zero as Japan's Wholesale Price Index (WPI) fell. Thus, Japan's liquidity trap and relative deflation, as best measured by a broad tradable goods index like the WPI, has been externally imposed as an incidental rather than deliberate outcome of U.S. policies.

According to McKinnon and Ohno (1997, forthcoming), ending the expectation

of an ever-higher yen and of ongoing WPI deflation in Japan requires a mercantile and exchange rate agreement with the United States in order to credibly stabilize the U.S. dollar value of the yen in the long run. In the absence of such an agreement and with the continued expectation of a higher yen, there is relatively little the BOJ itself can do to reflate Japan's economy or to allow it to escape from the liquidity trap. Thus, we agree with Dr. Okina that most of the criticism leveled at the BOJ for not being sufficiently inflationary is misplaced.

Let us now consider some of Dr. Okina's specific responses to these criticisms from this McKinnon-Ohno perspective.

### **1. THE FALL IN THE U.S. CONSUMER PRICE INDEX (CPI) FROM 1929 TO 1933 IN THE**

#### **GREAT DEPRESSION WAS MUCH GREATER THAN THE FALL IN JAPAN'S CPI IN THE 1990S.**

Indeed, Japan's CPI has not fallen in the 1990s but has grown about 1 percent per year. Thus, by international standards, the BOJ can fairly claim to be meeting a reasonable inflation target in the 1990s. But there are two problems here.

The first is that the CPI may not be the best measure of persistent deflationary pressure. Because the Balassa-Samuelson effect still seems to be strong in Japan, the WPI has fallen substantially since 1985—and fallen even more relative to its U.S. counterpart. And of course land prices continue to fall. So if one deflates nominal interest rates with these price indices instead of the CPI, real interest rates in Japan are higher.

The second problem is persistence itself. The sharp fall in the U.S. price level from 1929 to 1933 surprised everyone—and it is hardly likely that further falls of that magnitude would have been anticipated in the U.S. financial markets in the later 1930s. (However, some Fisher effect to lower U.S. interest rates in the 1930s likely was present.) In contrast, the persistent U.S. pressure to get the yen up from 1971 through 1995, and the fear that that pressure could return in the new millennium, is more than two decades old. A persistent effect is more likely to be anticipated by the market. Thus, persistent upward pressure on the yen could drive Japanese nominal interest rates below U.S. ones—even though Japan experienced no traumatic fall in prices comparable to what the United States experienced in the early 1930s.

### **2. HAS JAPAN'S MONETARY POLICY BEEN ACCOMMODATING?**

Dr. Okina is right to stress that the BOJ has been accommodating. Since 1994, there has been a big fall in the velocity of base money (McKinnon [1999])—and broader monetary aggregates have continued to expand relative to Japanese GNP.

Nevertheless, the word “accommodating” is the right one. If an outside force (the expectation of a higher yen and lower domestic WPI) drives nominal interest rates down while making private investment look risky, then the demand for base money will increase because (1) nominal interest rates are driven close to zero; and (2) the speculative demand for money increases because of greater volatility in the foreign exchange and long-term bond markets.

Although the BOJ (passively) accommodates this increased demand for base money, it is incapable of using domestic monetary measures alone to (actively) expand the economy. The BOJ's helplessness is particularly evident in the liquidity trap with a zero interest rate and unchanged foreign exchange expectations.

Thus, Dr. Okina is perfectly right in saying that simply announcing a high inflation target (as called for by Krugman [1998a, 1998b]) would not be credible as long as the BOJ has not the means to implement it. A massive devaluation of the yen is infeasible for the reasons he correctly points out. There could be a substantial loss of credibility from the announcement effect itself.

Targeting excess commercial bank reserves may or may not be feasible technically. But even higher excess reserves would also fail to expand the economy when the speculative demand—even by banks—for base money is almost unlimited.

### **3. SHOULD THE BOJ BUY GOVERNMENT BONDS?**

From the point of view of an integrated government, it does not much matter whether the BOJ buys government bonds or the public trust funds (based on the postal savings) buy them. Both institutions would bear the risk of large capital losses should nominal interest rates rise back to normal levels. Even apart from the possibility of incurring capital losses, however, it is probably better that the BOJ not set a precedent by underwriting government bonds directly.

### **4. THE CONSTRAINT ON YEN DEPRECIATION**

I have argued that the yen's market value today need not naturally depreciate in the face of growing excess domestic liquidity as long as the future yen is expected to be (erratically) higher. However, there exists an additional political-economic constraint on how much the government could attempt to depreciate the yen in real terms. Suppose, to stimulate the slumping but very large Japanese economy, unrestrained monetary expansionists—see Meltzer (1998) and Krugman (1998a, 1998b)—aimed for a sharp yen depreciation below its current purchasing power parity (PPP) rate. This would fail on several counts:

- (1) The domino effect: Other Asian currencies would be forced to depreciate further. In particular, the finely balanced position of China, where the yuan/U.S. dollar rate has been stable for more than five years, would be undermined.
- (2) Protectionist responses from other industrialized countries: Already in 1999, a major trade dispute is brewing over a surge in Japanese steel exports into the U.S. market.
- (3) The expectations effect: The fear of future yen appreciation could still remain and even be strengthened if expectations about the long-term value of the yen are little changed in the face of current yen depreciation.

Particularly in view of Japan's large trade surplus, almost all protagonists in the current debate recognize the potential calamity if the yen were to depreciate sharply relative to its current PPP rate of about ¥120 to the U.S. dollar. So Japanese monetary policy is trapped in two important respects: nominal interest rates cannot be reduced further and the spot value of the yen cannot be significantly devalued in the foreign exchanges. However, in proper long-term perspective, it is the yen's (distant) future value in nominal terms, and not so much today's spot value in real terms, that is too high.

**5. “IF THE AUTHORITIES SHOULD SERIOUSLY WISH TO CONTROL THE FOREIGN EXCHANGE RATE, THEY WILL NEED TO SWITCH TO A POLICY FRAMEWORK THAT FUNDAMENTALLY ALTERS THE EXPECTATIONS OF MARKET PARTICIPANTS” (OKINA [1999]).**

Dr. Okina’s statement is completely correct and is consistent with McKinnon-Ohno. But, in addition, we believe that stabilizing the value of the yen in the long run needs the cooperation of the United States because the Americans were more or less responsible for the problem in the first place. This is the key to ending the expectation of an ever-higher yen and the deflationary pressure on the Japanese economy.

If such a joint Japanese-U.S. program of long-term yen stabilization became credible, say, around a benchmark of ¥120 to the U.S. dollar (the exact number is not important as long as a long-term benchmark exists), nominal interest rates in Japan would jump upward toward international levels. Then, to keep the exchange rate stable, the BOJ might actually have to contract the current monetary base as the demand for base money falls. In effect, the Krugman-Meltzer proposal to greatly expand today’s monetary base would make the BOJ’s final adjustment problem more difficult.

What about expanding the monetary base in conjunction with BOJ intervention in the foreign exchanges to dampen yen appreciation, i.e., the issue of sterilized versus unsterilized intervention? Clearly, with an externally imposed liquidity trap and base money in circulation already in “excess,” the sterilization issue is not important, and unilateral action by the BOJ is likely to fail.

It would be worthwhile for the BOJ to undertake unsterilized intervention only if it became necessary for securing U.S. cooperation. However, if the signaling effect of successive joint interventions successfully ended the expectation of an ever-higher yen so that nominal interest rates on yen assets rose, the demand for monetary base would fall. Thus, the new base money created by the unsterilized intervention would have to be quickly withdrawn in order to prevent sharp yen depreciation.

In conclusion, the primary problem is to spring the liquidity trap for Japanese monetary policy by ending the expectation of an ever-higher yen through joint action by the Japanese and U.S. governments. Once the threat of sudden yen appreciation is eliminated, private investment in Japan could surge. Numerous criticisms of the BOJ, including the issue of sterilized versus unsterilized intervention, are of secondary importance and generally are not warranted. But such criticisms have deflected attention from the main problem: the need to quash the expectation that the yen will rise over the longer term.

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# Comments: What More Can the Bank of Japan Do?

**Allan H. Meltzer**

The Allan H. Meltzer University Professor of Political Economy, Carnegie Mellon University, and the American Enterprise Institute

It is a pleasure to have the opportunity to respond to Dr. Okina's defense of the policy of the Bank of Japan (BOJ). I believe he has made as good a case as we are likely to see. I want to begin by agreeing with two important points that he makes.

First, Japan is not in a "great depression" nor has it experienced a rise in unemployment or decline in income, prices, and money comparable to U.S. experience in 1929–33 or, for that matter Japan's experience at that time. Declines in stock prices, land, and housing prices have drastically reduced household wealth in Japan, and commercial banks' loan losses exceed losses in the United States during the Great Depression, but the similarity ends there.

Second, we agree that Japan is not in a "liquidity trap" where monetary policy is powerless to affect prices, output, or other key variables. Wages and product prices have fallen. Land and housing prices continue to decline, and the yen-U.S. dollar exchange has appreciated from ¥145 in June 1998 to about ¥104 as I write. None of this experience seems consistent with a liquidity trap. A more likely explanation is that the fall in prices and the appreciation of the yen reflect an excess demand for money.

Dr. Okina, and many others, describes monetary policy as easy or accommodative. I do not agree. Falling prices and appreciating currency suggest that wealth-owners (at home and abroad) want to hold more Japanese money balances than the BOJ has provided. The public cannot create more yen balances, but they can increase the real value of their yen balances by demanding yen. Their demands force the price level down and appreciate the yen-U.S. dollar exchange rate.

If the BOJ increased the growth rate of money, it would help to achieve four important goals: (1) stop current and expected future deflation of wages and prices; (2) convert an excess demand for money into an excess supply, encouraging spending; (3) stop the fall in housing and land prices, thereby strengthening the financial system and ending the erosion of real wealth; and (4) depreciate the exchange rate, improving the competitive position of Japanese producers in world markets. The first three goals are not controversial, though there are differences about the means of achieving them. The fourth goal has been controversial, so I will discuss that.

The argument is often made that devaluation of the yen is harmful to Japan's neighbors and trading partners. Japan, it is said, should not recover at others' expense. Such statements are based on a misunderstanding. The real exchange rate—the quoted exchange rate adjusted for differences in prices at home and abroad—must change to restore Japan's competitive position in the world economy. The only issue is not whether the real exchange rate changes, but how.

There are three possibilities. First, Japan can use expansive monetary policy to devalue its quoted (or market) exchange rate. Second, it has been doing the opposite recently, so it must in the future let prices and wages fall enough to restore equilibrium. Third, it can hope that the United States, Europe, and others inflate enough to ease the Japanese adjustment. Or it can rely on a mixture of price and exchange rate changes.

Putting aside hopes that principal foreign countries inflate, wage and price deflation is the alternative to devaluation. There are no others. Those who oppose devaluation as too costly for Japan's neighbors and trading partners should recognize that Japanese deflation is expensive also, for its trading partners, its neighbors, and its citizens. In my view—supported by the experience of the past decade—devaluation would be a cheaper, and I believe, faster way to restore prosperity to Japan and its neighbors.

The Japanese work force is talented and productive. Japanese producers in many industries have been creative and strong competitors. That's why Japan has become the world's second largest economy. Although there are the much-discussed structural problems, there is a competitive core that would take advantage of the yen's devaluation to produce more. As Japan returned to high employment and growth, imports from neighbors and trading partners would increase. The yen would appreciate. Japan's growth would help to restore Asian prosperity and contribute to growth of the world economy.

Dr. Okina compares buying long-term bonds to buying U.S. dollars as a means of expanding money. Either or both would work. Indeed, both would work about the same way, and it would not be possible for an outsider to know which policy was followed unless he or she looked at the BOJ's balance sheet to see what the BOJ had bought.

Almost two years ago, I urged the BOJ to take five actions: (1) increase the monetary base by purchasing any asset (other than treasury bills that have zero yield); (2) announce that the policy of buying assets would continue as long as the threat of deflation remains or is expected to return; (3) announce that the private sector has responsibility for ending the decline in asset prices, but the BOJ's policy would support their efforts by ending deflation and stimulating spending; (4) accept that the government (or its agents) must absorb many of the financial system's losses; and (5) allow the exchange rate to depreciate (temporarily) as required by the expansive monetary policy.

The position of the banking system has improved, and the economy has stopped declining. If the BOJ would take the other proposed actions, Japan would return to noninflationary economic growth sooner.

Finally, permit me to comment on the safety or solvency of the BOJ. I do not believe that the purchase of long-term bonds would jeopardize its reputation or safety. There is little reason to believe that restoration of noninflationary growth would raise interest rates enough to impair the BOJ's solvency. Further, many privately owned banks and financial institutions in Japan, the United States, and elsewhere have operated for long periods with impaired balance sheets. Both the Japanese and U.S. governments have current and prospective future liabilities far in

excess of their assets. Yet the public regards U.S. or Japanese government securities as two of the safest assets in the world. I see no reason to believe there would be any doubt about the government's obligation to stand behind the BOJ. No central bank has ever faced default, and no responsible government would permit that to happen. It is unclear to me what could be meant by failure of a central bank.

The BOJ should put its fears and concerns aside. Monetary expansion to end deflation is desirable for Japan, Asia, and the rest of the world. It is a mistake to let concerns about short-term costs, such as temporary currency depreciation, delay longer-term benefits by continuing the deflationary policy of recent years. And this is especially true since the costs are less than the costs of continued recession and deflation.

# Rejoinder to Comments Made by Professors McKinnon and Meltzer

**Kunio Okina**

Director, Institute for Monetary and Economic Studies, Bank of Japan

As succinctly summarized at the beginning of Professor McKinnon's comment, we have seen new waves of controversy concerning the Bank of Japan's (BOJ's) monetary policy management since my paper, "Monetary Policy Under Zero Inflation," was written in early summer.

In their comments on my paper, Professors McKinnon and Meltzer take into account such developments, and their views seem to respectively represent those of protagonists and antagonists with respect to the BOJ's monetary policy. I would thus like to respond to the comments of my distinguished colleagues and to further discuss issues with which the BOJ is faced.

In the following, I will focus on several important issues referred to by both gentlemen in their comments and present additional views in response to the criticism of the esteemed monetarist, Professor Meltzer.

## **A. Monetary Policy and the State of the Economy**

I believe that there is a general consensus that the current state of the Japanese economy is quite different from what was seen during the Great Depression in the U.S. Indeed, this is one of two important points on which Professor Meltzer agrees.

While Professor McKinnon also shares the same opinion, he emphasized the fact that the Wholesale Price Index (WPI), used as a measure of prices in Japan, has fallen substantially since 1985, and that the downward trend may likely be more persistent than during the Great Depression. To this I would only say that while the fact that the WPI in Japan fell almost consistently even in the 1980s (which includes the "bubble" period) is certainly interesting from the viewpoint of the McKinnon-Ohno hypothesis, it refutes rather than supports the belief that Japan is on the verge of a deflationary spiral as observed during the Great Depression.

This fact has, in my opinion, quite a significant implication since monetary policy responses can be essentially different during a deflationary spiral and a deep recession without a deflationary spiral. If an economy is on the verge of a deflationary spiral as observed during the Great Depression, the central bank concerned would naturally try to prevent such a scenario from materializing by taking all possible measures at its disposal, while thoroughly recognizing the substantial side effects such measures might induce. In such a situation, a central bank would even consider a substantial increase in its purchase of long-term government bonds, thereby providing massive

liquidity to the market, as well as discussing with the government how to deal with the erosion of the central bank's balance sheet stemming from such purchases.

However, the absorption of government bonds by the BOJ would be akin to introducing a drug into the economy, since if the government came to accept such indulgence there is a very real risk that it would be difficult to end such absorption because it would be too painful, as is evidenced by historical experience, and might impair the national interest of Japan from a long-term perspective.

In this context, it is noteworthy that there are some who, in view of the recent accumulation of fiscal deficits, predict that Japan might follow the same path as the Weimar Republic, whose massive budget deficit was monetized by the central bank's underwriting of government bonds, only resulting in economic crisis with hyperinflation, capital flight, and a GDP decline.

Hence, only if an economy faces the risk of tumbling into a situation experienced by the U.S. in the past, when prices and GDP fell by double-digit rates and massive unemployment occurred, might a central bank seriously consider whether it dares to follow such a course.

When an economy appears to be recovering based on such economic indicators as real GDP growth and various survey results, there will inevitably be upward pressure on forward-looking economic variables including the foreign exchange rate and long-term interest rates. Therefore, when rises in the foreign exchange rate and long-term interest rates are caused by such pressure and are not deemed to force the economy into a deflationary spiral, implementation of the aforementioned drastic additional monetary policy because of a continuing recession would, given its large side effects, impair not only the soundness of the central bank but also that of the entire economy.

Therefore, since the Japanese economy is in this kind of situation, the BOJ can do nothing else but ensure its zero interest rate policy permeates and put the economy back on a steady recovery path.

While Professor McKinnon accepted that the current state of the Japanese economy differs from that during the Great Depression and concurred with me that current monetary policy is quite accommodative, Professor Meltzer advocated that the BOJ take further monetary easing because of the decline in producer prices, wages, and land prices, and also the appreciation of the yen.

In this regard, I cannot agree with Professor Meltzer. The continuous decline in the WPI is, as Professor McKinnon pointed out, a long-term trend and has nothing to do with a deflationary spiral. To begin with, if Professor Meltzer emphasizes the decline in wages and prices, I do not understand why he agrees with me that the current situation differs from the Great Depression.

Examining his subsequent comments on the foreign exchange rate, he seems to focus more on the appreciation of the yen than the decline in wages and prices. However, when we look at the long-term development of the yen-U.S. dollar rate, to which Professor McKinnon referred, the yen has been consistently appreciating against the U.S. dollar except for the early 1980s. If such an appreciation indicates a tightness of monetary policy, then monetary policy in Japan has been almost consistently tight since 1971, when Japan abandoned the fixed exchange rate regime

and following which high inflation was seen in the early 1970s, and the “bubble” economy emerged in the late 1980s.

Even viewed theoretically, it is natural that the currency of a capital exporting country is subject to pressure for appreciation due to the accumulation of credit, as Professor McKinnon argued, and since what affects the foreign exchange rate (which is the relative price of currencies) is the monetary policy of Japan and the U.S., the view that the BOJ should further ease monetary policy since the appreciation of the yen is evidence of a tight monetary policy does not seem at all convincing.

Professor Meltzer’s concerns over the appreciation of the yen would appear to stem from his belief that a strengthening of Japan’s competitiveness through a depreciation in the yen’s real exchange rate (which is adjusted by prices) is inevitable for the world economy, and the issue is whether to achieve it via deflation or a depreciation of the yen. It is true that, if we accept the necessity for the yen to depreciate, it would be easy to understand a proposal such as “Since a depreciation of the yen is desirable and less costly than deflation for other countries, Japan should accept it.” While I completely agree with Professor Meltzer’s view that “As Japan returned to high employment and growth, imports from neighbors and trading partners would increase. The yen would appreciate. Japan’s growth would help to restore Asian prosperity and contribute to growth of the world economy,” unfortunately it is rather difficult to assume that Japan’s neighbors and trading partners share his belief that strengthening Japan’s competitiveness is inevitable for the world economy.

## **B. Monetary Policy and Realizing a Depreciation of the Yen**

It is without doubt that excessive appreciation of the yen would have adverse impact not only on the Japanese economy but also on the entire world. As a conceptual experiment, let us assume that excessive appreciation of the yen took place and that Japan’s neighbors and trading partners share Professor Meltzer’s belief that strengthening of Japan’s competitiveness via a depreciation of the yen’s real exchange rate is inevitable for the world economy. In such a case, what can Japan do, and what should it do, in order to see the yen depreciate? There are two possible answers. One is further monetary easing as Professor Meltzer advocates, and the other is a shift in the foreign exchange rate regime as Professor McKinnon mentioned.

Let us first look at monetary easing. Behind such thinking is one of the most basic elements of foreign exchange determination theory, namely, the interest parity equation that relates interest rate difference to the degree of foreign exchange depreciation.

Taking this equation into account, it is natural that foreign exchange intervention which is not accompanied by monetary policy is less effective. However, monetary policy cannot affect the foreign exchange rate through interest rate parity when interest rates are at almost zero, and moreover, since financial institutions are already holding a sizable amount of excess reserves the transmission path from monetary policy to the foreign exchange rate would be quite indirect and blurred even if the central bank doubled excess reserves through additional monetary easing. While some would expect announcement effects, no transmission mechanism exists to support such expectations permanently.

The only possibility in this context is if the initial announcement is understood as being the central bank's commitment to further easing of monetary conditions if the yen further appreciates, which would lead to a commitment to the policy described under Section A above. Indeed, if the central bank dramatically increased money supply by pursuing a type of monetary policy responding to a Great Depression situation, the yen would certainly depreciate.

Because of such a policy, however, fiscal discipline would be lost and government bond prices would collapse. The cost would be high. Thus, the BOJ is not likely to take such an option unless Japan is faced with a real deflationary spiral. Bearing this in mind, I cannot think of any reason why Professor Meltzer nevertheless proposes further monetary easing other than that he doesn't regard the central bank purchase of government bonds as a drug and the ensuing costs to the national economy as substantial.

Professor McKinnon referred to the central bank's underwriting of government bonds as follows: "Even apart from the possibility of incurring capital losses, however, it is probably better that the BOJ not set a precedent by underwriting governments bonds directly." I believe Professor McKinnon is correct in this regard, and that the difference of views stems from the wide gap in their assessment of Japan's monetary policy.

The other answer is a regime change that commits unlimited intervention to achieve a target foreign exchange rate. Professor McKinnon says it is a regime change, including concerted intervention, that is essentially necessary to prevent the yen from appreciating. If the market believes the Ministry of Finance (MOF) will conduct unlimited intervention to maintain a targeted rate, the foreign exchange rate would depreciate.

But why should the market believe that the MOF decides to conduct unlimited intervention? It is because the current Bank of Japan Law stipulates that "the Bank shall buy and sell foreign exchange as an agent of government . . . , when its purpose is to stabilize the exchange rate of the national currency," and that the BOJ consequently only conducts business as an agent of the MOF in foreign exchange intervention.

If the BOJ is to support such intervention on the part of monetary policy, its option is to maintain zero interest rates so that such unlimited intervention will not be disturbed from the monetary side. Bearing this point in mind, the argument for unsterilized intervention, as Professor McKinnon pointed out, not only is of secondary importance but also lacks validity when base money in circulation is already in "excess."

Then, is there nothing that the BOJ can do? If the market is skeptical about the BOJ's support for unlimited intervention by the MOF alone, as an effective supporting policy other than maintaining the zero interest rate policy, the Bank of Japan Law should be revised or interpreted differently so that the BOJ can intervene in the market using its own funds in close cooperation with the MOF but based on an independent decision.

In such a case, would the BOJ share the burden of unlimited intervention with the government? It depends on the economic situation at that time. If the BOJ does

not mind whether the yen appreciates or not, it would refuse to intervene in the market using its own funds. Its posture would be tested at this point.

However, given that the floating exchange rate system has prevailed among industrialized countries for quite a long time, any attempt at unlimited intervention to bring the foreign exchange rate back to something akin to a fixed exchange rate regime would be a grand experiment.

### **C. Monetary Policy and Balance Sheet Erosion**

On the subject of further monetary easing through the purchase of long-term government bonds, Professor Meltzer and I disagree on the implications it would have with respect to erosion of the central bank's balance sheet.

And, as both gentlemen say, and as I mentioned in my paper, it would probably not be a significant problem if one could consider the issue by integrating the government with the central bank. Such an amalgamation approach is perhaps valid, and the real issue is the introduction of a drug into the fiscal area, namely, the central bank's purchase of long-term government bonds.

However, the assumption of integrated government disregards reality. Economists can discuss issues by setting various assumptions in their models and this is one of their strengths, but erosion of the central bank's balance sheet cannot be solved just by assuming an integrated government or the government's obligation to stand behind the BOJ.<sup>1</sup> This is because, in the real world, the Japanese government and the BOJ are independent organizations and, since a clause whereby the government was obliged to compensate for large losses in excess of its own capital incurred by the BOJ was deleted in drafting the current Bank of Japan Law, balance sheet erosion could well be a high hurdle for the BOJ.

In connection with this point, I would like to present my views explaining why I cannot agree with some of Professor Meltzer's proposals.

First, is whether there is a possibility that the BOJ's balance sheet would be eroded. Professor Meltzer argued that "There is little reason to believe that restoration of noninflationary growth would raise interest rates enough to impair the Bank's solvency." In this regard, let us make a simple numerical exercise.

Based on quite a naive monetary approach, suppose that the BOJ, with the aim of seeing the yen depreciate by some 10 percent, increases Japan's M2+CDs by 10 percent through the purchase of long-term government bonds. Although credit expansion through lending is now quite limited in Japan, given the current money supply of ¥600 trillion the BOJ could increase money supply by 10 percent if it purchased some ¥60 trillion worth of 10-year government bonds (yielding 1 percent) held by nonfinancial institutions. If it did this and the economy witnessed inflation or succeeded in restoring noninflationary growth with long-term interest rates of 5 percent, the same level as in 1992 after the bursting of the bubble (at that time, the

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1. Professor Meltzer argued, "I see no reason to believe there would be any doubt about the government's obligation to stand behind the Bank. No central bank has ever faced default, and no responsible government would permit that to happen." However, for example, there was a case in 1993 when the Central Bank of the Philippines faced financial difficulties due mainly to capital losses and a new central bank (Bangko Sentral ng Pilipinas) was established.

growth rate of GDP was 1 percent and that of CPI was 1.6 percent), the BOJ would incur a loss of about ¥18 trillion.<sup>2</sup> Since this amount is several times larger than its net worth, the BOJ would thus see a substantial excess of liabilities, while the effects on the noninflationary growth and foreign exchange rate would be quite uncertain.

Second, Professor Meltzer says, “Both the Japanese and U.S. governments have current and prospective future liabilities far in excess of their assets. Yet, the public regards U.S. or Japanese government securities as two of the safest assets in the world.” As a Japanese, I am tempted to believe that our government bonds are regarded as such, but I have to admit I am not convinced for the following reason.

Looking at the general government<sup>3</sup> balance sheet in the National Accounts Statistics as of the end of 1997, the Japanese government’s assets were far in excess of liabilities, by ¥428 trillion in fact. However, recent studies show that the government carries huge off-balance sheet liabilities, such as pension liabilities, which far exceed this amount, thereby casting doubt on the reliability of official statistics. Under such circumstances, the rating of Japanese government bonds has unfortunately been declining and there are some who even warn of fiscal collapse. Putting all this together, it is natural to think that if the government can compile its balance sheet precisely like that of the central bank, the rating of government bonds would fluctuate according to the amount of excess liabilities.

Thus, it is far from convincing that erosion of the BOJ’s balance sheet as specifically shown in the numerical exercise above would not impair the credibility of the BOJ or the Japanese government.

Professor Meltzer concluded his comments by saying, “The Bank should put its fears and concerns aside. Monetary expansion to end deflation is desirable for Japan, Asia, and the rest of the world. It is a mistake to let concerns about short-term costs, such as temporary currency depreciation, delay longer-term benefits by continuing the deflationary policy of recent years. And this is especially true since the costs are less than the costs of continued recession and deflation.”

Unfortunately, his comments are not likely to convince the BOJ that it can “put its fears and concerns aside.” To indulge in the drug-inducing purchase of long-term government bonds would inevitably be accompanied by long-term costs. In addition, “temporary currency depreciation” is not a cost to begin with if it is necessary for the world economy. When we read Professor Meltzer’s comments, we get the impression that he is suggesting the BOJ should “jump in before looking” based on a monetarist’s belief.

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2. This numerical exercise assumes that time-to-maturity of the Japanese government bonds stays at 10 years. If we take account of the time lag until long-term interest rates increase, the capital loss will vary as follows: ¥17 trillion when the time-to-maturity is nine years, and ¥16 trillion when it is eight years.

3. Following the definition in the National Accounts Statistics, general government refers to the sum of central government, local government, and social security funds.





