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Monetary Policy Under Zero Inflation
—A Response to Criticisms and Questions Regarding Monetary Policy—

Comments and Rejoinder

Comments: Ronald I. McKinnon
Allan H. Meltzer
Rejoinder: Kunio Okina

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Kunio Okina's "Monetary Policy Under Zero Inflation"
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Rejoinder:

Rejoinder to Comments Made by Professors McKinnon and Meltzer
Kunio Okina***

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Comment on

Kunio Okina's "Monetary Policy Under Zero Inflation"

by

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Since the bursting of Japan's bubble in stock and land prices in 1991, the Bank of Japan has been under severe criticism—both domestic and foreign—for not doing more to halt the economy's deflationary slump. Most recently in mid 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 yen per 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 on Sept 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 Kunio Okina 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 this comment, I shall consider each of Okina's main points, rebutting the critics of the BoJ, from the alternative theoretical perspective Kenichi Ohno and I developed in our book *Dollar and Yen: Resolving Economic Conflict between the United States and Japan* (1997, 1998) 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 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 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 yen to the dollar, yen appreciation in nominal terms averaged about 4 percent per year through 1999, when the rate is now about 104 yen per dollar. From 1971 through April 1995 when the yen peaked out at 80 to the 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 America's biggest and most aggressive trading partner.

In mid-1995, American policy changed. The 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 American trade deficit (and Japanese trade surplus) in 1999 reinforces the expectation that American 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 dollar claims. True, 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 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.

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 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 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 American nominal interest rates and expected inflation were quite high, having lower interest rates and correspondingly lower WPI inflation rates was not a problem for Japan. In the mid-1990s, however, inflationary expectations in the U.S. diminished and American 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. 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 American policies.

According to McKinnon-Ohno, 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 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 Bank of Japan itself can do to reflate Japan's economy or to allow it to escape from the liquidity trap. Thus, we agree with Okina that most of the criticism leveled at the BoJ for not being sufficiently inflationary is misplaced.

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

(1) The fall in the U.S. 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 American 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 American 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 American financial markets in the later 1930s. (However, some Fisher effect to lower American interest rates in the 1930s likely was present.) In contrast, the persistent American 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 American—even though Japan experienced no traumatic fall in prices comparable to what America experienced in the early 1930s.

(2) Has Japan's monetary policy been accommodating?

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—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

(i) nominal interest rates are driven close to zero, and
(ii) 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 Okina is perfectly right in saying that simply announcing a high inflation target (as Professor Krugman wants) 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 and 1999b—aimed for a sharp yen depreciation below its current PPP rate. This would fail on several counts:

(i) *The domino effect*: Other Asian currencies would be forced to depreciate further. In particular, the finely balanced position of China, where the yuan/dollar rate has been stable for more than five years, would be undermined.

(ii) *Protectionist responses from other industrial countries*: Already in 1999, a major trade dispute is brewing over a surge in Japanese steel exports into the American market.

(iii) *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 dollar. So Japanese monetary policy is trapped in two important respects: nominal interest rates can't be reduced further and the spot value of the yen can't 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 which fundamentally alters the expectations of market participants" (page 17).

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 with the United States because the Americans were more 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-American program of long-term yen stabilization became credible, say, around a benchmark of 120 yen to the 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 American 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 American governments. 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.

References

Krugman, Paul, “Japan’s Trap”, http://web.mit.edu.krugman/www/japtrap, May 1998.

____________, “ Japan Still Trapped” *op cit.* June 1998.

McKinnon, Ronald I., “McKinnon on Japan: Wading in the Yen Trap”, *The Economist*, July 24, 1999. Pp. 83-86.

McKinnon, Ronald I. and Kenichi Ohno, *Resolving Economic Conflict Between the United States and Japan,* MIT Press 1997; Japanese translation, Nihon Keizai Shimbun 1998.

____________, “The Foreign Exchange Origins of Japan’s Economic Slump in the 1990s: The Interest Rate Trap” forthcoming in *The World Economy.*

Meltzer, Allan, “Time to Print Money”, *Financial Times,* 17 July, 1998.

Okina, Kunio, “Monetary Policy Under Zero Inflation: A Response to Criticisms and Questions Regarding Monetary Policy”, Discussion paper No. 99-E-20, Institute for Monetary and Economic Studies, The Bank of Japan, July 1999.

Response:
What More Can the Bank of Japan Do?

by
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It is a pleasure to have the opportunity to respond to Dr. Okina's defense of the Bank of Japan's policy. 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-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 Bank of Japan has provided. The public can not 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-dollar exchange rate.

If the Bank of Japan 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 U.S., 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 workforce 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 log-term bonds to buying 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 Bank's balance sheet to see what the Bank bought.

Almost two years ago, I urged the Bank 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 Bank's policy will 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 Bank would take the other proposed actions, Japan would return to non-inflationary economic growth sooner.

Finally, permit me to comment on the safety or solvency of the Bank of Japan. I do not believe that the purchase of long-term bonds would jeopardize the reputation or safety of the Bank. There is little reason to believe that restoration of non-inflationary growth would raise interest rates enough to impair the Bank'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 Bank. No central bank has ever faced default and no responsible government would permit that to happen.

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.

Rejoinder to Comments Made by Professors McKinnon and Meltzer

by

Kunio Okina

Director

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

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

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

1. 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 United States. 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 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 WPI in Japan fell almost consistently even in the 1980s (which includes the so-called 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 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 Bank of Japan would be akin to introducing a drug into the economy since if the government came to accept such indulgence there would be 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 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 which the US experienced in the past when prices and GDP fell by double-digit rates and massive unemployment was seen, 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 Bank of Japan can do nothing else but ensure its zero interest rate policy permeates and to put the economy back on a steady recovery path.

While Professor McKinnon accepted that the current state of the Japanese economy is different from that during the Great Depression and concurred with me that current monetary policy is quite accommodative, Professor Meltzer advocated that the Bank of Japan 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 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 is different from the Great Depression.

Examining his subsequent comments on the foreign exchange rate, he seems to more focus on the appreciation of the yen rather than the decline in wages and prices. However, when we look at the long-term development of the yen-dollar rate, as Professor McKinnon referred to, the yen has been consistently appreciating against the 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 US, the view that the Bank of Japan 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 like '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 Prof. 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 Professor Meltzer's belief that strengthening Japan's competitiveness is inevitable for the world economy.

2. 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 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 is shared by Japan's neighbors and trading partners. In such a case, what can Japan do, and should 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 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 which 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. And, while there is opinion which expects announcement effects, there is no transmission mechanism which would 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 monetary conditions if the yen further appreciates, which would lead to a commitment to the policy described under Section 1 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.

But, because of such a policy, fiscal discipline would be lost and government bond prices would collapse. The cost would be high. Thus, the Bank of Japan 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 which 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 will conduct unlimited intervention to maintain a targeted rate, the foreign exchange rate would depreciate.

But why should the market believe that the Ministry of Finance 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 Bank of Japan consequently only conducts business as an agent of the Ministry of Finance in foreign exchange intervention.

If the Bank of Japan 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 Bank of Japan can do? If the market is skeptical about the Bank of Japan's support for unlimited intervention by the Ministry of Finance 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 Bank of Japan can intervene in the market using its own funds in close cooperation with the Ministry of Finance but based on an independent decision.

In such a case, would the Bank of Japan share the burden of unlimited intervention with the government? It depends on the economic situation at that time. If the Bank of Japan does not mind whether the yen appreciates or not, it would refuse to intervene in the market using its own funds. The Bank's posture would be tested at this point.

However, given that the floating exchange rate system has prevailed among industrial 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.

3. 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 big 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 that the government's obligation to stand behind the Bank of Japan.[1] This is because, in the real world, the Japanese government and

[1] Professor Meltzer argued that "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 Philippines faced financial difficulties due mainly to capital losses and a new central bank (Bangko Sentral ng Pilipinas) was established.

the Bank of Japan 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 Bank of Japan was deleted in drafting the current Bank of Japan Law, balance sheet erosion could well be a high hurdle for the Bank of Japan.

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 Bank of Japan's balance sheet would be eroded. Professor Meltzer argued that "There is little reason to believe that restoration of non-inflationary growth would raise interest rates enough to impair the Bank's solvency." Let us make a simple numerical exercise.

Based on quite a naïve monetary approach and supposing that the Bank of Japan, with the aim of seeing the yen depreciate by some 10%, increases Japan's M2+CDs by 10% 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 Bank of Japan could increase money supply by 10% if it purchased some ¥60 trillion worth of 10-year government bonds (yielding 1%) held by non-financial institutions. If it did this and the economy witnessed inflation or succeeded in restoring non-inflationary growth with long-term interest rates of 5%, the same level as in 1992 after the bursting of the bubble (at that time, growth rate of GDP was 1% and that of CPI was 1.6%), the Bank of Japan would incur a loss of about ¥18 trillion.[2] Since this amount is several times larger than the net worth of the Bank of Japan, the Bank would thus see a substantial excess of liabilities, while the effects on the non-inflationary 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

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

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[3] balance sheet in 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 liabilities, such as pension liabilities, which far exceed this amount, thereby casting doubts 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 amount of excess liabilities.

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

Professor Meltzer concluded his comments saying that: "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 Bank of Japan 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 Bank of Japan should "jump in before looking"

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

based on a monetarist’s belief.