

# 1

## Overview of the Japanese Deficit Question

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In this chapter, we review the issues that concern the fiscal authorities of Japan and the United States. We begin by presenting basic facts on the fiscal situations in the two countries. We then review a few key concepts, such as sustainability of fiscal deficits and measures of net debts. Finally, we examine the present Japanese and U.S. situations extensively.

### **Basic facts and international comparisons**

Both the Japanese and the U.S. governments ran large fiscal deficits in the 2000s. The Japanese central government has been running budget deficits of 6 percent of GDP in the last several years, and the U.S. federal government has been running deficits of 3–4 percent of GDP in 2003–04, but reduced to 2 percent in 2005. However, the debt/GDP ratios are quite different in the two countries. Figure 1.1 and Table 1.1 show the gross debt-GDP ratio of the G7 countries from 1977 to 2006, with the last two years being projections by OECD. In 1991, Japan was in the middle of G7 countries in terms of total debt in ratio to GDP. The debt-to-GDP ratio of Japan was lower than that of Italy, Canada, and the United States, while higher than Germany, France, and the United Kingdom in the early 1990s. By 2000, Japan became the G7 country with the largest debt-to-GDP ratio, replacing a long-time number one, Italy. Since that time, Japan has increased its debt-to-GDP ratio further, and by 2005, it has become the number one indebted country by far.

It was not until the mid-1970s that Japan issued large amounts of deficit-financing bonds. The initial increase in the debt-to-GDP ratio

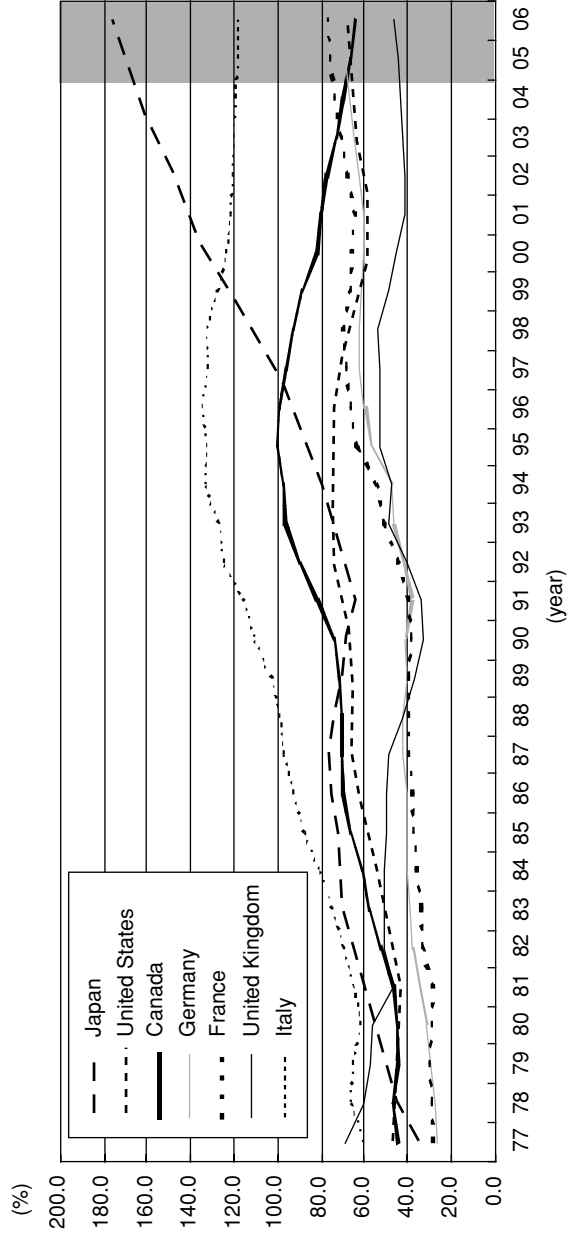


Figure 1.1 Gross debt as a percentage of GDP

Table 1.1 Debt-to-GDP ratio of G7 countries

	Canada	Germany	France	United Kingdom	Italy	Japan	United States
1977	45.0	26.7	29.1	68.2	61.2	34.9	46.9
1978	47.9	28.1	30.2	60.6	66.9	44.1	45.8
1979	45.2	29.1	30.5	57.0	66.2	49.3	44.6
1980	45.5	31.1	30.1	56.0	63.2	55.0	45.3
1981	46.9	34.8	29.4	47.5	65.4	59.9	44.4
1982	52.7	37.7	33.5	51.7	70.7	64.0	49.4
1983	58.4	39.3	34.6	51.6	75.9	69.8	52.4
1984	61.7	40.1	36.3	51.4	81.6	72.3	54.0
1985	66.9	40.8	38.0	50.1	88.9	72.1	58.9
1986	71.0	40.7	38.8	49.7	93.5	75.8	62.4
1987	71.5	41.8	40.1	48.9	98.1	76.4	64.1
1988	71.1	42.3	40.0	42.8	100.3	74.1	64.8
1989	72.3	40.9	39.9	36.9	103.3	70.8	65.1
1990	74.5	41.5	39.5	33.0	112.5	68.6	66.6
1991	82.1	38.8	40.3	33.6	116.5	64.8	71.3
1992	89.9	41.8	44.7	39.8	126.0	68.7	73.7
1993	96.9	47.4	51.6	49.6	127.9	74.9	75.4
1994	98.2	47.9	55.3	47.8	134.4	79.7	74.6
1995	100.8	57.1	63.9	52.7	133.5	87.1	74.2
1996	100.3	60.3	67.5	52.6	135.7	93.9	73.4
1997	96.2	61.8	69.4	53.2	133.0	100.3	70.9
1998	93.9	63.2	71.1	53.8	133.4	112.2	67.7
1999	89.5	61.6	67.3	48.8	128.4	125.7	64.1
2000	81.8	60.9	66.2	45.9	124.5	134.1	58.2
2001	81.0	60.5	64.9	41.2	122.0	142.3	57.9
2002	77.7	62.9	68.7	41.5	121.5	149.3	60.2
2003	73.3	65.1	71.2	42.0	120.9	157.5	62.5
2004	70.6	67.0	74.0	43.4	120.0	163.5	63.5
2005	67.2	68.6	76.2	44.9	119.5	170.0	64.9
2006	64.8	69.1	77.4	46.5	119.3	175.4	66.8

in the 1970s was halted in the early 1980s, and the debt-to-GDP ratio peaked during that period in 1987 at 76 percent. The fiscal consolidation in the 1980s reduced the debt-to-GDP ratio to 65 percent in 1991. Asako et al. (1991) provide the description of the rise and fall of deficits and discretionary fiscal policy explanations of the fiscal policy in the 1970s and 1980s. Nonetheless, the debt-to-GDP ratio of Japan has risen sharply since the mid-1990s: to 80 percent in 1994, 100 percent in 1997, 150 percent in 2002, and reached 170 percent in 2005. Without substantial fiscal consolidation, the ratio would reach 200 percent by 2011. Such a high level of debt is unprecedented in the experience of advanced countries outside of wartime.

#### 4 *Tackling Japan's Fiscal Challenges*

The debt-to-GDP ratio of the United States, as shown in Table 1.1, was lowered substantially in the late 1990s, in contrast to Japan. The ratio peaked at 75.4 percent in 1993. That year, the Japanese debt-to-GDP ratio of 74.9 percent was actually lower than that of the U.S. The U.S. debt-to-GDP ratio fell to 58 percent in 2001, thanks to spending restraint and to strong revenues from the robust economic growth in the late 1990s. Although the U.S. debt-to-GDP ratio has been rising in the past few years, its level in 2004 of 63.5 percent is still lower than the ratio in the mid-1990s.

The large Japanese budget deficits have raised questions about sustainability. Optimists cite two facts, large financial assets that the government owns in their various agencies and low interest payments (because of the very low level of nominal interest rates in Japan). The net debt of the Japanese government is substantially lower than the gross debt because of large financial assets accumulated in the government sector in Japan. Of course, if the level of the debt becomes too large, interest payments would rise, making sustainability of the fiscal gap a serious issue. However, the share of interest payments in the central and local government budgets has fallen in the 1990s, because of the low levels of long-term interest rates. The Japanese long-term interest rate has remained quite low at around 1.5 percent in 2004–05.

Figure 1.2 shows the “net” government liabilities, as opposed to “gross” liabilities, according to the OECD. In this figure, the Japanese fiscal situation looks less dire than in Figure 1.1. The net debt-to-GDP ratio is only at 80 percent in 2004, and remains lower than that of Italy. The Japanese government has many financial assets, including its own government bonds, as assets on the balance sheet of government agencies. When these financial asset holdings are deducted from the level of gross debt, then the net debt figure is much lower than the gross debt figure. As the Japanese government created its own financial agencies and accounts, as a part of government investment programs, financial assets on the balance sheet can be deducted, when true indebtedness of the government as a sector is a concern. However, Figure 1.2 also illustrates that the net debt is also increasing at a rapid pace. The average annual increase in Japanese debt levels from 2000 to 2004 was 7.6 percent in gross terms and 6.2 percent in the net terms. The recent increase in the gross stock of debt is accounted for by the rise in net debt, not matched by the increase in financial assets. Even in net terms, the debt-to-GDP ratio reaches 100 percent by 2007. The net debt-to-GDP ratio of the United States has fluctuated between 40 and 60 percent over the past 20 years.

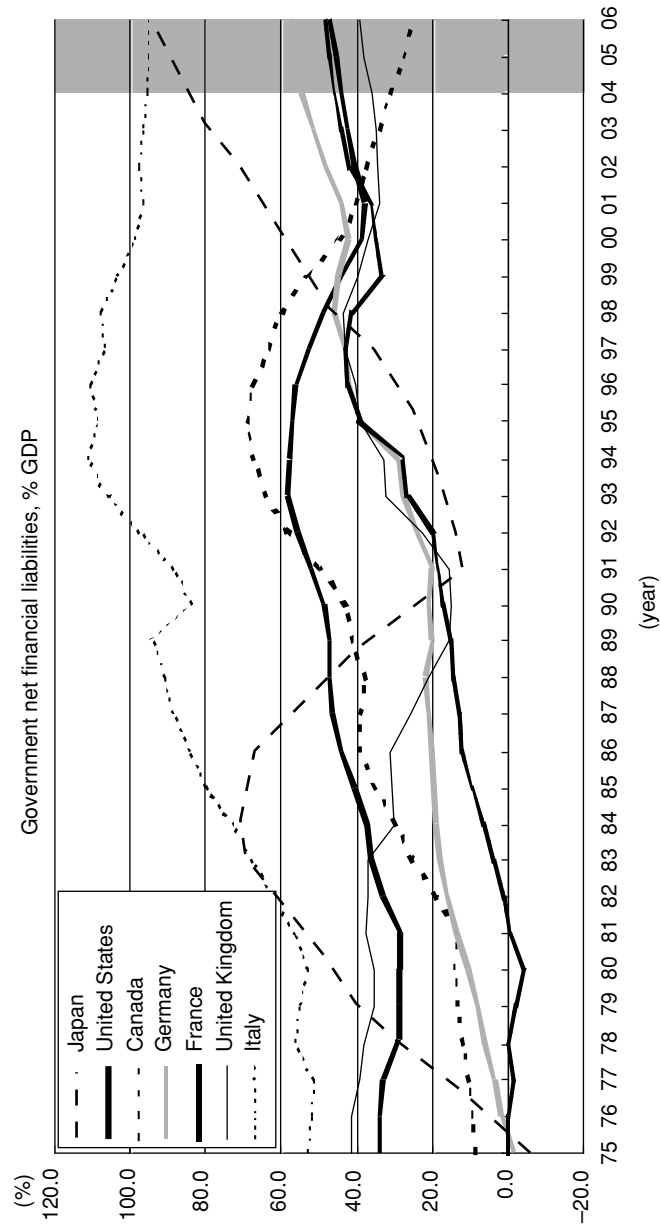


Figure 1.2 Net debt-to-GDP ratio, G7 countries, 1997–2004

Even in the past few years, when U.S. fiscal deficits have risen, the U.S. net debt has risen only a few percentage points of GDP.

In Figure 1.3, we show the ratio of net government interest payments to GDP for G7 countries. In this figure, Japan is not an outlier. Indeed, only 2 percent of GDP is spent on net interest payments. (The outlier is Italy, whose interest payments relative to GDP exceeded 10 percent in the beginning of the 1990s, and declined to about 4 percent in recent years.) There are two reasons for the low interest payment ratio of about 2 percent in Japan, despite a level of gross debt exceeding 170 percent of GDP. First, net debt is smaller, as we showed above, so that net interest payments are lowered. This observation is especially true if assets are earning a much higher interest rate than the liabilities, mainly government bonds pay. Second, the interest rate in Japan is very low—0 percent for the short-term money market, and 1.5 percent for the ten-year government bonds. Almost all liabilities are issued in the domestic market denominated in yen, so the large government liabilities mean only small interest payments as a ratio to GDP.

Hence, in Japan, there is little market pressure—such as a high interest rate (risk premium) on government bonds—applied to the government to reduce the deficits, despite the large and increasing debts. However, many economists are worried that, sometime in the future, the mounting debt will put enormous burden on the fiscal operations—either as expenditure cuts or tax increases. Fiscal stresses will magnify when interest rates begin to rise.

The Japanese government is keenly aware of the need to reduce fiscal deficits, and prepare eventually for fiscal surpluses to finance the needs of an aging society in the future. Such a plan should focus on the primary balance—the fiscal balance without interest payments to outstanding bonds or revenues of government bond issues, the usual measure for the government stance as regards fiscal responsibility.

Figure 1.4 presents data on the primary balance of the G7 countries. The Japanese primary balance has been negative since 1993, after a ten-year period of surpluses. Other G7 countries enjoyed strong surpluses in the second half of the 1990s. Japan alone increased its primary budget deficits in the second half of the 1990s. The primary deficits became larger, still exceeding 6 percent of GDP in 2002, falling only to about 5 percent in 2004. This level is far higher than in the United States and European countries. Although the change in primary balance of the United States from 2000 to 2003 is significant, from 4 percent to -3 percent of GDP, the balance is stronger than in Japan. The United Kingdom, France, and Germany also experienced a fall in their primary

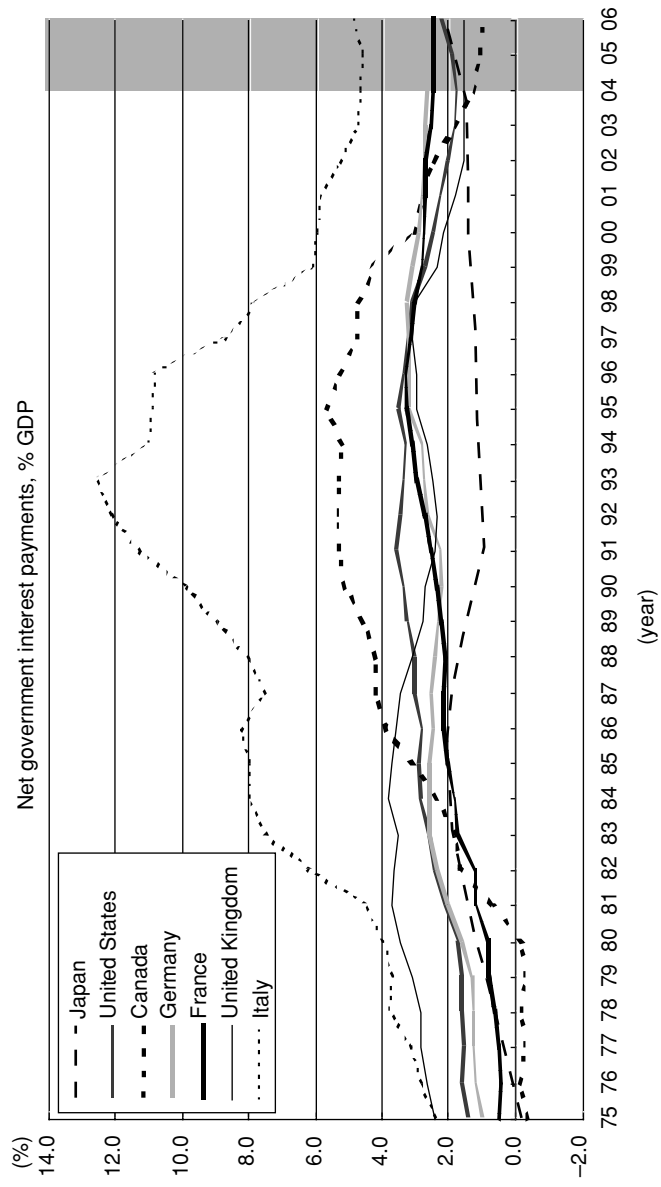


Figure 1.3 Ratio of government net interest payments to GDP, G7 countries, 1975–2004

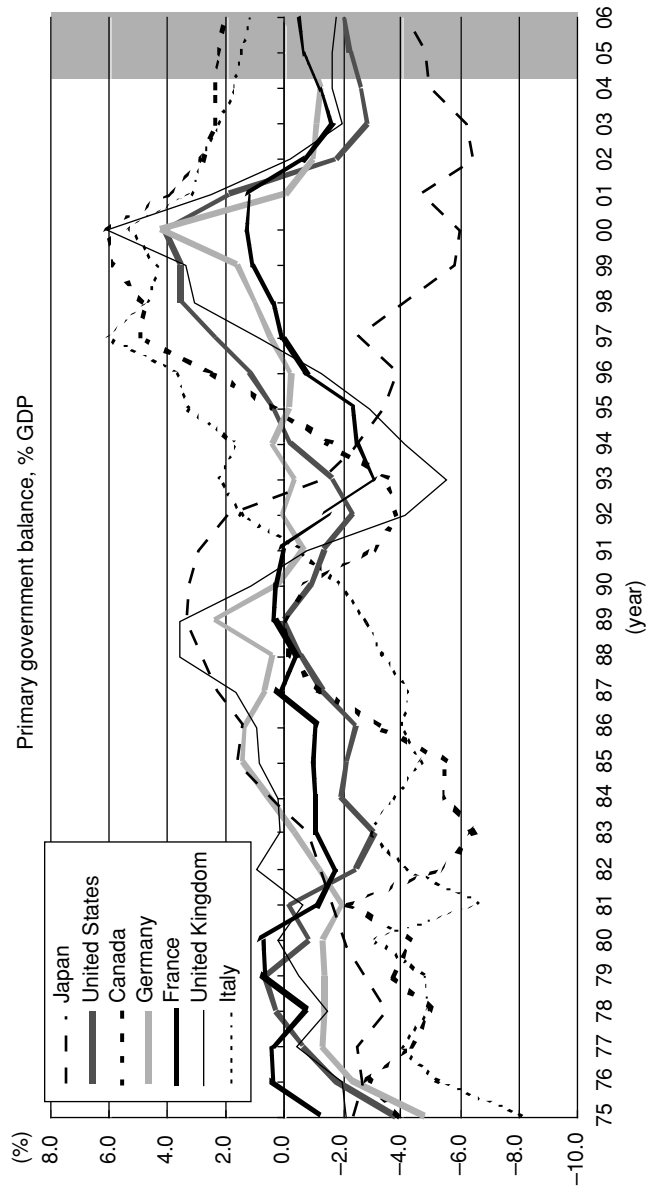


Figure 1.4 Ratio of primary fiscal balance to GDP, G7 countries, 1975–2004

balance from 2000 to 2003. Indeed, the deteriorating economy and fiscal situations in the large European economies made necessary a revision to the Stability and Growth Pact in the European Union.

In both Japan and the United States, the bulk of economists' measures of fiscal imbalances are future liabilities—namely social security and pension schemes, health care, and other contingent liabilities. Both countries are experiencing rising shares of these welfare (or entitlement) expenditures, broadly defined. In Japan, the problem is more acute than the United States, because the society is aging faster. Because of the demographic factors common to all advanced economies, but most prominently in Japan, the ratio of the working population to the retired population will decrease quickly from the current level of 4-to-1 to 2-to-1 by 2030. More expenditure on pensions, health care, and other spending related to the elderly will be needed while fewer young people will be shouldering the burden than before.

## **Japanese fiscal challenges**

### **Measuring the size of the debt: gross versus net**

The views on the seriousness of a large debt-to-GDP ratio in Japan fall into a pessimistic and an optimistic camp. The pessimistic camp believes that the current situation is serious enough to warrant immediate steps toward fiscal contraction. The optimistic camp believes that there are still some years before the situation requires significant action.

The optimistic camp's logic is strong. First, although the gross level of Japanese government debt is large, net debt—subtracting financial assets held by the public sector from gross debt—remains small relative to GDP. This case is made forcefully by Broda and Weinstein (2005), for example. Second, investors who hold Japanese long-term debt (Japanese government bonds, or JGBs) are largely Japanese nationals. Therefore, the future burden of the taxes, which may reduce consumption, will be future gains of bond-holders in Japan, who may increase consumption. That is, the fiscal transfer of purchasing power is among domestic groups. Japan is not Argentina or Russia, where a fiscal crisis led to a currency crisis, in this view. Third, long-term interest rates remain very low, suggesting that the financial market participants may not be concerned significantly about the sustainability of the current debt level or deficit financing.

Even the optimists, of course, recognize that fiscal consolidation is needed at some point in the future to reverse net debt growth. Because the net debt figures show sharp increases in the past several years, the extrapolation of the past trend to the future points to eventual

unsustainability. But timing is still a choice variable in the optimistic view, particularly if a fiscal expansion can steer the stagnant, deflationary economy toward its potential growth path. Once the economy resumes potential growth, Broda and Weinstein argue that Japan will choose either to maintain the current level of social security and health benefits for a larger share of population (due to the aging society) by increasing its rate of consumption taxes to an average of European countries, or to reduce old-age benefits.

The pessimists' argument is also convincing. The pessimistic camp counter that the current low interest rate on JGBs may reflect an unwarranted optimism among market participants. As the zero interest rate policy continues, the bond market participants have developed a view that the low short-term interest rate will continue indefinitely in the future, while a return of economic growth would lift tax revenue relative to GDP. The combination of low inflation rate, low interest rate, and rapid economic growth is needed if the optimist scenario is to be realized. The pessimists worry instead that the economy is faced with the unpleasant dilemma of slow choking or sudden death. A continuing stagnant economy would keep the interest rate low while interest payments increase as a share of government spending, or accelerating economic growth could lead to much higher interest rates and interest payments. There will be a lag between an increase in the market interest rate and the increase in interest payments in budget, because most of the JGBs are long-term, fixed-rate securities. This lag is the only hope (for the pessimist) for a recovery of the Japanese economy without debt default or inflation. More delay in fiscal consolidation will raise the vulnerability of the fiscal situation to an adverse shock that may raise the interest rate ahead of the growth rate.

Whether the current level of debt will be serviced under more normal conditions—that is, a higher interest rate—is a challenging question. A favorable progression from accelerating growth to a higher interest rate is crucial for a smooth transition to normal conditions. An unfavorable sequencing may place the economy in a difficult situation, forcing either sharp spending cuts or tax increases to avoid virtual default.

Pessimists point to other factors that may aggravate the already damaged fiscal situation. These include budgetary needs to support the pension and health care systems as well as the contingent liabilities that are associated with local government liabilities and public financial institutions.

The government's demographic projections have been inaccurate over the past several decades. As a result, contribution rates to the pension system have been increased every few years. A further increase may

become difficult as people are resisting the already high contribution rate of about 18 percent. For most middle-income wage earners, the amount of pension contributions exceeds the amount of income taxes. The negative supply-side effects are becoming apparent. Housewives take up only part-time work in order to avoid pension contributions, and many young people refuse to pay pension contributions, undermining their eligibility to receive benefits in the future. Among those who are not employees (but are supposedly covered by the Kokumin Pension Plan), the rate of contribution payment was only 63.4 percent in Fiscal Year (FY) 2003.

The public pension system has been reformed several times but reformed plans have regularly collapsed after several years because of wrong projections for longevity, births, and workforce participation. Few believe that the 2004 reform plan will remain in place more than a few years. A series of step-wise contribution increases and small benefit cuts may reach a breaking point—the current plan has a cap on the contribution rate at 20 percent, so that after reaching that point all savings will have to come from benefit cuts. More fundamental reforms that would stimulate willing participation to the system are needed.

Local governments are issuing local government bonds, and public institutions are issuing government agency bonds. There is no explicit guarantee on these bonds by the central government. However, inferring from the interest rate spread, financial market participants believe that these bonds are underwritten by the central government. If the market is right, effective levels of government debt may be higher than conventionally measured.

To summarize, optimists believe that time remains for the Japanese government to reverse current fiscal imbalances, without the growth-damaging consequences of fiscal consolidation. The economy may return to a normal potential growth path thanks to fiscal stimulus. The prevailing low interest rate in the market clearly supports the optimists' view. Pessimists believe that the situation is serious enough and time is very limited. The debt will be at such a level that there will be no way out. A prolonged deflation may delay the eventual default or a sudden economic acceleration may raise the interest rate to the level that would put extra burden on the budget. Room for maneuvering is getting smaller very quickly, on this view.

#### **Assessing sustainability**

Pessimists warn that sustainability may be out of reach soon, while optimists believe that there are plausible paths of taxes and expenditures

to keep the debt-to-GDP ratio from rising indefinitely. The central issue of contention between these two camps is the sustainability of the government's debt. We now turn to the existing work on the sustainability of the Japanese public debt.

Economists have suggested several ways to test the sustainability of the fiscal position. Hamilton and Flavin (1986) developed a test of the so-called no Ponzi game condition, that is, the net present value of the sequence of debt and future budget balances is zero. Operationally, this test can be carried out with various unit-root tests. Trehan and Walsh (1988) and Hakkio and Rush (1991) have also proposed unit-root tests. However, it is often very difficult to show whether a given fiscal path would be sustainable because the ultimate test regards the transversality condition, which is not easily assessed with finite samples. However, scenarios can be presented to illustrate the path of fiscal debt into a far-enough future, say to the year 2100. Alternatively, the reactions of the fiscal authorities to deficits and the debt-to-GDP ratio in the past can be used to infer whether similar reactions would be helpful in bringing down the debt-to-GDP ratio in the future.

Broda and Weinstein (2005) calculated the net debt of the Japanese government, and then produced a scenario in which tax rates would rise to U.S. or European levels in the future. Currently, Japan is near the bottom in the tax-burden-to-GDP ratio among the OECD countries. That is, there is room to raise revenues, going forward. Their conclusion is that the Japanese fiscal debt will be manageable; the Japanese government will have to increase the tax-burden-to-GDP ratio to the average of OECD countries or European countries. Figure 1.5 shows their simulation of the net debt path to 2100.

The Broda-Weinstein study raises questions. For example, do the authors subtract the appropriate assets to arrive at the net debt? If they subtract financial assets in the social security fund, the procedure will underestimate net debts, because financial assets in the social security fund are held against future deficits in the pension system. The fund will be depleted sometime in the future.

Ihori et al. (2001) use the framework of Bohn (1998) to examine the sustainability of the Japanese public debt. They regard the fiscal situation as sustainable if an increase in debt-to-GDP ratio is associated with an increase of the primary-surplus-to-GDP ratio, given other conditions in the economy. They cannot reject the proposition that the Japanese national debt (the stock of central government's JGBs outstanding) has been unsustainable for the period including the late 1990s. Ihori et al. also consider a question of how to reduce deficits by increasing taxes.

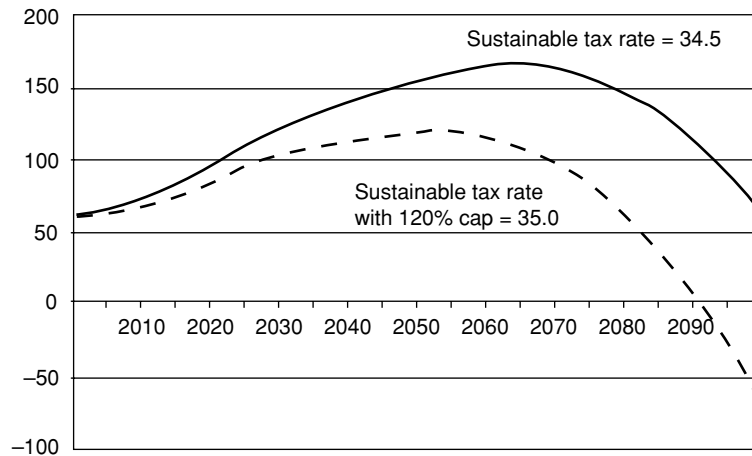


Figure 1.5 Broda and Weinstein simulation

They argue that fiscal reform should not be too flexible, because some interest groups will use their political leverage to avoid participating in budget and tax reforms.

**Source of deficits**

To analyze sources of the Japanese fiscal imbalances, we begin by examining whether the current large deficits reflect primarily temporary, cyclical deficits due to a weak economy or permanent, structural deficits. If deficits are cyclical, they will disappear as the economy recovers, and no new structural reforms to increase tax rates or reduce spending are necessary. However, if deficits are structural, various efforts to change the expenditure and tax structures are clearly needed.

In 1992, the Japanese economy entered a prolonged recession. The growth rate dropped from an average of 4 percent for 1975–91 to 1 percent for 1992–2004. As recessionary pressures continued, several fiscal stimulus packages were implemented. If the economy had been growing at its potential growth rate, tax revenues would have been higher and spending on unemployment, corporate failures, and bank restructuring would not have been necessary. Cyclical developments led instead to lower taxes and higher spending through the working of the automatic stabilizers. The government also introduced discretionary fiscal policy to stimulate the economy. Temporary reductions of income tax rates or one-time fiscal spending are an example of discretionary fiscal stimulus.

These temporary measures, if reversed when a recession is over, will not fundamentally change the fiscal position in the long run.

Other fiscal actions reflect structural problems. Pensions and health care benefits will increase in proportion to GDP in a society in which the elderly are rapidly increasing as a share of the population. In an aging society, doing nothing will likely result in increased structural deficits. Overall, it is difficult to separate the role of automatic stabilizers and the role of structural factors. However, there is consensus among Japanese fiscal experts that most of the Japanese deficits developed in the 1990s are structural. Even when the Japanese economy goes back to a normal growth path with full employment, primary balances would not be restored without tax increases or spending cuts. Spending cuts would be difficult because there remain few budget items large enough to provide savings. Pensions and health care benefits have to be reviewed in order to bring the primary balance to surplus.

Figure 1.6 presents information on expenditures, tax revenues, new bond issues, and interest payments of the general budget of the central government of Japan. In the 1990s, widening deficits were due to declining tax revenues and increasing expenditures. The biggest increases in expenditures were in 1998 and 1999, and were financed by bond issues. Afterward, there were some cuts in expenditures. In contrast, tax revenues declined steadily.

It is difficult to estimate precisely how much of the deficits are structural and how much cyclical, but many believe that by now a significant part

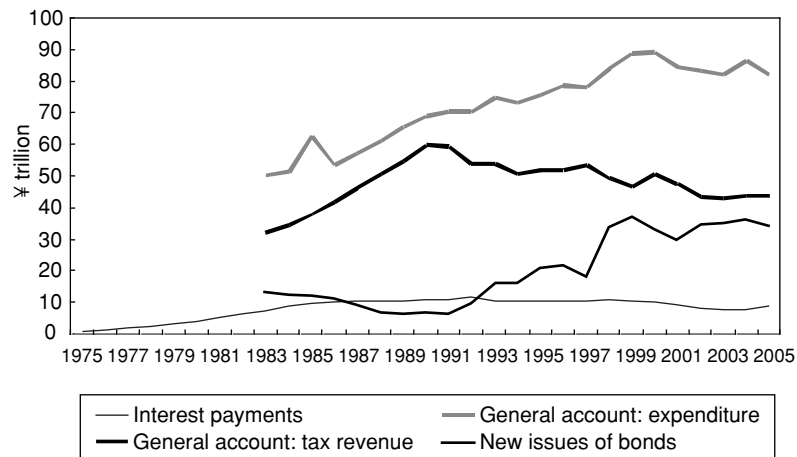


Figure 1.6 Measures of the Japanese fiscal situation

of deficits are structural. Therefore, fiscal consolidation in the future must envisage cuts in entitlement spending or tax increases as a major part of the plan.

### **Declining fiscal multipliers and Ricardian effects**

Repeated attempts at fiscal stimulus during the 1990s raise the question of their effectiveness because the economy did not return to a self-sustaining, potential growth path. Was the economy under repeated negative shocks that affect the impact of expansionary fiscal packages? Were the packages not big enough? Or did the fiscal multiplier become smaller somehow?

Kuttner and Posen (2001, 2002) and Posen (1998) argue that fiscal policy is still potent in Japan. They argue that most of the fiscal packages in reality included already scheduled programs. Additional new spending increases or tax cuts—often dubbed as “real water” or *mamizu* in Japanese—in various packages were surprisingly small. One package that had a large net increment of stimulative measures was the package of 1995 and it produced a recovery in 1996.

Yoshino and Nakajima (1999) argue that the fiscal multiplier has been declining over recent decades. Their estimated multiplier was 3.27 on average from 1975 to 1980, 3.48 from 1981 to 1985, 1.07 from 1985 to 1990, 1.94 from 1990 to 1992, 0.95 from 1992 to 1993, and 0.45 from 1993 to 1997. There are several hypotheses that could explain these results. First, government projects simply became less productive once high-return public work projects were exhausted. Government infrastructure projects in later years affected increasingly remote areas. The bullet train network is an example. The bullet train started operation in 1964 between Tokyo and Osaka, then extended to Fukuoka in the southwest, to Morioka in the north and to Niigata toward the other side of Honshu, a network expansion to increasingly less populated and more remote areas. The marginal returns to this public investment clearly declined over time.

Another not mutually exclusive possibility is pork barrel spending. Although politicians always try to bring economic benefits to their constituencies, the ratio of pork barrel spending may have increased, as other industrial policy projects were eliminated as Japanese technologies in the manufacturing sectors caught up with those in the United States and European countries.

Ihori et al. (2001) examined the issue of debt neutrality, and concluded that neutrality in the strong form would not hold. Namely, deficit

spending would not be completely offset by a reduction in private consumption of the same magnitude.

#### **Non-Keynesian effects of fiscal policy**

When the national debt becomes large and consumers and firms are concerned about inevitable tax increases to come, an increase in fiscal deficits would not stimulate the economy. This would be especially true if spending was targeted to pork barrel projects. Under these circumstances, tax increases combined with expenditure cuts may in fact stimulate economic activities, contrary to the usual Keynesian macro model. The possibility of a so-called non-Keynesian effect, first pioneered by Giavazzi and Pagano (1990, 1995), has attracted attention in recent years in Japan.

Giavazzi and Pagano (1990) examined experiences of fiscal reforms in Denmark and Ireland. Both had accumulated large debts by the early 1980s. Both started fiscal tightening in 1982, but with different results. In Denmark (1983–86), tightening did not reduce consumption growth, while a conventional contraction was the result in Ireland. The contrast of the non-Keynesian effect in Denmark and the usual Keynesian effect in Ireland may reflect different shares of liquidity constrained households and the expectation of future tax reduction due to ongoing spending cuts. The authors added that even in Ireland a fiscal contraction did not result in consumption growth in later period (1987–89). Alesina and Perotti (1995) expanded the study to other cases of fiscal contraction in European countries and Canada.

In later work, Giavazzi and Pagano (1995) and Giavazzi et al. (2000) explored the reason for a non-Keynesian effect, linking it to the unusually large size or speed of changes in fiscal policy. When a fiscal adjustment becomes larger than normal, then its effect becomes different from that estimated by just multiplying the size of the fiscal package and the coefficient relevant for a small fiscal change. This non-linear effect was confirmed in Giavazzi et al. (2000) in the case of OECD countries.

Perotti (1999) emphasized that not only the size of deficits but also the level of public debt matters. He showed that when debts and deficits are large, an increase in spending results in the reduction in private consumption.

The situation in Japan, characterized by a rapid expansion of fiscal deficits and mounting public accelerating debts, suggests the possibility of non-Keynesian effects—further deficit spending will not stimulate private spending, but—making in revenue— a fiscal consolidation may. Households and firms may worry about future tax increases so much that

the government's actions to rectify the final imbalances will convince the private sectors to spend more now instead of saving for the future.

### **Local government versus central government**

The Japanese fiscal system has a complicated system of central and local (prefectural and municipal) governments. The central government gives a block grant transfer— called local allocation tax (a misnomer)—to local governments based on a system that is supposed to equalize services to residents in different regions of Japan. However, the system allows for moral hazard on the part of local government to expand expenditures, most of which are inefficient.

Tajika and Yui (Chapter 7, this volume) examine the system of the block grant transfer and recommend a reform. They identify that the problem lies in the fact that block grants are allocated based on the “needs” of the local governments. They think by reforming the relationship between the central and local governments, the net liabilities of central government may be reduced significantly.

Even Tajika and Yui may be too optimistic. Contingent liabilities of local governments are mounting. Many municipal governments were induced to merge in 2002–04, so that scale economies can support the provision of basic needs for residents, with additional expenditure allowances financed by additional local government bonds. Those bonds are supposed to be paid back by future block grants.

### **Japanese deficits and debt: a summary**

The division between optimists and pessimists as regards the sustainability of Japan's public debt should not be overly emphasized, since there is substantial agreement between them. Both optimists and pessimists find that the rapid increase in the debt-to-GDP-ratio—either in gross or in net terms—cannot continue indefinitely. Something—expenditure cuts, tax increases, and/or social security reforms—has to be done. The differences between the optimists and pessimists lie more in their views on the urgency for action, and the implicit assumptions on the political and economic pains that it may entail.

### **The U.S. fiscal challenge: a comparison**

Over the past half-century, U.S. federal government debt held by the public as a percentage of GDP has fluctuated from a low of about 25 percent to a high of about 60 percent. While federal debt increased during the 1980s and 1990s to almost 50 percent of GDP, it declined thereafter

and still remains under 40 percent of GDP despite its recent upturn. Federal borrowing, averaging about 2 percent of GDP over the past 50 years, has tended to rise just after recessions (as in 1974–75, 1980–81, 1990–91, and 2001).

Much of the discussion of federal debt and budget deficits in the United States has centered on the potential for government debt to crowd out capital formation in the economy. Federal government debt is currently only about 13 percent of the private capital stock, which provides an upper bound on the amount of capital that federal debt could have crowded out. International capital flows and changes in private saving in response to changes on government debt reduce the potential for crowding out. Indeed, the evidence for the United States presented in Engen and Hubbard (2004) suggests that, all else being equal, an increase in federal government debt equivalent to 1 percent of GDP would raise the long-term real rate of interest by about 3 basis points (see also Laubach, 2003). As those authors point out, the absence of a large impact of budget deficits on interest rates does not imply that the U.S. fiscal imbalance should not be a matter of concern. Engen and Hubbard did not investigate the degree to which federal borrowing might be offset by private domestic savings or inflows of foreign savings or both. Such factors interact with federal borrowing in ways that may have similar impacts on interest rates but different impacts on the economy as a whole.

More important still, the measured government debt fails to include the large unfunded liabilities of federal programs for the elderly, principally social security and Medicare, totaling tens of trillions of dollars. The current path of U.S. entitlement spending will require large transfers of resources from younger to older cohorts. Holding the path of non-interest federal outlays constant, budget deficits represent higher future tax burdens to cover both these outlays plus interest expenses associated with the debt, which have adverse consequences for economic growth. The U.S. fiscal imbalance is almost entirely a story about Medicare and social security, requiring large reduction in the growth of promised benefits or unprecedented large increases in the U.S. tax burdens (see Gokhale and Smetters, 2003).

Indeed, the Congressional Budget Office (2005, pp. 3–4) strikes a strongly cautionary tone:

By 2050, government spending is projected to climb to well above its historic share of GDP; and considerably higher than the historical average share of revenue, which is about 18 percent. The levels of

borrowing implied by that outlook could have a corrosive, or eventually, contractionary effect on productivity.

Moreover, the United States is unlikely to be able to borrow such sums on a sustained basis, even from international markets (especially given that aging populations in the rest of the developing world are likely to put similar pressures on budgets in other countries). Therefore, at some point, it is almost certain that spending will have to be cut or that taxes will have to rise. To the extent that increased taxes involve higher marginal rates on labor and capital income, they would tend to discourage work and saving, and therefore reduce economic output. For example, the Congressional Budget Office has estimated that if all projected spending was financed by higher taxes, GDP could be 6 percent lower by 2050 than if spending was cut instead.

The administration of President George W. Bush has sought to restrain the growth of entitlement spending rather than seek large increases in social insurance payroll taxes required for budget (for an overview of the social security reform debate in the United States, see Council of Economic Advisers, 2002, 2004). Distributional concerns would be addressed by seeking reductions in benefit growth rates that rise with income.

The U.S. social security debate offers a potential roadmap for entitlement reform and fiscal consolidation. First, a pre-funded Social Security system would generate real savings to provide future retirement benefits. As with popular 401(k) pension plans, funds can be placed in personal accounts. Once social security's long-term financial footing is restored, avoiding transition costs associated with funding personal accounts is straightforward: Future traditional benefits would be reduced so that the present value of the combination of personal account contributions and traditional benefits remains unaffected.

To reduce entitlement obligations while maintaining distributional concerns, old-age support could be reformed toward a "safety net" system. One way to accomplish that aim would be to guarantee a minimum benefit. A second alternative would be to set a more generous initial benefit for low-lifetime-income workers than for middle- and high-lifetime-income workers. Finally, contributions of low-income individuals to personal accounts could be matched in some proportion with public contributions to bolster future income in retirement. Many economists suggest a similar reform plan for Medicare, combining personal accounts (see, for example, Cogan et al., 2005) with reductions in promised benefits for higher-income workers.

### Concluding remarks

In this chapter, we have reviewed contemporary debates in Japan and the United States regarding their respective fiscal situations. Deficits have risen substantially in the last several years in both countries—since 1993 in Japan and since 2000 in the United States. How these rising deficits and debt levels would affect and constrain the future economic policies is an important policy question. In Japan, all of the options to bring down deficits—expenditure cuts, tax increases, and social security reforms—are actively debated. The social security reform is particularly difficult as population dynamics have been changing adversely, and a pay-as-you-go system, though modified, is more difficult to maintain now than ever. In the United States, the possible adverse effects of the debts on the interest rate and fundamental social security reforms have been a topic of intensive investigations. More work on these questions is clearly needed to present rational policy options to the public and policy makers.

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