Japan's Monetary and Economic Policy

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From the mid-1970s to the mid-1980s monetary policy in Japan was highly successful. After absorbing the 1971 Nixon shock, including devaluation of the dollar and a few months of trade restrictions and yen appreciation, the economy rebounded. By the end of that decade and well into the next Japan's economic performance set the standard for developed countries.

The Bank of Japan claimed to control a monetary aggregate, $M_2 + CD$s, during these years. At first, control was very poor. The base rose at a compound annual rate of 30% a year. At this rate, the base doubled between August 1971, when the U.S. closed the gold window, and December 1974. Appreciation of the yen reduced the subsequent rate of inflation but did not eliminate it. The annualized rate of increase in consumer prices rose from about 7% at the time of the Nixon shock, August 1971, to more than 20% in 1974. Peak rates of inflation came about a year after peak rates of base money growth; in 1974 base money growth was less than the rate of inflation, so the real value of the base fell. Lower inflation followed.

After 1974 inflation fell steadily. Five years later, in 1979, inflation was between 2% and 3%. If there is an upward bias in the measured inflation rate, as many believe, inflation was lower than the reported rates. With the brief exception of 1980-81, inflation continued to fall. By 1986, the reported CPI inflation rate fluctuated around zero.

During the years 1979 to 1984, the nominal monetary base rose at a 5% compound annual rate. Real GDP rose about 3% a year, on average, and inflation (CPI) averaged about 3%.

The good news ended in 1985. The good years came at a time when the dollar had appreciated sharply against many currencies and by 64% on a trade weighted basis. Between year-end 1980 and 1985, however, the dollar fluctuated in a 6% band around 235 yen per dollar. Japanese purchases of dollars remained modest. Although reserve balances fluctuated, total
Japanese monetary reserves in 1985 were SDR 25.2 billion, about the same as in 1981.\textsuperscript{1} This is one of the few periods since 1971 when the yen/dollar exchange rate remained relatively stable without substantial purchases by the Japanese authorities.

What happened next strikes me as remarkable and, to my knowledge, little noticed. Between 1985 and 2001, Japan's monetary reserves in SDR increased by a factor of 8, a 13\% compound annual rate of increase. The increase did not occur at a steady rate. Monetary reserves in 1988 were three times the level reached in 1985. The yen appreciated in these years by almost 50\%, from 238 to 128 yen per dollar. Again in the 1990s, monetary reserves doubled and redoubled to more than SDR 200 billion. This time, the yen/dollar exchange rate fluctuated over a wide range, 20\% on both sides of 115 yen per dollar. In 1999, a year of very large dollar purchases, the yen appreciated against the dollar despite a more than SDR 50 billion increase in Japan's monetary reserves.

These are not small adjustments at the margin. Japan experienced massive inflows of foreign exchange and substantial appreciation. At the current exchange rate of approximately 130-yen per dollar, the nominal exchange rate is about twice the rate in March 1973, when major countries decided to end the fixed exchange rate system. On average, the yen appreciated 2.5\% a year, although the constant average rate gives a very misleading impression of the path of the exchange rate. The long-term average rate of appreciation is about 55\% greater than the difference in the compound annual average rates of consumer price inflation over a similar period.\textsuperscript{2} Ignoring differences in measurement and in tradables versus non-tradables, these data suggest that the real yen/dollar exchange rate has appreciated more than 50\% since 1973.

I attribute the real appreciation to higher productivity growth in Japan during the postwar years and possibly also to increased relative demand for yen by Japan's Asian trading partners. In the 1990s, unit labor costs in Japan increased relative to the United States. Permit me to quote from a previous paper where I discuss relative productivity and unit labor costs.

"The data show that, on a 1985 base, relative cost changes moved in favor of Japan by nine percent in the 1980s and early 1990s. The relative cost advantage disappeared in 1992. By mid-1993, the United States had increased its relative cost advantage by five to six percent and in

\textsuperscript{1} Data are from annual reports of the U.S. Council of Economic Advisers for various years. Yen/dollar exchange rates are end of year rates.
\textsuperscript{2} Japan's cpi growth, 1973-2001 is 3.2\% compounded annually. For the U.S. the compound rate is 4.8\%. Use of deflators would change the values without much effect on the conclusion.
1998 by more than ten percent. The nominal exchange rate did not depreciate to offset the change in costs. The evidence suggests that the terms of trade became less favorable to Japan."

Meltzer (2001, p. 26)

I did not go from this finding to the longer-term effects on the real exchange rate discussed earlier. If the real appreciation of the yen reflects mainly differences in productivity, the recent past is very different from the earlier postwar years. From 1991 to 2001, the nominal yen/dollar exchange rate appreciated by 4.3% a year. Japanese cpi was almost unchanged over the decade. The difference in average inflation rates is 2.3% a year, so real appreciation of the yen continued and, the annual rate of real appreciation increased despite higher productivity growth in the United States.

What of the future? The longer-term is unknowable. The near-term, perhaps the next five years, favors the U.S. Japan has much to do to increase productivity growth in services and to catch-up in several of the new industries. No one can be certain, but if my surmise is correct, expected U.S. productivity growth exceeds expected Japanese productivity growth for the near term future. Either the yen has to depreciate further, or Japan's price level has to continue falling. Or, contrary to my conjecture, Japan's productivity growth has to increase.

Let me repeat the last conclusion. Japan has three choices. It can continue to deflate wages and prices until real wages and costs of production reduce unit labor costs enough to restore normal growth. It can depreciate the exchange rate, thereby reducing effective prices of home production and restoring growth. It can adopt measures that increase productivity growth to validate its current costs of production. The first two options are alternatives. The third option can, in principle, accompany either deflation or devaluation.

Each of these choices has consequences for monetary policy and for Japan's future. For example, continued deflation raises the real value of the debt. Higher productivity growth and progressive taxes close the budget deficit and generate surpluses that can be used to retire debt. I return to discussion of productivity growth below.

Two remaining questions are: why did Japan receive such large inflows from abroad, and why did they fail to increase the money stock? The second question is easiest. Japan sterilized most of the foreign inflow thereby preventing the inflow from raising the growth rate of the monetary base. I find the first question more difficult to answer fully. Foreigners have bought Japanese shares and made direct investments. The main reason for the inflow, however, is that,
arithmetically, it reflects the current account surplus that Japan sustained throughout this period. The main reason for appreciation of the yen is continued deflation. This is mainly the consequence of its monetary policy before March 2001.

Can we reconcile these two findings? On one side, there is the Japanese current account surplus. On the other there is deflation, adjusting the real exchange rate to make Japan more competitive. If the Bank of Japan did not sterilize the capital inflow, the monetary base and money stock would grow faster eliminating the need for more deflation. The answer may lie in the competitive advantage that Japanese manufacturers have achieved in the production and sale of motor cars and other consumer durables and the disadvantage that they face in supplying many other goods and services.

If this is, indeed, the answer, we are back to the earlier issue of productivity in a new context. Japan has four problems--a macro problem reflected in the overall deflation, a relative price problem requiring deregulation, modernization, and reform in the service sector and the less productive parts of manufacturing, a weak financial system with large losses, and an enormous debt.

Two Explanations

There are two principal explanations of current Japanese deflation, one real and one monetary. In the words of Governor Hayami, the real explanation looks to the "variety of systems which had supported the postwar development of Japan's economy." Hayami (2001, p. 9). Some of these systems have become obsolete. To restore growth, the government has to approve reforms of the banking and financial systems, postal savings, competition laws and many other traditional features of the economy. Many of those who favor the real explanations insist that monetary expansion alone will not succeed in ending the long period of slow growth and frequent recessions that still continues.

The monetary explanation sees Japan's deflationary monetary policy as a major contributing reason for slow growth and frequent recessions. With prices of houses and equities selling for 40%, 50% or 60% of the prices at the 1990 peak and deflation expected to reduce prices further, holding cash is a low risk way to increase wealth and income. Also, with falling prices and a weakened financial system, holding cash is a prudent choice. The government has issued large amounts of debt to finance spending on projects with low social returns. The growth
of government debt plus unfunded liabilities for pensions, health care, and the Japanese railroads put at risk future payments for pensions and health. The saving rate remains high, and much of the saving takes the form of cash and near cash assets.

The real explanation sees deflation as evidence of an excess supply of goods and labor. Until removal of impediments to more efficient use of resources, monetary expansion will not create loans, increase the money stock or stop the deflation. This view has been repeated many times by Bank of Japan officials. Deputy Governor Yamaguchi (2002) restated it recently.

The monetary explanation emphasizes the excess demand for money. The public would like to hold more real balances than the Bank of Japan and the financial system produce. Hence they reduce spending on goods and services, lowering prices and increasing real balances.

The two explanations are not in conflict. Both appear to be true. Structural reforms of the economy -- to increase competition, reduce regulation, strengthen the financial system and modernize financial practices -- are overdue. The issue for monetary policy, as I understand it, is whether monetary expansion can be effective if the government fails to make the necessary reforms. Many of those who argue for structural reforms say, in effect, that the solution to Japan's problems must be found in higher productivity growth, not in currency depreciation. Those who urge a monetary solution do not, and should not, argue against structural reforms to increase productivity. They urge monetary expansion to end the deflation and favor structural reforms to increase productivity growth. They claim, however, that productivity growth is more likely to increase in a growing economy.

These are the broad policy options for Japan. They subsume many different choices. There are many ways to deregulate, and the order could be important. Reduction of marginal tax rates would encourage productivity growth in the private sector particularly if accompanied by deregulation. I leave the important task of filling in these details to those more knowledgeable about Japan's economy than I. I repeat that productivity-enhancing changes are more likely to occur in a growing economy, but tax reduction, financial reform (especially strengthening banks) would help now.

Before leaving this discussion, I want to point out that a similar type of issue arose in the Great Depression. As I wrote these lines, I thought back to the distinguished Harvard professor, Oliver M.W. Sprague who served for many years as an adviser to the Federal Reserve in the 1920s and as an adviser to the Bank of England from 1930 to 1933.
Sprague considered two explanations of the Great Depression. The monetary school wanted the leading central banks to "flood the market with a great amount of additional credit and currency." The "industrial or economic equilibrium school included all the responsible people connected with the great central banks of the world." This school held that falling prices were a symptom not a cause. "When prices did advance, more currency and credit would be employed, but they did not believe that simply by injecting more currency and credit into the situation they could certainly bring about the desirable rise in prices and business activity."3

The comparison has an important common feature -- reluctance to increase money to end deflation. This conclusion was based on a belief that more money would not end deflation. The reason advanced differs in the two cases. Sprague and the central bankers at that time relied on the real bills doctrine. They were wrong. Once leading countries devalued their exchange rates, recovery began.

The United States was not the only country to benefit from devaluation, but perhaps it provided the clearest evidence on the alternatives. After President Roosevelt devalued the dollar by almost 60% in 1934, gold flowed to the United States in great quantities. The monetary base rose. Three years of strong recovery followed. Monetary expansion was not the sole reason for the recovery, but it was the major reason.

One of the other reasons should be mentioned. Beginning in 1932, but with increased resources in 1933, the Reconstruction Finance Corporation restored the banking and financial system. A key change came when the Reconstruction Finance Corporation gained authority to buy preferred shares in the banks and other institutions it assisted. Money growth, devaluation, and restoration of financial solvency made a powerful combination. Real GNP rose 33% in the next three years. If the Federal Reserve and the government had avoided major errors in 1937, the recovery would have continued and real GNP would have passed its 1929 peak.

The Whys of Continued Deflation

More than four years ago, I proposed to the Bank's senior officers a policy to end deflation. The main point was that the Bank should announce a policy to expand the monetary base at an eight to ten percent rate until deflation ended. The policy would work best if the government restructured the financial system, but it should work, albeit less well, without bank

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3 The paragraph quoting Sprague is taken from Meltzer (2002, Chapter 5, p. 6).
reform. Bank officials considered this policy and rejected it at the time. The Bank has now adopted its own version of that policy.

My aim was to end deflation and maintain price stability. I believe that announcement of the Bank’s intentions, if credible, would encourage adjustment of asset and output prices to a new equilibrium at zero inflation. At that equilibrium, I expected rising prices for land and other assets. Rising asset prices would improve the position of the banking system, reducing their losses and the threat to their solvency. Also, rising asset prices would encourage purchases by stronger buyers. Ending the fall in domestic output prices would not only improve the relation between costs and prices, but it would reduce the return to holding idle money balances, inducing a shift from money to other assets and to the market for new production.

More than two years later, the Bank announced that expansive policy would continue until “deflation concerns are dispelled.” The Bank remained cautious, however, and, despite deflation, claimed that low nominal short-term interest rates offered evidence of expansive policy. Over the years, the Bank and its staff offered different reasons for choosing cautious, deflationary actions instead of a bold plan to end deflation. The reasons they offered in defense of their policy include the following: it would do no good because short-term interest rates were near zero; approval of banking and financial reform had to precede monetary stimulus; purchases of long-term debt would encourage the government to run larger deficits and also put the bank at risk of capital losses; purchases of foreign exchange would devalue the yen and hurt regional economies.

There may have been other reasons, some unspoken. After a visit by then Deputy Treasury Secretary Summers in 1998, when the yen/dollar exchange rate reached 145, joint intervention drove the yen/dollar rate back to about 120. To outsiders it appeared that the Clinton Treasury frowned on depreciation, even if driven by market forces. They urged more fiscal stimulus, a policy that might have been more effective if the Asian crisis had not first reduced real export growth and then reduced real exports.

In a standard model such as IS-LM, there is only one interest rate, and there is no banking system. The only money is outside money, the monetary base consisting only of currency. Bonds are perfect substitutes for capital. In the open economy version with a fluctuating rate, interest parity holds. This is a useful starting point for our analysis of these arguments. If the nominal interest rate is zero, as in Japan, then by assumption monetary policy can do nothing.
Domestically, money and bonds are perfect substitutes at a zero interest rate. Since bonds and capital are perfect substitutes by assumption, there is no margin on which exchanges of money for other assets can have an effect on relative prices and real output. The direct effect on real wealth, the Pigou-Haberler-Patinkin real balance effect is too small to change the quantitative conclusion.

Two different models relax some of these assumptions. Bernanke and Gertler (1995), and Kashyap, Stein and Wilcox (1993), have analyzed and tested models in which the banking or financial system is not consolidated with other private sector balance sheets. Bonds and capital are perfect substitutes, but bank loans have specific properties that distinguish them from the bonds that banks buy. Bank lending provides a transmission channel that supplements the monetary transmission channel.

In Japan's experience during the past five years the real value of bank loans and discounts has declined. As reserves piled up at banks, banks bought government securities but did not increase their loans. The lending channel has not operated to increase monetary or economic expansion. The evidence from bank lending can support either the Bank's view that banking reform must precede effective monetary expansion or that bank lending is driven by the demand to borrow. As long as prices and output are expected to continue declining, lending is highly risky, collateral loses real value, and the demand for loans to increase inventory or buy assets remains small or shrinks with falling inventories and investment.

The evidence on bank lending in Japan supports the Bank of Japan's insistence that increasing bank reserves does not generate more lending, at least not yet. One possible reason is that banks do not want to risk their remaining capital. The banks have very little capital. Recent estimates by Fitch rating service suggest that about 40% of Tier 1 capital consists of deferred taxes. An additional 30% is preferred shares pledged to government as payment for assistance in 1998-99. (Quoted in Royal Bank of Scotland 2002)

I favor a different explanation. Borrowers report in the Tankan survey that, while lenders remain cautious, they are more willing to lend than in some earlier years, e.g., 1998. Declining investment and exports accompanied by inventory reduction suggests that there is not much demand to borrow from banks. Much of current demand for loans is satisfied on the commercial paper market. That market continues to grow and apparently satisfies demands by the least risky borrowers.
The second model has three distinct assets on the consolidated balance sheet -- money, bonds, and capital. Brunner and Meltzer (1989). In the open economy version, there are two countries, each with the same three asset types. During the periods relevant for this discussion, the assets are distinct. Interest arbitrage conditions do not hold exactly in the foreign exchange market. Asset and output prices change at different rates. In long-run adjustment, capital sells at its replacement cost, but there is scope for monetary policy to affect asset prices and output in the short- to medium-term. As in Milton Friedman's (1956) restatement of the quantity theory, the demand for money depends not on a single short-term rate but on a whole panoply of relative prices or rates of interest. In long-run equilibrium, one rate summarizes efficiently all the information in the term structure, asset markets and the foreign exchange market. In a period of adjustment, there are opportunities to change these relative prices and, thus, the demands for money and non-money objects. The model of the demand for money becomes part of a general equilibrium model with money, bonds and capital.

The Liquidity Trap

A liquidity trap can occur in this model only, if at all, in long-run adjustment when one interest rate summarizes fully all the information in asset markets, including markets for foreign assets. Is this an empirically relevant story or a theoretical possibility with no observable counterpart? There are few periods in the monetary experience on which we have data when a short-term interest rate reached zero. In my History of the Federal Reserve, I looked at the two experiences in twentieth century U.S. monetary history -- the recessions of 1937-38 and 1948-49 -- when the nominal interest rate on short-term debt was at, or near, zero. In both cases, the price level fell. Falling prices raised the real rate of interest but also raised the real value of the monetary base and the money stock. The economy recovered a few months after the increase in the real value of the monetary base. In both cases, renewed or increased growth of the nominal monetary base contributed to the growth of the real base.

These are the only previous cases of deflation and zero nominal interest rates that I found. The 1920-21 experience in the United States provides some additional evidence. In this deep, postwar recession, nominal interest rates rose. It is the only recession in Federal Reserve history that has nominal interest rates higher at the recession trough than at the previous peak.
How did the economy recover from the recession? As prices fell, the real value of the monetary base increased and real interest rates rose. The United States was on the gold standard. Falling prices and rising real interest rates attracted a capital inflow from abroad, just as these conditions attract capital inflow to Japan.

This is how I summarized the 1948-49, 1937-38, and 1920-21 experiences.

Two of these "recessions followed inflations that drive down the real interest rate and the real value of the monetary base. The real value of the monetary base reached a trough two months before the 1948-49 recession started, and turned positive in April [1949]. Industrial production started to rise in July, three months later. As in 1920-21 and 1937-38, but to a lesser extent, gold inflows under a fixed exchange rate contributed to the increase in real balances.

"Real interest rates give a very different picture of events. Ex post real interest rates were lowest before the recession and highest before the recovery. The fall in real rates did not prevent the recession, and the rise did not prevent recovery. As in 1920-21 and 1937-38, the effect of real interest rates on economic activity appear to have been dominated by the response to rising real balances.

"Two of the deflationary recessions, 1937-38 and 1948-49, provide evidence on the frequently stated proposition that monetary action becomes ineffective at low nominal interest rates. The data suggest that nominal interest rates near zero did not make monetary policy ineffective or irrelevant.” Meltzer (2002, Chapter 7, pp. 77-78)

There are some important differences. Japan sterilizes the capital inflow, but the U.S. did not except for part of 1937-38 recession. Growth of the nominal and real monetary base increased ending the deep U.S. recession. If Japan had expanded the monetary base by the SDR 250 billion increase in foreign exchange reserves that came to Japan since 1993, I believe the recession would have ended long ago.

A model with one interest rate cannot explain why the U.S. recovered from three experiences with deflation, two with interest rates near zero. Deflation increased the real rate, retarding recovery and deepening recession. There must be another, more powerful channel that overrode the effect of deflation and high or rising real interest rates. Since deflation results from an excess demand for money, the channel must have satisfied the excess demand for money.

We know that there was such a channel. Growth of the nominal and real monetary base increased the stock of real balances until it exceeded the demand for real balances. The excess
stock then spilled over to asset markets and to the markets for goods and services, increasing spending, raising prices, and ending deflation.

We can think of the transmission process in different ways. Simplest of all is the one just described -- the rise in real balances eventually exceeds the demand for real balances, so spending increases. A second channel is the real wealth or real balance effect. This certainly helps theoretically, but it is too small in developed economies to help very much in practice. To be more than a theoretical nicety, the effect of real balances on spending would have to be implausibly large. The third channel includes the effect of many relative prices other than the short-term interest rate. These include long-term interest rates, exchange rates, prices of capital assets relative to the price of new production of the same asset, and the expected return to real capital per unit of real capital. Also, there is the expected rate of inflation. Growth of the monetary base (or the money stock) relative to demand is a proxy for all of these changes.

Let me dwell on the last of these for a moment. Suppose the expected deflation over the next three months is four percent, but a year from now the price level is expected to be stable. The three-month interest rate on a government bill cannot fully capture both expectations. During the transition from deflation to price stability, we need more than one interest rate in the demands for money and other assets and in the expenditure function. Growth of the monetary base absolutely and relative to demand records some of these effects, succinctly even if not perfectly.

In a multi-asset, multi-country world--the real world--a liquidity trap is the property of a model with a single interest rate. That model is not the right model to analyze monetary policy in Japan.

We all know Keynes's statement, borrowed from John Stuart Mill, about policymakers being slaves of dead economists. Less well known is Knut Wicksell's view of monetary history and policy.

"Monetary history reveals the fact that folly had frequently been paramount; for it describes many fateful mistakes. On the other hand, it would be too much to say that mankind has learned nothing from these mistakes." Wicksell (1935, p. 4)

Marriner Eccles was Chairman of the Board of Governors of the Federal Reserve System during a time of depression when short-term nominal interest rates were at or near zero. His view of monetary policy could have been written by the Bank of Japan before they began
quantitative easing two years ago and perhaps after. Eccles wrote that he "considered excess reserves plentiful and contended that neither [gold] desterilization nor loosening of reserve requirements would actually ease credit." Blum (1959, p. 393)

Fortunately, Eccles later reduced reserve requirements, and the U.S. Treasury stopped sterilizing gold and foreign exchange receipts. Fortunately, also, the Bank of Japan has relented on reserve creation. They could repeat the historical precedent more fully by agreeing with the ministry to stop sterilizing foreign exchange. That would work to end the recession, as it did in the United States in 1938.

The Loan Market

Would continued increases in the monetary base eventually induce Japanese banks to expand loans? My answer to that question is that loans will not increase substantially until bank managements believe that the risks of further default, bankruptcy, deflation, and recession are considerably reduced. They must believe and expect that new loans will be profitable.

Reform of the banking and financial system would work to foster the change in anticipations. I believe that without monetary stimulus, banking reform alone is not likely to generate a demand for loans by solvent borrowers. Japan needs both.

Purchases of Long-Term Debt

The Bank refers to purchases of long-term debt, or other assets, as unorthodox policy. To the student of monetary history, this is an odd statement. It is true that most central banks today operate principally in the money market. Historically, banks bought foreign exchange and other assets, and some still do.

Walter Bagehot, the great student of the 19th century money market, reports on the way the Bank of England responded to the banking panic of 1825.

"According to the official statement … 'we' that is the Bank directors, 'lent money by every possible means, and in modes which we had never adopted before; we took in stock on security, we purchased Exchequer Bills, we made advances on Exchequer Bills, we not only discounted outright, but we made advances on deposits of bills of Exchange to an immense amount-in short, by every possible means consistent with the safety of the Bank.' " Bagehot (1873/1962, p. 99)
Bagehot praised the Bank for its boldness that quickly ended the panic. Bagehot's main theme remains applicable now. He criticized the Bank for failing to announce its policy in advance. In an early example of the tradition that we now call rational expectations, he urged the Bank to announce its policy rule and to act as it had promised.

The Federal Reserve's "bills only" policy in the 1950s was very controversial. It, too, was considered unorthodox, not because the Federal Reserve bought bonds but because it would not. The rule restricted open market purchases to the Treasury bill market. Chairman Martin and the Federal Open Market Committee would only purchase long-term securities in the event of disorderly markets. Disorderly meant that there were no bids for long-term securities, but many offers to sell, when bond prices fell. The Federal Reserve followed this policy from 1953 to 1960.

Most economists opposed the policy and criticized the Federal Reserve for insisting on it. They were mistaken. The proper way to judge the effect of the policy is to consolidate the government accounts by combining the central bank's balance sheet with the Treasury's. The consolidated account shows that the Treasury could undo any effects of the central bank's decision to buy only Treasury bills by selling more bills and reducing bond sales when it refunded old issues or sold new issues.

This proposition is true in Japan. The Ministry of Finance can adjust its debt management operations by selling more bills and fewer, long-term, JGBs. With a large deficit and frequent refundings, the Ministry can adjust the composition of the public debt to achieve the duration it wishes. It need not depend on the Bank.

The "bills only" example shows that the Federal Reserve tried to establish a tradition where none existed. Under political pressure from Congress and Kennedy administration economists after 1960, it yielded and bought longer-term bonds, just as it had done in the 1930s and 1940s. The tradition to which the Bank of Japan points was not well established, at least in the United States and Great Britain.

One of the Bank's main concerns is a legitimate concern that large purchases of long-term debt would encourage more government spending and further deterioration of the fiscal balance. Deputy Governor Yamaguchi (2001, p. 386) makes this argument. If this is a major concern, it could be overcome by agreement between the government and the Bank. One of the more puzzling aspects of Japanese policy to an outsider is the inability to reach an agreement that
would include increased monetary expansion on one side and fiscal and institutional reform on the other.

The most puzzling part of the argument for me is the expressed concern about the Bank's solvency. The Bank sometimes expresses concern that with economic recovery interest rates would rise, bond prices would fall, and the Bank's equity would be reduced or eliminated.

This type of argument has been discredited and rejected long ago. A central bank puts out perverse signals, if it puts concern for its profitability ahead of its obligation to maintain price or exchange rate stability. It is the essential responsibility of a central bank to lend or supply liquidity when others will not and to withdraw excess liquidity. To carry out its responsibility, it must often sell when security prices are low and buy when security prices are high. To do otherwise is to mistake its public duty.

Another way of stating this point is that a central bank must supply public goods. One of those public goods is managing risks that collective action can reduce or avoid. Because profit-maximizing bankers cannot be expected to act for the collective benefit, central banks are no longer private institutions as many once were. Because there is a conflict between political expediency and proper decisions, central banks in many countries are independent of immediate political pressures. But central banks do not provide these public goods, if they are constrained by concern for their profitability.

No central bank has been unable to act because it had negative equity or because it lost money. It can always print money to pay its obligations. The money it supplies is valued because it is the medium of exchange and a temporary store of value, not because of the central bank's solvency.

Further, a proper valuation of the central bank's assets and liabilities raises doubts about potential insolvency. Most of the central bank's liabilities bear no interest. As market interest rates rise, the present value of its net earnings increases. The loss of wealth from a rise in interest rates, no matter how large, must eventually be offset by the Bank's future earnings. Concerns about insolvency simply reflect incorrect measurement, counting the bookkeeping loss while ignoring the present value of future net earnings.

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4 Much of this paragraph was borrowed from Meltzer (2001a, p. 389).
Foreign Exchange Purchases

No one can maintain correctly that there is a tradition against a central bank buying foreign exchange. Nowhere is this true, certainly not in Japan. As the data discussed earlier show, the Bank of Japan regularly buys foreign exchange. In some years, it makes very large purchases. But it sterilizes most (or all) of its purchases, so the purchases do not increase the monetary base and the money stock. The reason may be that it purchases for the Ministry of Finance and automatically sterilizes the purchase or sale. If so, the Ministry should direct the Bank to permit purchases to increase the monetary base.

Japan has experienced deflation for several years. Deflation occurs when the public chooses to hold more real balances than the central bank produces. Modern economies have many impediments to price and wage declines. Adjustment of real balances by deflation is a slow process. In Japan, the Asian crisis and the U.S. recession reduced demand for Japan's exports contributing to Japan's deflation.

Deflation adjusts a country's real exchange rate as well as its real balances. Reduced economic and productivity growth in the 1990s changed the real value of the yen from an appreciating currency to a depreciating currency, as noted earlier. Adjustment of the real value can occur either through depreciation of the nominal exchange rate or through a fall in Japan's price level relative to its trading partners. By preventing yen depreciation, the Bank and the government require Japan to continue deflation.

One often stated reason for choosing deflation over devaluation is political. China, Korea, countries in Southeast Asia, and the U.S. Congress are all likely to complain that a weaker yen is a "beggar thy neighbor policy," a policy of exporting unemployment.

Political statements of this kind neglect Japan's deflation. Markets will adjust real exchange rates. If the government or the Bank prevents currency depreciation, they must accept deflation. Whatever harm the trading partners experience following depreciation occurs, probably more slowly but over a longer period, with deflation.

Allowing money growth to depreciate the exchange rate is not a beggar thy neighbor policy. It is a response to a market signal. The market wants to reduce the real value of the yen. Unless there are exchange controls, the market will succeed, sooner or later. But the costs in Japan and its trading partners have been, and will continue to be, larger if Japan continues deflation and recession. That is because the income effect works to the benefit of Japan's trading
partners. A successful policy of ending deflation and restoring price stability would have yen depreciation as one of its effects.

How much would the yen depreciate to restore price stability? Based on my earlier estimates, each 1% increase in the growth of the Japanese monetary base relative to the U.S. monetary base (both in real terms) depreciates the real yen/dollar exchange rate by two percent. Meltzer (2001, p. 25) At its current value of about 130 yen per dollar, a 5% increase in real base growth would depreciate the real value of the yen by 10%, other things equal. The calculation implies a depreciation of 0.13 from recent value around 130. Ending sterilization would, therefore, be a constructive way to satisfy the excess demand for real balances at recent rates of increase in foreign exchange reserves. I believe it would provide most of the desired increase.

The calculation brings me to an amended version of my earlier proposal: as before, the Bank should announce that it will increase the effective growth of the monetary base to 8% a year and that it will maintain that rate of expansion until deflation ends.5 The new amendment adds that the Bank will stop sterilizing foreign exchange purchases as a means of maintaining 8% growth of the monetary base and bypassing the banking system and the zero interest rate. The Bank should emphasize that it is responding to the market's message, exporting growth not unemployment.

Conclusion

Considerable experience has taught me that the Bank is unlikely to accept my arguments or my conclusion. Deputy Governor Yamaguchi has said that "if the risks to the economy clearly outweighed costs, we would go to 'unusual' policy measures." Yamaguchi (2001, p. 387) Perhaps that is why the yen/dollar exchange rate recently depreciated by 10% and why, beginning last year, the Bank has flooded the commercial banks with reserves.

I will conclude with a plea and a puzzle, not a summary. For several years, perhaps seven or eight, the Bank had been reluctant to provide the monetary stimulus that most outsiders, including some members of the Diet, and domestic and foreign academics urged on them. The Bank, on its side, has urged successive governments to restructure banking and financial institutions and introduce other structural changes.

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5 Exchanging base money for zero interest rate securities achieves nothing. The effective growth rate should exclude these purchases.
This has been a dialogue of the deaf, to revive an old but appropriate term from the 1960s. Until recently, the Bank did not respond to the government, and the government did not respond to the Bank. The puzzle is that, after nearly a decade, the Bank and the government have not developed a mutually acceptable set of policies. It is in Japan's interest, in Asia's and the worlds, that a constructive program should begin. The Bank and the Ministry should end sterilization, and the government should get on with banking and other reforms. No one else will or can solve the banking problem or restore Japan's prosperity.
References