MACROECONOMIC COUNTRY ANALYSIS:

Japan’s Next Move?

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SPP MACROECONOMICS 556
APRIL 12, 2000
The last decade (1989-1999) has been one of the longest periods of slow growth and recession in Japan’s history. Despite GDP growth hovering above zero for the better part of the decade, higher levels of growth have been elusive and most Japanese feel the effects of stalled economic growth. With both consumers and investors acting as if they are in recession, the Japanese economy has been trapped by this behavior and unable to escape this low-growth period, and most recently have officially been in recession. We have characterized this phenomenon as the “growth paradox.” The battle cry from this decade has been about economic re-vitalization and upturn of growth rates. Based on what we learned in class, this paper examines Japan’s recent macroeconomic situation and makes suggestions about what might be Japan’s next macroeconomic policy move.

Section 1 – Japanese Economy at a Glance

The national account data shows that economic performance started to decline after 1990. In 1990, the real GDP growth was 4.81 percent, but since then, it went down to 0.72 percent by 1994. In 1996, it went up by 3.96 percent, but in 1997, it slowed down to 1.42 percent, and in 1998, it recorded a negative growth by –4.19 percent.

Private consumption growth also dropped due to the downturn of the economy. It grew by 7.04 percent in 1990, but since then, it declined down to 2.35 percent in 1993 and recorded –0.68 percent in 1998.

General government consumption growth slowed down from 1990 to 1994 despite the fiscal stimulus packages conducted by the government. The government consumption increased by 3.66 percent in 1995, due to the large fiscal stimulus package, but was kept under 2 percent since then, reflecting the return to a contractionary fiscal policy.

Gross domestic investment was a biggest fluctuating component of the GDP growth. Since its peak in 1990 with the growth of 10.9 percent, the investment decreased from 1992 to 1994 due to the over investment of the bubble economy and continued credit crunch of financial institutions that lasted through 1990s. In 1996, fiscal stimulus package boosted the investment by 8.25 percent, but for recent two years, it showed negative growth. This downturn was most likely caused by the contractionary fiscal policy conducted in 1996-97.

Inflation and interest rates have remained low. Since 1991, the real interest rate (official discount rate adjusted by CPI) was always below 2 percent. It is noteworthy that since 1995, the Bank of Japan (BOJ) has conducted a “zero interest rate” policy to stimulate the economy, and real interest rate has been negative since 1997. Inflation indexes have been low, as CPI was under 2 percent most of the time since 1992, and from 1994 to 1996, it was near zero inflation or even closer to deflation (except for 1997).

Figure 2. Inflation and Interest Rate

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</thead>
<tbody>
<tr>
<td>M2*+CD (in trillions of Yen)</td>
<td>419.73</td>
<td>470.02</td>
<td>504.97</td>
<td>516.34</td>
<td>515.49</td>
<td>526.83</td>
<td>541.83</td>
<td>558.80</td>
<td>575.31</td>
<td>597.49</td>
<td>618.88</td>
</tr>
<tr>
<td>CPI (1995=100)</td>
<td>88.7</td>
<td>90.7</td>
<td>93.4</td>
<td>96.5</td>
<td>98.2</td>
<td>99.4</td>
<td>100.1</td>
<td>100.1</td>
<td>100.1</td>
<td>101.8</td>
<td>102.5</td>
</tr>
<tr>
<td>CPI change (%)</td>
<td>0.68</td>
<td>2.25</td>
<td>2.98</td>
<td>3.32</td>
<td>1.76</td>
<td>1.22</td>
<td>0.70</td>
<td>-0.10</td>
<td>0.10</td>
<td>1.70</td>
<td>0.69</td>
</tr>
<tr>
<td>Discount rate(%)</td>
<td>2.5</td>
<td>4.25</td>
<td>6.0</td>
<td>4.5</td>
<td>3.25</td>
<td>1.75</td>
<td>1.75</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
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<tr>
<td>Real interest rate**(%)</td>
<td>1.82</td>
<td>2.00</td>
<td>3.02</td>
<td>1.18</td>
<td>1.49</td>
<td>0.53</td>
<td>1.05</td>
<td>0.60</td>
<td>0.40</td>
<td>-1.20</td>
<td>-0.10</td>
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*M2 is estimated by adding Money, Quasi-money, and Certificates of Deposit from IFS.

**Discount rate - (change in CPI)

Estimated by authors, based on IMF data.
The private and public savings share of GDP is also worth watching (figure 3). While private savings stayed around 35 percent to 32 percent, public savings (balance between government revenue and spending) grew negative from 1994 and in 1996 it was minus 4.7 percent of the GDP, as a result of the fiscal stimulus packages conducted by the government. Overall decline in savings from 1993 to 1997 was absorbed by decrease in investment (except for 1996).

Figure 3. \( Sp+Sg=I+NX \)

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</thead>
<tbody>
<tr>
<td>Private saving</td>
<td>35.2%</td>
<td>35.6%</td>
<td>34.6%</td>
<td>32.1%</td>
<td>32.7%</td>
<td>33.5%</td>
<td>34.2%</td>
<td>34.1%</td>
<td>35.1%</td>
<td>33.6%</td>
<td>31.6%</td>
</tr>
<tr>
<td>Public saving (Government deficit)</td>
<td>-2.6%</td>
<td>-2.9%</td>
<td>-1.6%</td>
<td>1.7%</td>
<td>0.3%</td>
<td>-1.5%</td>
<td>-3.4%</td>
<td>-4.0%</td>
<td>-4.7%</td>
<td>-3.9%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>Investment</td>
<td>30.4%</td>
<td>31.3%</td>
<td>32.8%</td>
<td>32.2%</td>
<td>30.8%</td>
<td>29.7%</td>
<td>28.7%</td>
<td>28.6%</td>
<td>29.0%</td>
<td>28.6%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Net export</td>
<td>2.3%</td>
<td>1.4%</td>
<td>0.7%</td>
<td>1.7%</td>
<td>2.2%</td>
<td>2.3%</td>
<td>2.1%</td>
<td>1.5%</td>
<td>0.5%</td>
<td>1.2%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Consistently exporting more than importing, Japan’s current account has been positive since 1981. The relation between net export and real exchange rate can be observed in figure 4. When the resource balance is increasing, nominal exchange rate is depreciating. This also implies that Japan historically has negative capital account balance. We observed that the Japanese currency was over valued until 1995 and under valued since 1995, which can be seen by comparing nominal effective exchange rate and real effective exchange rate¹. We assume that the latter reflected the political intention to keep nominal rate high to maintain economy.

Figure 4. Relation between NX and exchange rates.

The Japanese economy in 1990s is characterized by a slow and low growth in the first half and then plunges into a deep recession in the last two-year period. The question posed by Japanese policy makers and economists is simple—**WHAT WILL STIMULATE JAPAN’S GROWTH?** Based on what we learned in the course, our analysis will focus on fiscal and monetary policy tools that have been tried.

**Section 2 – Policy Analysis of Japanese Economy**

There is no doubt that Japan’s prolonged economic recession partly stemmed from a structural problem, evidenced by the fragility of financial intermediaries. However, we avoided touching on structural issues in order to analyze the economy with the tools we learned thus far. We also realized that misguided fiscal policy decisions rather than structural problems most likely triggered Japan’s recent economic malaise. Thus, we continue our analysis first by focusing on the gap between potential and real GDP growth rate, second by analyzing Japan’s fiscal expansionary policy, and finally by looking at the ultra-loose monetary policy implemented by BOJ.

I. **GDP Growth**

According to the Solow growth model, the level of capital, labor and technology determine a county’s potential long-term economic growth rate (full-employment level of output). By applying the model into Japanese economy, there was no change in the potential growth rate in 1990s, since Japan had:

1. The BOJ officially announced its zero inflation policy in 1999, but the overnight call market rate has been near zero since 1995.
2. Japanese saving rate is one of the highest in the world. There are many reasons such as tax incentives, borrowing constraints, and different consumer preference on consumption due to cultural differences.
3. Although we did not cover effective exchange rate in the class, we used the number for comparison purpose.
• **No exogenous shocks** (such as the oil shock and the breakdown of Bretton Woods system in 1973).
• A **complex industrialized** economy (not vulnerable to supply shocks)
• No change in human and physical capitals, high productivity
• No macro-economic tendency suggesting a structural change in components of GDP (for example, if a country is losing its export competitiveness over time, a decline in NX should “precede” and *lead* to a decrease in GDP.)

Therefore, based on this model, we hypothesize that Japan’s potential economic growth might be higher than the current level of growth (but we do not know how high it should be). If so, what caused this prolonged economic malaise and downturn? To answer this question, we now turn to the fiscal and monetary policies embarked on by Japanese government and BOJ since 1991.

II. **Fiscal policy**
The Japanese government pursued expansionary fiscal policy since 1991 to stimulate the aggregate demand and fill the gap between the real and potential economic growth rates. There were in total seven fiscal stimulus packages announced by the Japanese government from 1992 through 1998. Public investment in these stimulus packages totaled 23 trillion yen, or 4.5 percent of GDP. However, none of the stimulus packages successfully pulled the Japanese economy out of depths of the recession. The only exception was the September 1995 fiscal stimulus package. It was the largest of the seven stimulus packages announced between 1992 and 1998, resulting in solid economic growth of 3.6 percent in 1996 (the highest growth since 1991). Therefore, demonstrating that fiscal policy is still an effective tool.

This positive sign of economic recovery in 1996 was, however, undercut by a return to contractionary fiscal policy in 1996 and 1997. The decision to increase the consumption tax rate from 3 percent to 5 percent caused this contraction. We believe that this fiscal contraction would be the biggest mistake made by the Japanese government in 1990s. Simultaneously confronted with the strong pressure from the public to restructure the government and to prepare for an aging society, policymakers were more concerned with balancing the budget than with using fiscal policy to further increase production and employment. This fiscal contraction caused an inward shift of the IS curve and took the economy back into the depths of recession.

Another important aspect of the fiscal policy that noted is that all announced Japanese fiscal programs hugely overstate their stimulative content. This tendency for overstatement of fiscal packages is demonstrated in Figure 5. The components of fiscal stimulus packages are summarized in two categories; one that has a real effect on GDP (so-called “pure water” or *Mamizu* in Japanese) such as public investments and tax reduction, and one that do **not** have any real effect on GDP. These fake components typically include the following four items:

• Private investment incentives (loan programs with an impact on allocation of funding among investments but that have no impact on the total level of investment)
• Front-loading of previously committed public works program (no net impact on GDP)
• Government purchase of assets (just reshuffling: who owns what kind of problem)
• Requests for local governments to increase G

Of the seven stimulus measures announced prior to 1999, the September 1995 package was the most effective, with an actual stimulus of roughly 60 percent of headline amount, while the other six injected less than half the amount claimed into the economy, and three had no direct stimulative content. The September 1995 stimulus package, which is the largest in terms of the size of “pure water” and actually added significantly to economic growth in 1996 (3.6 percent much higher than the 0.9 percent in 1995), shows that, if large enough, fiscal stimulus is still effective in Japan.

Figure 5: Announced Stimulus Packages in the 1990s

<table>
<thead>
<tr>
<th>Economic Situation</th>
<th>3/31/92</th>
<th>8/28/92</th>
<th>4/13/93</th>
<th>9/16/93</th>
<th>2/8/94</th>
<th>4/14/95</th>
<th>9/20/95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange rate (yen/dollar/c)</td>
<td>132.92</td>
<td>123.26</td>
<td>113.4</td>
<td>104.45</td>
<td>108.66</td>
<td>104.15</td>
<td>103.25</td>
</tr>
<tr>
<td>Discount rate (percentage)</td>
<td>3.75a</td>
<td>3.25</td>
<td>2.5</td>
<td>1.75</td>
<td>1.75</td>
<td>1.75</td>
<td>0.5</td>
</tr>
<tr>
<td>Nikkei 500 stock price (yen)</td>
<td>11,799</td>
<td>18,000</td>
<td>20,919</td>
<td>20,502</td>
<td>20,660</td>
<td>16304b</td>
<td>18,198</td>
</tr>
<tr>
<td>Total Package Announced</td>
<td>390</td>
<td>10,700</td>
<td>15,230</td>
<td>6,418</td>
<td>6,020</td>
<td>4,800</td>
<td>12,810</td>
</tr>
<tr>
<td>Mamizu</td>
<td>-</td>
<td>4,240</td>
<td>5,082</td>
<td>1,500</td>
<td>-</td>
<td>2,700</td>
<td>8,000</td>
</tr>
<tr>
<td>of total package</td>
<td>0</td>
<td>39.6</td>
<td>33.4</td>
<td>23.4</td>
<td>0</td>
<td>56.3</td>
<td>62.5</td>
</tr>
<tr>
<td>of GDP</td>
<td>0</td>
<td>0.9</td>
<td>1.1</td>
<td>0.3</td>
<td>0</td>
<td>0.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Public Investment Incentives</td>
<td>0</td>
<td>2100</td>
<td>4210</td>
<td>1268</td>
<td>5710</td>
<td>na</td>
<td>0</td>
</tr>
</tbody>
</table>

na = not available
Note: Mamizu is calculated as total public investment minus spending in the following year, purchase of land for future public works, and other assets transfers, and represents the amount that potentially increase GDP. Private Investment Incentives are announced government lending programs, which do not directly increase GDP. The do not include local government-processed expenditures.

III. Monetary Policy

As an aside, BOJ was gaining more independence from the Ministry of Finance during this period. In April 1998, the Japanese government amended the Bank of Japan Law, giving the central bank more independence from the Ministry of Finance. The biggest changes were the creation of a Monetary Policy Board, the restriction of the Finance Minister ability to dismiss BOJ governors with Diet approval, and an implicit commitment to have the Board respond more to market changes rather than tightly guiding private-sector financial institutions. Research presented in our textbook suggests that the level of central bank independence is strongly associated with the level of inflation and that the higher the independence the lower and more stable the inflation rate. Indeed, the revised objective of the BOJ became the “contribution to the sound development of the national economy through the pursuit of price stability.”

Japan began loosening its monetary policies – primarily by lowering the discount rate – complementing the fiscal stimulus packages, in an effort to re-invigorate economic growth. Since the mid-1990s, the Bank of Japan has been lowering the overnight call rate, going from 4.25 percent in 1989 to .5 percent in 1998. In addition, the real interest rate fell from 2 percent in 1989 to negative 1.2 percent in 1997 and negative .19 percent in 1998. In February 1999, BOJ officially adopted this “ultra-easy” monetary policy, creating the zero-interest rate policy, geared toward keeping banks as liquid as possible. In addition, BOJ has repurchased government bonds through open-market operations as a tool to inject more money into the economy.

Normally, this loosening of monetary policy – or increasing the money supply – would by itself stimulate aggregate demand – by boosting lending. However, the tenuous situation of the financial sector has reduced consumers and investors’ expectations and is cause for their highly cautious behavior. Consequently, we have observed that the past monetary expansions (1992-1998) have not had the presumed effect on GDP. Upon closer examination, we hypothesize that it is due to the slopes of the IS-LM curves, and their subsequent sensitivity to interest rates.  

**Reasons Why We Think the LM Curve is very flat:**

- Near zero interest elasticity of investment demand
- Part of newly injected money is caught by financial intermediaries that have liquidity problems (and are stashing reserves, M2) and the rest of money is hoarded by the cash-hungry people (precautionary hoarding)
- Credit crunch problem (Japanese banks in total: 780 trillion yen in outstanding assets, 29 trillion out of which represents a capital base. Capita/Assets ratio = 3.7 percent)
- Securities and bonds are sold off to raise the cash under the zero-interest rate and the rate of return on investment declines

If we argue that Japan’s LM curve is virtually flat – then additional monetary policy changes will be largely ineffective in promoting GDP growth. No matter how much money gets injected into the economy, it will not affect growth, as increases to monetary base will have no direct effect on aggregate demand.

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5 Based on Paul Krugman’s recommendations.
Looking at the equation for money demand, we observe that it is based on the negative relationship between income and interest rates, meaning the lower the interest rate the higher income will be. We also observe that changes in the money demanded are determined by changes in income (Y) and interest rates (r), and their co-efficients h and f. When the variable f is infinitely large, the LM curve will be horizontally flat. Again, this would suggest that changes in the money supply would have little or no effect on income growth.

After nearly a decade of expansionary monetary policy in Japan, one central question is where did the injections of money go? Here we examined how large or small the money multiplier might be. While it is widely known that central banks can increase or decrease the money supply, they have less control over how much the original injection grows over time. The reason for this is due to the fact that the multiplier is dependent on two wildcard variables – bank and consumer behavior. Therefore, the Bank of Japan only has tangential control over money injection changes having a positive effect on the overall money supply because the velocity variable is presumably so low.

This problem of low velocity and small money multiplier is known as the Liquidity Trap. Part of the current limitation of monetary policy is this “liquidity trap” where both banks and private citizens are holding on to large proportions of the money supply injections. If the money multiplier is very low – the presumed effect of a money supply injection is weakened.

Section 3 – Recommendations
The policy goals should be to reduce the uncertainty and drive up the rate of return on capital. The initial policy we recommend would be a fiscal expansion policy. As fiscal expansion eventually creates sufficient demand to raise interest rates and inflation, the goal of the initial policy is largely attained. When savings have been reduced and the gap between the rate of return on investment and the interest rate (premium rate of giving up liquid cash) is narrowed, a monetary policy can take over from fiscal stimulus to the extent necessary.

In the following part we discuss the effectiveness of fiscal and monetary policy.

Would fiscal policy be effective under current circumstances?
First we attempt to answer the question whether current economic circumstances in Japan, such as financial fragility and consumers’ thrift, diminish or outweigh short-run effects of additional stimulus, if undertaken.

In general, there would be three potential limitations of the effect of a fiscal expansion (based on our class lecture):

- Deficit spending potentially crowds out private investment by increasing demand for savings and driving up interest rate.
- Some of the remaining fiscal stimulus can leak abroad (additional crowding out) in the form of increased imports because an interest rate raise should lead to an appreciation of the currency.
- If fiscal expansion is viewed as temporary and people are rational and forward-looking (as Ricardian equivalence suggests), some portion of the population will save much of the increase in cash to distribute benefits over their lifetime.

\[
\text{MONEY MULTIPLIER} \quad m = \frac{1 + c/d}{r/d + c/d} \\
\text{r/d} = \text{bank behavior} \\
\text{c/d} = \text{consumer behavior} \\
\]

\[
\text{QUANTITY EQUATION} \quad M \uparrow \downarrow =PY \text{ (constant)}
\]
We examined the possibility and applicability of these general drawbacks of fiscal expansion under the current abnormal economic circumstances in Japan, and came to a conclusion that Japan would be in a desirable situation to embark on an expansionary fiscal policy for the following reasons:

- A fiscal expansion and a corresponding rise in public spending will not immediately drive up interest rates, because there is a significant oversupply of savings in the economy, and, to the extent that it eventually moves the interest rate, the impact on investment demand may be small. Thus, there would no crowding out in investment and in Net Exports.
- Under current circumstances, monetary policy’s ineffectiveness (discussed above) may automatically accommodate the fiscal expansion without immediate negative inflationary consequences.
- Investment demand depends not only on the interest rate but also upon the expectations of aggregate demand growth in the economy. If the expansionary effects of fiscal stimulus on national income stimulates investment demand more than whatever induced rises in interest rates diminish it, then fiscal expansion crowds investment in. Thus, if fiscal stimulus were large enough to change people’s expectations; it would have a larger impact than usual.

We also know from our analysis of fiscal stimulative packages that, with the 1995 fiscal expansion package, Investment increased, interest rate fell, NX improved, while the consumer side of stimulus was indeed spent rather than saving. From the reasons listed above and the actual data in 1995 we assume that an expansionary fiscal policy would be an effective prescription for Japan’s economic disease.

**Would monetary be effective under current circumstances**

One of the central questions plaguing Japanese officials and world economists is: How to control or incentivize spending or lending? Even at ultra-low interest rates, Japanese banks are not lending and consumers are not borrowing. As a result, the BOJ, other banks and money market brokers have record excess reserves because of this “hoarding” behavior.

**What are the remaining Monetary Policy Tools in Japan?**

1. **Underwriting or increasing the purchase of government bonds**
   But the pressure to underwrite bonds runs the serious risk of weakening fiscal discipline, which in turn would hurt Japan’s credibility as a lender and cause Japan’s credit rating to drop.

2. **Announcement of an explicit inflation target**
   Krugman recommends that Japan formally announce a target, publish an inflation report and forecast, which could help underline the BOJ’s intention to avoid deflation. However, the selection of a price index and numerical target (like CPI) could reduce BOJ’s flexibility to respond to shocks.

3. **Expanding outright purchase of private sector securities and buying tangible assets**
   This option obviously puts more money into the economy, but is highly risky and tantamount to printing money. If used as a way to finance more government spending, BOJ could be accused of monetizing the budget deficit. This option will surely cause inflation to rise.
Bibliography


5. International Financial Statistics Yearbook. IMF.


8. Thinking about the liquidity trap. Paul Krugman. December, 1999 (from his website)
Appendix I
Arguments for Ineffectiveness of Fiscal and Monetary Policy

Although we proposed fiscal and monetary policy to tackle Japanese economy, there is an argument against its usage. One is, as mentioned in the early part of the paper, a structural reformist who believes nothing would work unless the structural reform of Japan has achieved. The other is academic argument that whether fiscal expansion change people’s expectation or not.

Structural reform
Structural reformists often argue three main points to justify ineffectiveness of fiscal and monetary policy:

“Reform” Japan’s declining performance is a proof that the global economy demands ever-higher standards of liberalization and adherence to the market.
Change in the basic structure of Japan’s economy

“Crisis” a tightly woven and corrupt economic system is at the root of Japan’s declining performance. Japan should grow once again only when there has been sufficient pain to destroy old ways.

“Inevitable” the mounting burdens of an aging society
There are binding fundamental limits to short-run growth

However, we believe that structural reforms generate a short-term decrease in output, which may be more than offset in the long run but is not acceptable under the current economic situation.

Consumers response to a fiscal expansion
There are two opposing concepts of how consumers would response to the fiscal expansion policy.

• If consumers were Ricardian, a fiscal stimulus would not have any impact on consumption, because Savings rise to offset any fiscal expansion because households see in today’s fiscal expansion future tax rises that they or their heirs should bear.

• If consumers hold cash because of “precautionary hoarding”, fiscal policy primarily affects savings through its influence on income growth and expectations.

If the rise in savings is precautionary, fiscal stimulus crowds investment in. If Ricardian, further government spending will be neutral and not affect economic growth.

We are in favor of precautionary hoarding because:
Precautionary hoarding hypothesis is consistent with a rising savings rate and cash hoarding in the face of declining interest rates and provides a seemingly ample motive for precautionary thrift in today’s Japan (but the problem is this argument also holds true under the Ricardian assumption).

To the extent that today’s individuals view money spent on them or bonds sold to them as a net benefit rather than one they will have to pay back in full in the future, government spending will raise individuals’ wealth or income and, therefore, their consumption. This view can stem from the fact that people’s motive to leave bequests for their children is not always strong or that the discount rate of individuals is higher than that of the government.
If government can borrow the money at a lower interest rate than individual, and an individual faces a liquidity constraint, tax reduction is equivalent to borrowing by the government on behalf of individuals and her consumption will increase.

Deficit financing would mean lowering tax rate with the expectation of a higher tax rate in the future. It would then rational for individual consumer to shift their spending and profit-earning efforts toward the present.
Would short-run benefits of fiscal expansion outweigh the costs of increasing debt-burden in the long run?

We think that “persistent” budget deficits are a problem in a sense that government expenditure hurts national saving and lowers future living standards (because either investment is reduced or borrowing from abroad is increased, and with it, future obligations to service foreign debt out of future national income). In case of Japan, an aging society also is another factor that made policymakers worry about the budget deficit.

However, just sitting and doing nothing in front of the current economic crisis is like farmers of paddy field who hold on a small store of water under a serious draught this year for a global warming that is predicted to come at some time in the future. Sacrificing this year’s crop instead of saving a small store of water for the future global warming does not make sense. Similarly, in an economic perspective, an aging society is a reality in 30 years. But withholding the money (pure water) from the appropriate policies to respond to the current economic crisis only harms the Japanese economy today without doing anything to prepare for its future burdens.

In addition, Japan is the world biggest creditor and its net debt is the smallest among the industrialized countries. One may argue that Japan’s huge under-funded pension liabilities are the source of potential crash of Japan’s budget credibility. However, pension liabilities are contingent claims (meaning that they would not become due together at one time) and This pension liabilities problem is common in almost all G7 countries. So there is no reason that only Japan’s economic credibility would deteriorate because of its huge pension burdens. If this happens to Japan, so does to US and other countries.
Appendix II
Effect of **Announced** Fiscal Stimulus Package

Effect of **Actual** Fiscal Stimulus Package (pure water problems)
Actual amounts of fiscal stimulus packages are much smaller than announced. As a result, the expansionary shift of IS curve does not boost the output enough.