Japan's Deteriorating Fiscal Situation

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Because of a very weak economy, which lowered tax revenues and raised government spending, Japan's fiscal balance has deteriorated rapidly. The budget, in surplus until 1992, turned negative in 1993, and the deficits continued to worsen, reaching almost 11 percent of GDP in 1998. The government debt-GDP ratio increased by almost 50 percent from 1991 to 1997, and by another 40 percent in the four years after that. By 2000, Japan had the largest ratio among Organization for Economic Co-operation and Development (OECD) member countries.

Japan's fiscal situation continues to look grim, especially given the demographic situation. Population aging is expected to slow economic growth and raise future government health care and social security expenditures. Projections of the country's population and the percentage of the total population that is elderly are plotted in the figure below. The population over sixty-five has grown rapidly and now stands at about 15 percent.

Huge increase in debt-GDP ratio

By 2020, its percentage is expected to approach 25 percent, and by 2050, 33 percent.

These rates of aging are much higher than for example, in the United States, where only about 15 percent of the population will be over sixty-five by 2025.

Japan's recent fiscal position

Recently, government saving has been declining and public investment has been rising (Table 1). These recent trends in government saving and investment were caused by the recession, and also by structural changes. The recession and the decline in the rate of economic growth lowered tax revenues. Structural changes worsening government saving include tax reforms that lowered tax elasticities and tax revenues, and the aging of the population, which raised social security and healthcare expenditures. The deterioration of government finances led to sharp increases in outstanding government bonds, raising concerns about fiscal sustainability and calls for fiscal reform.

Recent government saving

Tax revenues declined because of the recent recessionary environment. In addition, government consumption increased. Owing to the low cyclical variability of Japanese unemployment and social welfare benefits, however, government consumption increases during the recession were capped. Government saving can be divided into the "full-employment" and "cyclical" components. We estimate that during the period 1991–99, Japan's "full-employment" government saving was about 2.6 percent, slightly higher than actual government saving of 2.0 percent, leaving the "cyclical" component of government saving at

Population and Elderly Projections

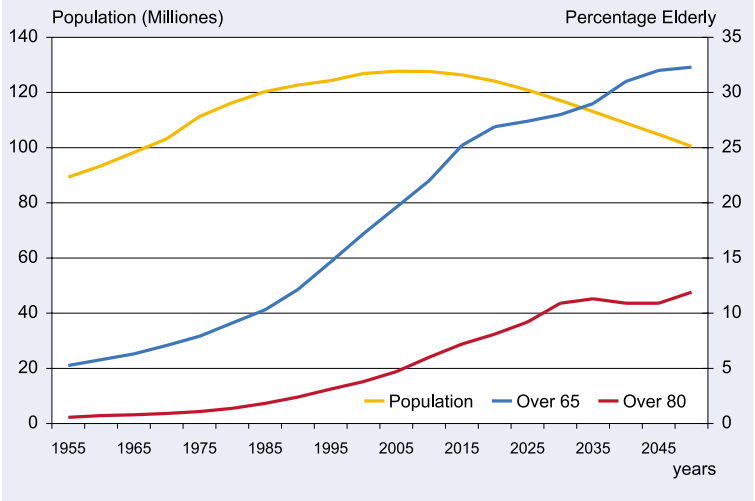

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Table 1
Japanese Private and Government Saving, Investment, and Net Exports
(in percent of GDP)

	Private saving	Government saving[a]	Private investment[b]	Public investment	Net export surplus
1955–73	13.5	9.5	17.3	7.3	– 1.5
1974–79	26.3	3.1	20.7	9.2	– 0.6
1980–90	26.0	4.5	20.7	7.4	2.4
1991–95	26.0	5.2	21.5	7.7	1.9
1996–99	28.4	1.6	20.3	8.0	1.8

[a] Includes net social security surplus. – [b] Includes plant and equipment, housing, and inventory investment.

Source: Ecnomic and Social Research Institute, *Annual Report on the National Accounts,* 1999 and 2001 editions.

– 0.6 percent.[1] Thus, much of the recent decline in Japanese government saving was not because of "automatic stabilizers," but because of structural factors, such as tax reductions.

Government saving has declined since the early to mid-1990s, with tax reductions supporting aggregate demand in the face of an unprecedented economic downturn. Particularly in 1998, when the economy slipped into recession, the government passed tax cut measures that led to a substantial decline in government saving in the following year. Marginal income and capital gains tax rates and health insurance premia were cut, exemptions for gift taxes were raised, and tax deductions for home mortgage holders were introduced. The government also lowered corporate tax rates from 50 percent to 40 percent.

Recent public investment

Between 1990 and now, the Japanese government passed ten stimulus packages, in an attempt to jump-start the stalling economy. The most important component of the government stimulus packages were public works, which are included in public investment. However, as shown in Table 1, the actual increases in public investment in the late 1990s were rather moderate, compared to the prominent – and headline grabbing – role of public works in the stimulus packages.

There are two reasons why actual public works fell short of the levels announced in stimulus packages. First, during the 1990s, the central government assigned roughly two-thirds of the increased public works spending to local governments (without providing a commensurate increase in funding). The capacity, however, of local governments to expand public investment was affected by their poor financial situation, and the continued rise in public investment has increasingly been financed through local bond issues. The amount of outstanding local government bonds increased from 12 percent of GDP in 1990 to 22 percent of GDP in 1997. Many local governments surpassed the legally allowed threshold of bonds outstanding, and were put under bond issuance restrictions by the central government. Second, some of the public investment funds provided by the stimulus packages remained unused because of poor project implementation.

Recent government debt and liabilities

Sharp decline in public saving, only moderate increase in public investment

The late 1990s decline in government saving and rise in public investment led to sharp increases in government debt. Table 2 depicts the fiscal balance-GDP ratio, and several debt to GDP ratios. The fiscal balance-GDP ratio is lower than the difference between the government saving-GDP ratio and the public investment-GDP ratio by about 2 percent, mainly because of the inclusion of net government land purchases in the fiscal balance. During the 1990s, the government bought significant amounts of land from the private sector to prop up land prices. The fiscal surplus declined continuously in the 1990s, reaching about minus 10 percent in 1998. Correspondingly, the ratio of debt to GDP has risen sharply. By international standards, Japan's *gross* debt-GDP ratio in 1999 was the highest among the G-7 countries – Italy's was 115 percent, and the United States' was 62 percent.

Because of the partly funded nature of the Japanese pension system, as well as the government's major role in financial intermediation, the Japanese government holds significant assets, keeping *net* debt to GDP at a moderate level, and lower than in other G-7 countries. However, since the assets of the social security system are more than offset by future pension obligations, they should be excluded when assessing Japan's debt

[1] We estimate the "full-employment" government saving by regressing government saving on the output gap and a constant. We interpret the estimated value of the constant; which is the government saving rate when the output gap is equal to zero – as "full-employment" government saving.

Table 2
Overview of Government Finances
(all figures in percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Fiscal balance[a]	1.9	1.8	0.8	– 2.4	– 2.8	– 4.1	– 4.9	– 3.7	– 10,7	– 7,0
Government Saving	7.2	7.2	6.7	4.7	4.2	2.9	2.6	2.6	1.2	0.0
of which:										
Social security surplus	1.3	1.7	1.6	1.4	1.2	1.2	1.1	1.2	0,8	0.4
Healthcare	– 3.6	– 3.5	– 3.7	– 3.8	– 3.9	– 4.1	– 4.2	– 4.1	– 4.2	– 4.3
Other surplus	9.5	9.0	8.8	7.1	7.0	5.9	5.6	5.5	4.6	3.9
Gross debt	65.1	64.7	67.6	72.7	78.4	85.4	91.8	97.5	108.5	120.5
Net debt A[b]	7.3	6.4	12.3	10.1	12.1	16.9	21.6	27.9	38.0	44.4
Net Debt B[c]	35.4	35.5	42.9	42.8	46.6	52.5	57.7	64.6	75.9	84.9

[a] Government Saving plus Net Land Purchases and Net Gift and Inheritance Taxes minus Public Investment. – [b] Including social security system assets. – [c] Excluding social security system assets.

Source: Economic and Social Research Institute, *Annual Report on the National Accounts*, 2001 editions.

situation. As a result, Japan's *net* debt *excluding social security net assets,* at 85 percent, is significantly higher than in the United States, at 60 percent, and in Germany, at 53 percent.

The government's true net obligations may be substantially higher than the net debt figures because of unfunded liabilities. There are three main sources of unfunded liabilities. The first source is the future costs of government social security and health schemes. Estimates of future unfunded social security costs depend on demographic, economic growth, and interest rate assumptions and range widely. In Japan, there are several social security schemes, but the main scheme – the Employees' Pension Scheme – derives one-third of its (benefit) payouts from government subsidies, and two-thirds of its payouts from payroll taxes (contributions). Muhleisen (2000) estimates the present value of net unfunded liabilities at 60 percent of GDP. With regards to government health benefits, on average, government subsidies cover about one-third of total public health insurance benefits (2 percent of GDP), with the rest covered by health insurance contributions and co-payments. Given that the elderly are exempt from health insurance contributions and pay only small co-payments, the future aging of the population is expected to significantly raise the proportion of health benefits covered by government subsidies.

Unfunded liabilities increase the government's net obligations

The second source of unfunded liabilities is potential losses on government assets. A portion of the government's assets represents soft loans that may not be repaid. Many large public or joint public-private infrastructure projects financed from Fiscal Investment and Loan Program (FILP) loans generate less revenue than budgeted, which may imply significant contingent liabilities of the government. For example, much of the substantial debt – 3 percent of GDP – of the now privatized Japan National Railways is owed to FILP. Since most of this debt will never be repaid, this debt will eventually have to be covered from the government budget. Other public corporations with large accumulated FILP debt include the Japan Highway Corporation (4 percent of GDP) and the Housing and Urban Development Corporation (2.5 percent of GDP).

The third source of unfunded liabilities is the explicit and implicit government guarantees of private sector lending. Explicit guarantees are extended by FILP and other government entities to encourage lending by private financial institutions. Examples are guarantees of bank deposits by the Deposit Insurance Corporation and guarantees of lending by credit cooperatives to small- and medium-sized enterprises. Although, these guarantees do not entail fresh government lending, should the guaranteed loans not be repaid, the government must cover the loans from the budget. The total amount of outstanding government-guaranteed bonds and loans amounted to about 10 percent of GDP in 2000. Although historically, only about 1 percent of government-guaranteed loans are never repaid, if the Japanese economy worsens, the percentage of unpaid loans could soar (Bayoumi, 1998).

In addition to the explicitly guaranteed government loans and bonds, there are the *implicitly* guar-

anteed government loans. Historically, the Japanese government has shown willingness to cover the irrecoverable problem loans of private financial institutions. For example, in 1998, the government authorized 60 trillion yen (12 percent of GDP) in public funding to cover the irrecoverable loans of private banks.[2] This willingness represents implicit guarantees, and these guarantees are contingent liabilities of the government. In 2000, outstanding loans minus the capital and liquid assets of financial institutions was about 200 percent of GDP. If, as some bank analysts estimate, 10 percent of the loans are irrecoverable, then the cost to the government of these implicit guarantees could be as high as 20 percent of GDP.

Fiscal sustainability

The sharp increase in Japanese government debt in the 1990s has raised questions about the sustainability of this debt, and much policy work has been done in this area. Clearly, at current Japanese government fiscal deficit levels, the government debt will keep on growing. For, given growth and interest rate assumptions, the fiscal surplus *exclusive of net debt interest payments,* or the *primary* fiscal surplus, necessary to stabilize the debt-GDP ratio is:

$$b = \frac{(r - gr) * d}{(1 + gr)},$$

where b is the primary surplus-GDP ratio, r is the long-run real interest rate, gr is the long-run real growth rate of GDP, and d is the debt-GDP ratio. For example, assume that r and gr are 0.06 and 0.012. To stabilize the debt-GDP ratio at the current net debt-GDP ratio of 0.85, the government will have to run a primary fiscal surplus-GDP ratio of almost 5 percent. Given the current cyclically-adjusted primary fiscal deficit-GDP ratio of about 4 percent, to keep the debt-GDP ratio at the current level, the required increase in the primary balance would be 9 percent of GDP.

It would be very difficult for the government to achieve this adjustment in the primary balance through fiscal reform in the near future. Thus, some analysts have argued that the government may attempt to lower the real value of the debt through inflation. Since Japanese government bonds pay a nominal coupon rate, inflation will lower the real return on bonds, and the real interest rate. From the equation above, we can see that the fall in the real interest rate will lower the required adjustment in the primary deficit.

Recent fiscal reform measures

To restrain increases in the debt-GDP ratio, the government has proposed several fiscal reform measures in the 1990s. However, most of the measures were postponed or abandoned, as the government sought to stimulate demand in light of the very weak domestic economy. Specifically, in 1997, the government enacted the Fiscal Structural Reform Law. The goal of the 1997 Law was to eliminate fiscal deficits by 2003.

The main instruments in the 1997 Law were cuts in government consumption and investment, rather than tax increases. Public investment spending was to be cut by 7 percent in 1998, with zero nominal growth until 2001; and energy, education, and overseas development assistance were to be cut by 10 percent in 1998, with annual reductions until 2001 (Ishi, 2000, p. 149). However, with the severe recession of 1997, fiscal consolidation was put on hold, and a wide-range of pump-priming measures were introduced. In particular, rather than declining, public investment for 1998 was increased by over 10 percent.

Progress in healthcare and social security reform

Areas where the 1997 Law made progress were in healthcare and social security reform, which are important, given the aging of the population. In 1997, the contribution rate and co-payments by patients for the government health insurance schemes were increased sharply (Ishi, 2000). In particular, patients aged 70 and above are required to pay a fixed proportion (10 percent) of their medical costs. The government also capped prescription drug prices, which are very high in Japan. In 2000, a pension reform bill based on the 1997 Law passed the legislature. The bill contained provisions to cut lifetime pension benefits by about 20 percent. Specifically, pension benefits for new retirees were cut by 5 percent; the age of pension eligibility will be gradually (from 2013) raised from 60 to 65; and pension benefits will be subject to an earnings test. Analysts have estimated that the 2000 pension reforms will reduce government unfunded social security liabilities from the current 60 percent of GDP to 30 percent of GDP (IMF, 2000).

[2] The total of public funds actually spent – and included in government consumption – in 2000 was about 8 trillion yen (0.16 percent of GDP).

Looking forward, the government is planning on implementing further budget cuts, once the economy fully recovers. Recently, a political commitment has been made to cap government deficit bond issues at 30 trillion yen (0.6 percent of GDP) in 2002. Although "deficit" bonds reflect only a portion of total government borrowing, this bond issuance ceiling should help lower future fiscal deficits.

As stipulated in the 1997 Law, public investment is due for further cuts. Criticism has been directed at the economic value of the public works projects, as well as contracting procedures. To address the efficiency issues, new cost-benefit guidelines for review of public works projects were announced. Contracting procedures have also been reformed. Public works projects are scheduled to be cut severely, although whether the cuts will actually materialize is unclear. Moreover, the government intends to change the form of public works from the traditional type of construction projects to broader social infrastructure investment; for environment and energy-related projects, telecommunications networks, scientific research, nursing homes, and the like.

Without significant fiscal reforms, prospects are grim

With regards to healthcare, contribution rates and co-payments, especially by the elderly, are planned to be increased further. The government's stated goal is to restrict the growth of medical costs of the elderly to no more than the rate of inflation. The age of eligibility for special elderly medical care will eventually be raised from 70 to 75. Further cuts are also planned in social security; for example, there are suggestions that average benefits should further be reduced by about 40 percent, to avoid large increases in future contribution rates.

Concluding comments

The prospects for improvements in the Japanese fiscal situation are grim unless the government carries out significant fiscal reform. Japanese citizens should brace themselves for painful adjustments in the near future, in the form of lower public services and higher taxes.

A resumption of strong growth in real GDP would reduce the need for spending and tax adjustments. For example, from our fiscal sustainabiliy analysis above, if real interest rates are 3 percent, a real GDP growth rate of slightly in excess of 3 percent can imply falling debt-to-GDP ratios. The analysis there has assumed that real growth averages just 1.2 percent per year. This assumes total factor productivity (TFP) growth of 2.0 percent per year. TFP growth of 2.0 percent is actually an assumption on the high side, as it is equal to Japan's average TFP growth between 1970 and 1990, and Japan has not been as innovative as it was then. What lowers GDP growth from 2.0 percent to 1.0 percent is the dramatic annual decline in the labor force caused by the aging of the population.

Thus, one way to increase GDP growth is to raise the labor supply. Possibilities include removing the impediments that restrict the movement of labor between firms and encouraging women from participating to a greater extent. Another possibility that has received scant attention until now is to promote immigration into Japan.

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