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Fiscal Sustainability in Japan

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Japanese government debt is at unprecedented levels with a gross debt to GDP ratio of over 230% and a net debt to GDP ratio of 150%. There are three big challenges to fiscal sustainability: the huge government bonds outstanding; continued budget deficits; and the growing age-related spending. The debt is sustainable as long as the market as a whole believes it is. The path to fiscal consolidation requires increasing the tax rate, reducing spending, broadening the tax base and growing the economy out of trouble. The longer the delay before moving to a more sustainable consolidation path, the larger the risks and closer Japan moves towards a financial crisis. The policy goal is to keep government debt sustainable, not to repay it all. Just as Japan has done since the burst of the asset bubble in the early 1990s there is every likelihood that the Japanese economy will muddle through.

Keywords

Japanese government debt; fiscal sustainability; debt to GDP ratio; fiscal consolidation

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Abstract

Japanese government debt is at unprecedented levels with a gross debt to GDP ratio of over 230% and a net debt to GDP ratio of 150%. There are three big challenges to fiscal sustainability: the huge government bonds outstanding; continued budget deficits; and the growing age-related spending. The debt is sustainable as long as the market as a whole believes it is. The path to fiscal consolidation requires increasing the tax rate, reducing spending, broadening the tax base and growing the economy out of trouble. The longer the delay before moving to a more sustainable consolidation path, the larger the risks and closer Japan moves towards a financial crisis. The policy goal is to keep government debt sustainable, not to repay it all. Just as Japan has done since the burst of the asset bubble in the early 1990s there is every likelihood that the Japanese economy will muddle through.

It has become widely known that Japan has the largest gross debt to GDP ratio globally. The gross debt to GDP ratio of Japan in 2000 was 136% and has been growing, except for in 2006 and 2007, reaching more than 230% in 2015 (Figure 1). This figure is much larger than that of Italy, the second largest debt to GDP holder in 2015 with about 150%. Countries with much less debt have experienced debt crises.

Accounting for government assets, the net debt to GDP ratio is close to 150%, the highest among the Group of 7 (G7) advanced economies and second largest net debt to GDP ratio in advanced economies after Greece and followed by Portugal in 2014 as can be seen from Figure 2 (Auerbach, 2015). The net debt figure does make the debt burden appear more manageable, and once the fact that many of the government bonds are held by the Bank of Japan (BoJ) is taken into account, the net debt figure looks even lower. But, the assets the government holds are largely in the form of the pension fund and foreign exchange reserves, which are not liquid assets that can be sold without significant consequences for livelihoods or the exchange rate.

The Japanese government's total revenue and expenditure in 2014 were 51.4 trillion yen and 99.0 trillion yen, respectively, with government bonds outstanding of 778 trillion yen.¹ There is no government plan to reach primary fiscal surpluses by 2020 so the trajectory is for that to increase and the interest component to grow substantially.

This short paper explains the three big challenges to fiscal sustainability: the huge government bonds outstanding; continued budget deficits; and the growing age-related spending. In this paper we will discuss each issue in turn.

The paper concludes by outlining the most likely scenarios.

¹ Throughout this paper a simple year means a fiscal year. For instance, 2014 means fiscal year 2014.

1 Huge accumulated government bonds outstanding

What is important here is that both the gross, and net, debt to GDP ratios are growing rapidly, in particular after 2007. They are expected to continue increasing under the current monetary and fiscal policy regime. Thus, Figures 1 and 2 clearly illustrate that the Japanese government is facing a big challenge arising from the huge accumulation of outstanding bonds. There is no easy way to eliminate them and a reasonable present goal for the Japanese government could be to stabilise the debt to GDP ratios. To this end, the Japanese government needs to come up with a long-term credible fiscal consolidation plan as soon as possible.

What has been fortunate for Japan is that the long-term interest rate has been declining, despite the fact that the Japanese government bonds (JGB) outstanding have been quickly accumulating over the last three decades as can be seen from Figure 3. This is partly because most of the JGBs are held by domestic investors, economic growth and inflation have been low after the bursting of the bubble economy, and the unprecedented easing of monetary policy. As a result, the interest payments have been stable, ranging from 10.2 to 11.0 trillion yen between 1986 and 1999, decreasing gradually to 7.0 trillion yen in 2005, and slowly recovering to 10.1 trillion yen in 2014 over the last decade.

As discussed in Auerbach (2015), Japanese government debt is sustainable as long as the market believes it is. Conversely, it could quickly become unsustainable if it loses credibility. In particular, Figure 3 suggests that when the interest rates start increasing due to the lack of a long term fiscal consolidation plan, the Japanese government could face a vicious spiral of interest rates and fiscal sustainability. Specifically, if the Japanese government fails to provide a long term credible fiscal consolidation plan, the market would eventually become suspicious of JGBs, requiring higher interest rates on them. Then, the interest payments could grow substantially because of the huge accumulated government bonds outstanding, which could cause further increases of interest rates due to the decrease in credibility of fiscal sustainability. How much time is left for Japanese government to eliminate the possibility of this vicious spiral? As discussed, one of the main reasons for the low interest rates on JGBs is that more than 90% of JGBs are held domestically. However, according to the recent studies by Hoshi and Ito (2014), the amount of Japanese government debt will exceed the private sector financial assets within the next 10 years or so. So, such low interest rates probably cannot be maintained for more than 10 years. Therefore, there is not much time left for the Japanese government to enforce a solid fiscal consolidation plan. The important first step would be to stop the continuing fiscal budget deficit, which we will discuss in detail next.

2 Continuing fiscal budget deficit

One obvious reason why the Japanese government accumulated such a huge amount of outstanding government bonds is that it has been continuously running a fiscal budget deficit over the last 40 years. Indeed, as shown in Figure 4, the total expenditures have exceeded the total revenues every year over the last 40 years. In particular, after the bursting of the bubble economy in 1990, government expenditures have been increasing gradually from about 70 trillion yen in 1991 to about 100 trillion yen in 2015, while the tax

revenues have been almost constant with slight decreases. As a consequence, the JGBs outstanding have been growing rapidly since 1991 as can be confirmed from Figure 3.

The government debt to GDP ratio could be stabilised, even if the government bonds outstanding are accumulating, although this is not the case for Japan. Figure 5 identifies the factors that raise the ratio of outstanding government debts to GDP in Japan, showing that the primary deficit has been the main factor over the last 20 years, in particular recently. Therefore, it is very important to recover a primary surplus, as existed in the late 1980s, to stabilise the debt to GDP ratio. As a matter of fact, the Japanese government plans to achieve a primary surplus by 2020, although that seems to be very optimistic. The recent simulation by the Cabinet office shown in Figure 6 suggests that it might be difficult to achieve the goal even under the generous growth scenario. If the current government's economic reform package succeeds, the Japanese economy could attain 3% nominal GDP growth, but still it is not possible to realise a primary surplus even in 2023. Under a more realistic scenario, namely if the Japanese government maintains the current economic growth rate, the primary deficit will be about 3% of GDP over the next 10 years.

To achieve a fiscal surplus, it is evident that the Japanese government must increase tax revenue and cut expenditure significantly. Nonetheless, the consumption tax hike from 8% to 10% has been postponed from October, 2015 to April, 2017. This decision was made based on the weak recovery from the temporal economic downturn after the consumption tax hike from 5% to 8% in April, 2014. It is hard to say that the Japanese government made the wrong decision, but this clearly indicates that it is not straightforward to increase tax revenue by raising the consumption tax rate. More importantly, a 10% consumption tax rate is still far below the consumption tax rate to achieve fiscal sustainability suggested by the recent studies. For example, Braun and Joines (2014) document that the Japanese government can maintain the sustainability if the consumption tax rate is increased to 36% in 2019 and kept at this level forever. In addition, Oshio and Oguro (2013) show that the consumption rate should be increased closer to 30% for the Japanese government to accomplish the fiscal sustainability.

It is almost impossible for the Japanese government to achieve a primary surplus in 2020, or more generally sustain the fiscal sustainability by increasing tax revenue. Thus, the Japanese government needs a significant cut of expenditure in the next 10 years. This seems to be challenging due to the increasing growing age related spending, which we will discuss next.

3 Growing age related spending

It is also well known that Japan is the fastest ageing economy due to its high life expectancy and low fertility rate (Seike, 2016). As can be seen in Figure 7, the proportion of elderly people (aged 65 and over) to the whole population was below 10% in the middle of 1980s, but it has increased rapidly over the last three decades to more than 25% in 2015. It is estimated that this trend will continue for the next 45 years, and the ratio will be between 36.6% and 43.3% depending on fertility.

As a natural consequence of ageing, the sum of social security benefits has tripled from 34 trillion yen in 1980 to 110 trillion yen in 2013, as we can see from Figure 8. This trend will be expected to continue for the

next 10 years. More specifically, the total social security spending forecast by the Cabinet office, shown in Figure 9, suggests that it is expected to grow about 2% each year for the next 10 years.

By the global standard, the Japanese social security program seems to be too generous. This is confirmed by Figure 10, which plots the social security spending (vertical axis) against the tax burden and social security contributions (horizontal axis) for OECD countries. As can be seen, the tax and social security burdens of Japan are far below the average, while the social security benefits are above the average. Given the rapid growth of age related spending, the Japanese government needs to implement substantial structural reforms of the social security program. There is no simple way to accomplish this and it has to be a combination of several reforms. Some of examples include increasing medical copayments for individuals over 74 to 20%, raising the retirement and eligibility ages for receiving public pension payments from 65 to 67 or higher, and reducing the ratio of the pension to average annual earnings to below 50%.

4 The way forward

The growing government debt in Japan financed by JGBs has not looked sustainable since the late 1990s when the yield on 10-year JGBs was falling to below 2%. Many in the financial markets have lost a lot of money short-selling JGBs since then, thinking that the debt is not sustainable and that the government will default or the country will experience hyperinflation. But the debt is sustainable as long as the market as a whole believes it is.

The path to fiscal consolidation requires increasing the tax rate, reducing spending, broadening the tax base and growing the economy out of trouble. Japan does have a low tax to GDP ratio compared to other OECD countries at 30% compared to the OECD average of 50%. Most of the literature involves simulations and analysis of raising the consumption tax rate — because it is one of the least distortionary taxes — significantly higher than the current rate of 8%. Increasing the consumption tax to 20%, for instance, would turn the non-pension deficit into a surplus immediately, but not enough to stop the overall deficit rising (Imrohorglu, Kitao and Yamada, 2016). Raising the consumption tax rate from 5% to 8% in 2014 caused growth to fall below zero and delayed the further increase to 10% by at least 18 months. It is politically very difficult to raise the consumption rate, especially when the growth rate is low.

Pension reform, such as increasing the retirement age, and pro-growth structural reform in healthcare and female workforce participation will broaden the tax base, putting the fiscal position on a better trajectory. That would only be part of any solution though, as the age-related spending will continue to increase as the population ages and the dependency ratio continues to increase. Also, for any significant impact on the fiscal position, the increase in female labour force participation would need to mean earnings and employment opportunities similar to those of men (Imrohorglu, Kitao and Yamada, 2016).

It is clear that without primary budget surpluses by 2020 gross debt will continue to grow past that year. But the government does not have to ever 'repay' all the debt (Turner, 2015). The realistic policy goal is to keep government debt sustainable.

The BoJ's QQE associated with the introduction of a 2% inflation target in early 2013 has resulted in the BoJ having held 30% of JGBs and purchased almost all newly issued JGBs in 2015, which have kept the long-term rate historically low. In addition, the negative interest rate policy implemented by the BoJ in February 2016 further flattened the yield curve, at times even pushing the long-term rate negative. Although this monetary policy stance thus far appears not to be effective in achieving the 2% inflation target, it helps conceal the urgency of the fiscal sustainability problem and buys the government some time. But they are not a complete solution for the fiscal problem in Japan, although they could give extra time for Japanese government to conduct fiscal consolidation.

What would happen if for some reason the BoJ achieves the 2% inflation target? Inevitably, the BoJ would have to look for an exit strategy from purchasing JGBs, but unless there is a credible fiscal consolidation plan, that will be another risk for the Japanese economy. Currently, the BoJ is purchasing JGBs at the rate of 80 trillion yen annually, lightening Japan's fiscal burden. If the BoJ were to scale back its purchases of JGBs, there could be a large impact on the Japanese economy with an inherent risk of this leading to a vicious spiral of interest rates rises spurred by scepticism of fiscal sustainability as we discussed above. Thus, if the Japanese economy achieved the BoJ's 2% inflation target without taking fiscal construction measures, it would not be an exaggeration to say that reaching this goal in fact would put the Japanese economy in peril.

Default or hyperinflation look like the two options facing a Japanese government in the future, if the trajectory of government debt does not improve. The BoJ's purchases of JGBs is effectively monetising some of the government debt and expanding the BoJ's balance sheet.

Although Japan's government debt continues to grow and that debt looks increasingly unsustainable, there has been little policy action to encourage any significant change to the trajectory of debt. Fortunately, the market has yet to lose confidence in the government's ability to get on a path to sustainability. This is partly because most JGBs are held domestically, the BoJ has been conducting active monetary easing, and Japan has its own currency. But none of these measures will help in the long-run. A loss of confidence in the sustainability of government debt will see a sharp decline of JGB prices and with large ownership of JGBs by financial institutions, could lead to another financial crisis. Thus, the Japanese government needs to conduct fiscal consolidation to secure its credibility in near future.

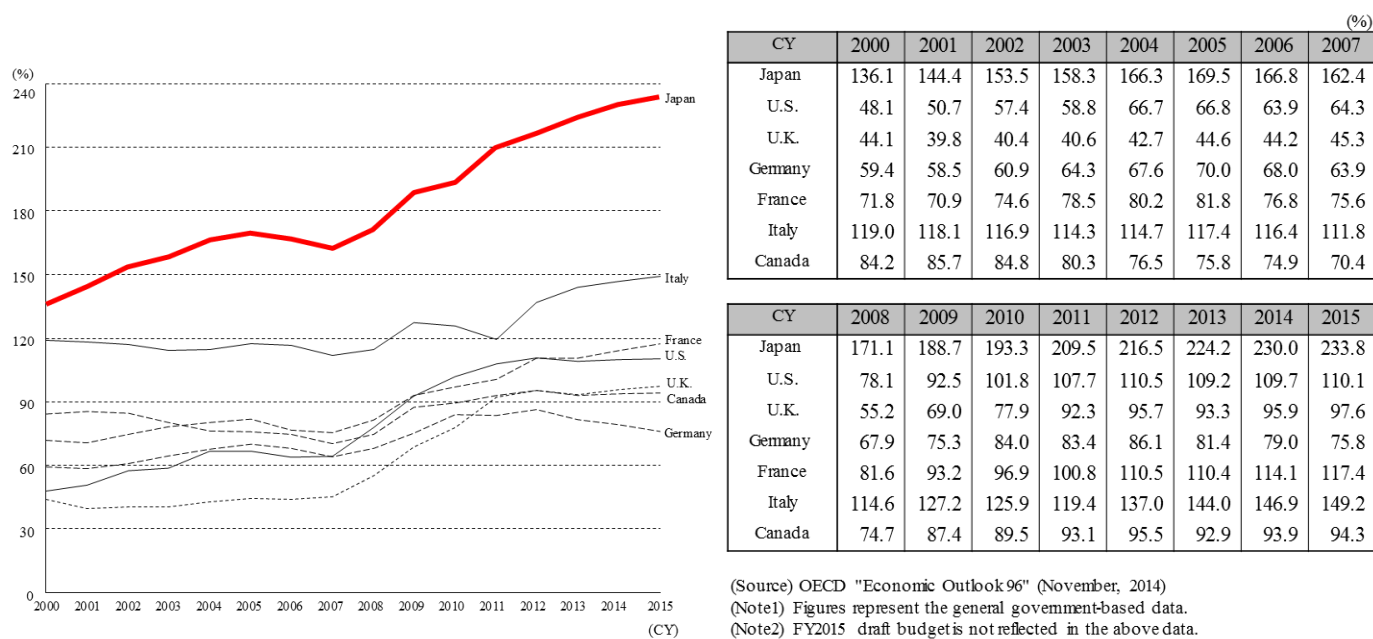
The trade in short-selling JGBs may finally pay-off for those expecting a debt crisis but they may be disappointed once again. Just as Japan has done since the burst of the asset bubble in the early 1990s there is every likelihood that the Japanese economy will muddle through.

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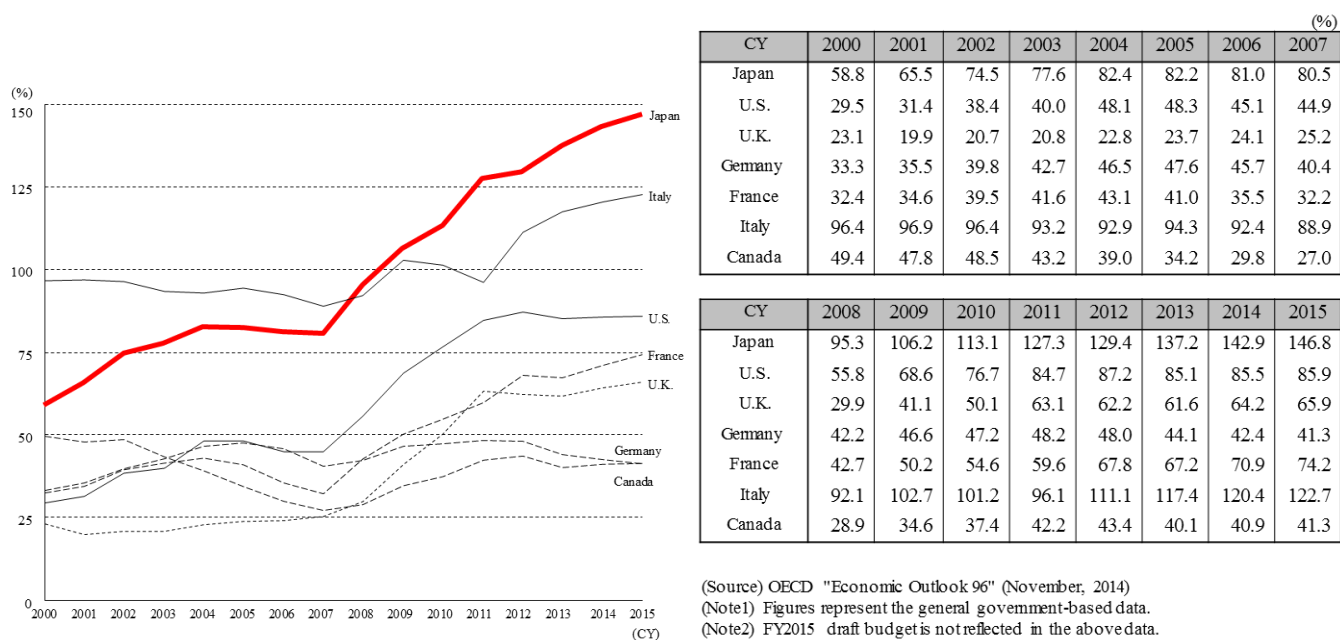
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Figure 1: General Government Gross Debt to GDP Ratio for G7 countries



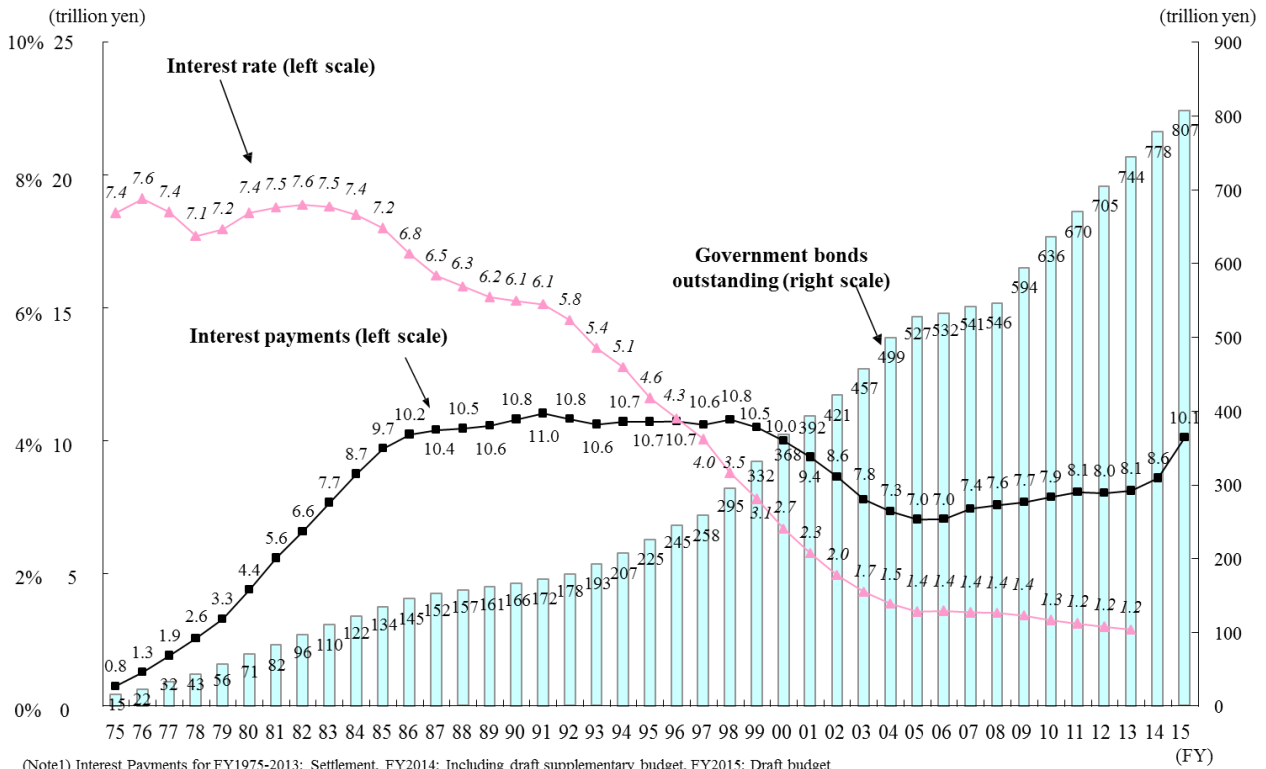
Source: Ministry of Finance (2015)

Figure 2: General Government Net Debt GDP Ratio for G7 countries



Source: Ministry of Finance (2015)

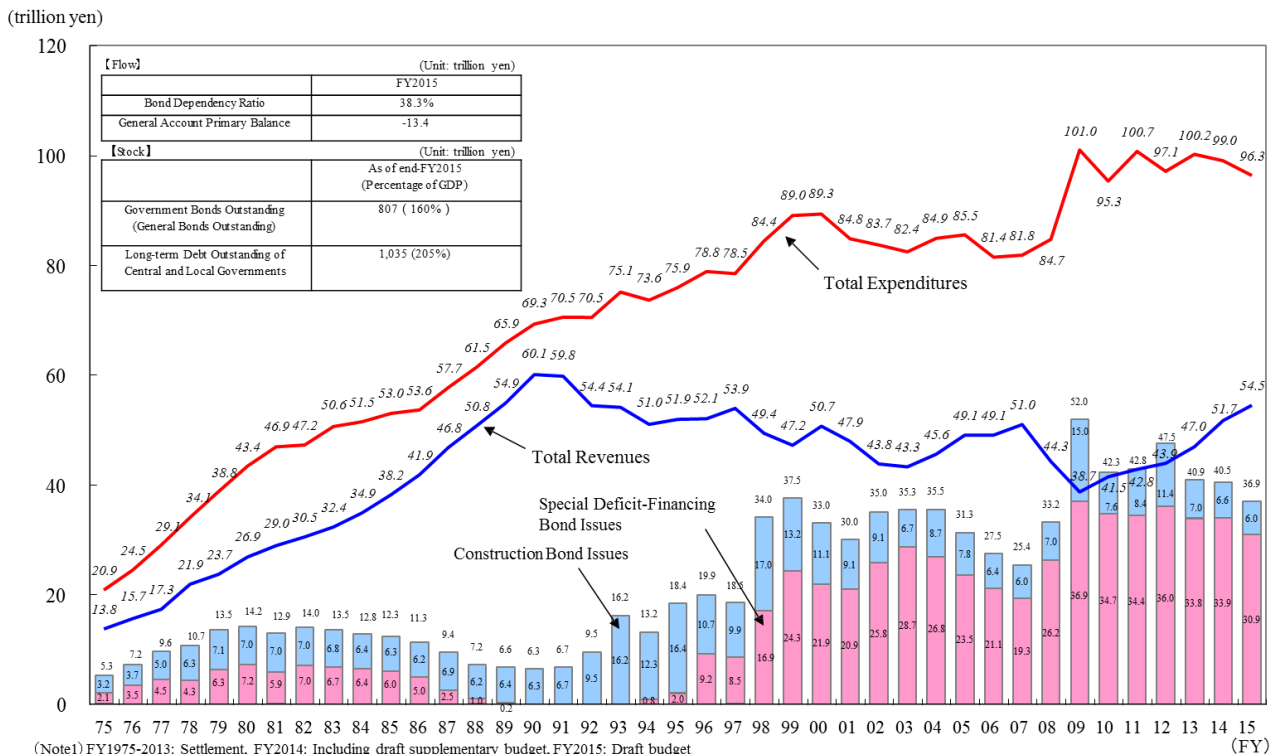
Figure 3: Trends in Interest Payments and Interest Rate



(Note1) Interest Payments for FY1975-2013: Settlement, FY2014: Including draft supplementary budget, FY2015: Draft budget
 (Note2) Government bonds outstanding for FY1975-2013: Actual, FY2014: Estimate, FY2015: Outlook
 (Note3) Government Bonds Outstanding includes reconstruction bonds as a source of funds for measures and projects for reconstruction from the Great East Japan Earthquake (FY2011: 10.7 trillion yen, FY2012: 10.3 trillion yen, FY2013: 9.0 trillion yen, FY2014: 9.4 trillion yen, FY2015: 10.3 trillion yen) and Pension-related Special Deficit-Financing bonds as a source of funds to achieve the targeted national contribution to one-half of basic pension (FY2012: 2.6 trillion yen, FY2013: 5.2 trillion yen, FY2014: 4.9 trillion yen, FY2015: 4.6 trillion yen).

Source: Ministry of Finance (2015)

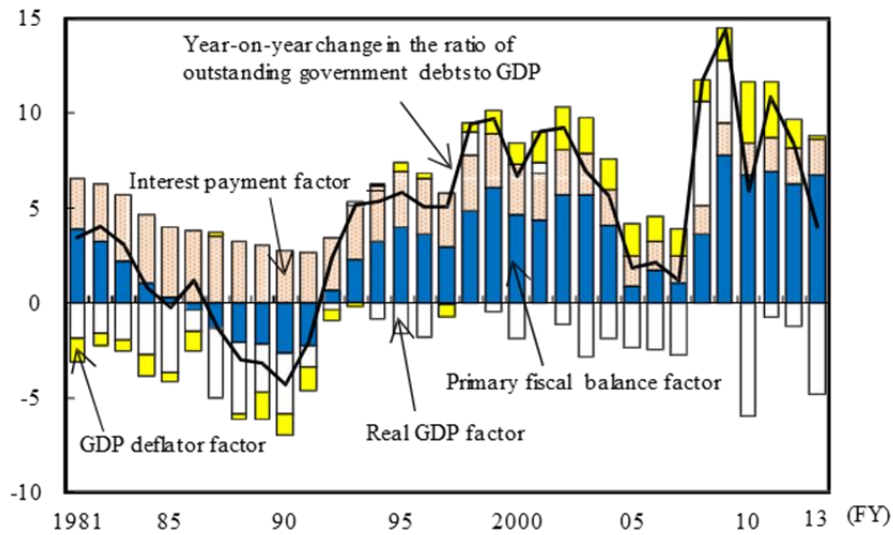
Figure 4: Trends in General Account Tax Revenues, Total Expenditures and Government Bond Issues



(Note1) FY1975-2013: Settlement, FY2014: Including draft supplementary budget, FY2015: Draft budget
 (Note2) Following various bonds are excluded: Ad-hoc Special Deficit-Financing bonds issued in FY1990 as a source of funds to support peace and reconstruction activities in the Persian Gulf Region, Tax reduction-related Special Deficit-Financing bonds issued in FY1994-1996 to make up for decline in tax revenues due to a series of income tax cuts preceding consumption tax hike from 3% to 5%, Reconstruction bonds issued in FY2011 as a source of funds to implement measures for the Reconstruction from the Great East Japan Earthquake, Pension-related Special Deficit-Financing bonds issued in FY2012,2013 as a source of funds to achieve the targeted national contribution to one-half of basic pension.
 (Note3) General Account Primary Balance is calculated by subtracting Primary Expenditures from the sum of Tax Revenues and Other Revenues: It is different from the Central Government Primary Balance on SNA basis.

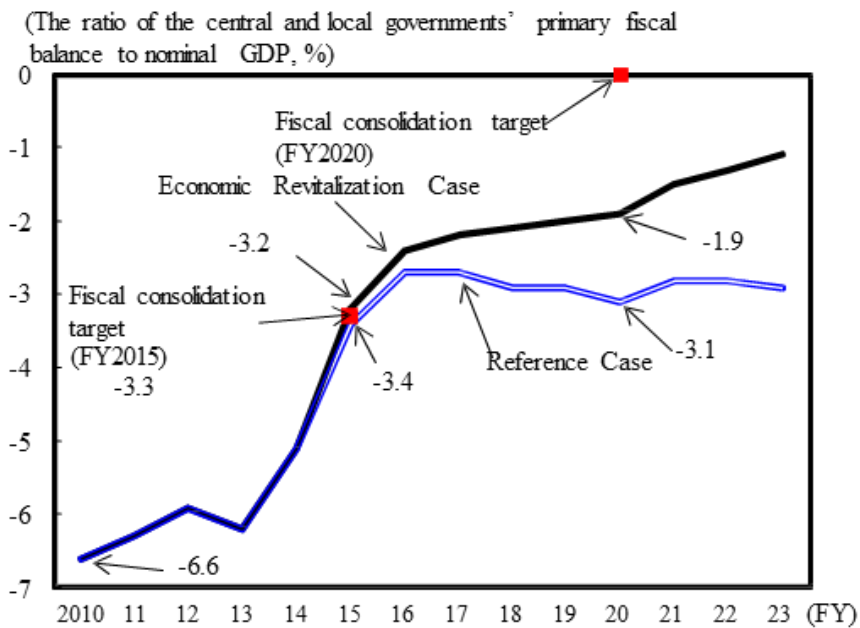
Source: Ministry of Finance (2015)

Figure 5: Factors that raise the ratio of outstanding government debts to GDP in Japan



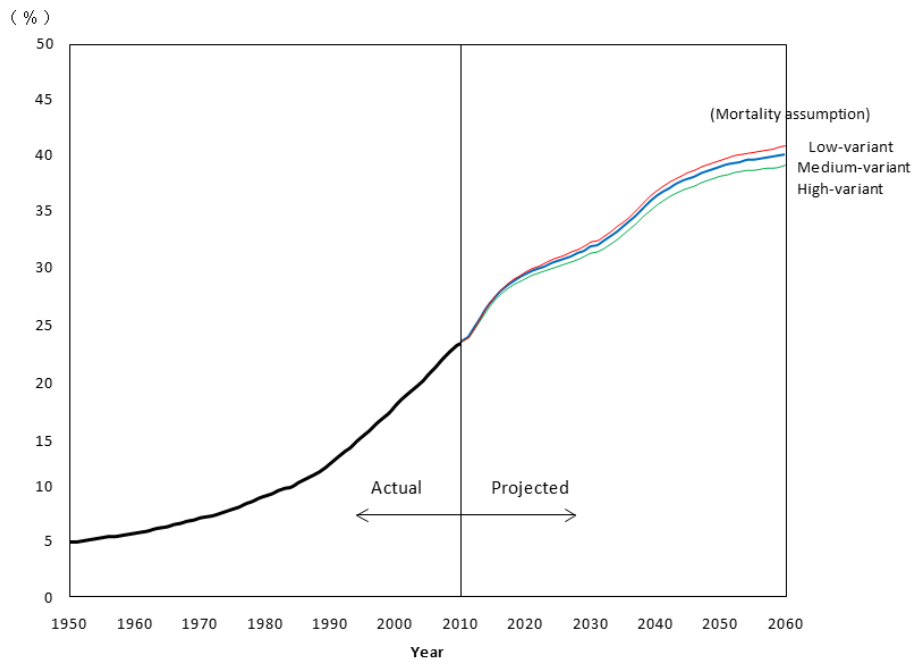
Source: Cabinet Office (2014)

Figure 6: Relationship between the Cabinet Office's Projections for Medium to Long Term Analysis and Fiscal Consolidation Targets



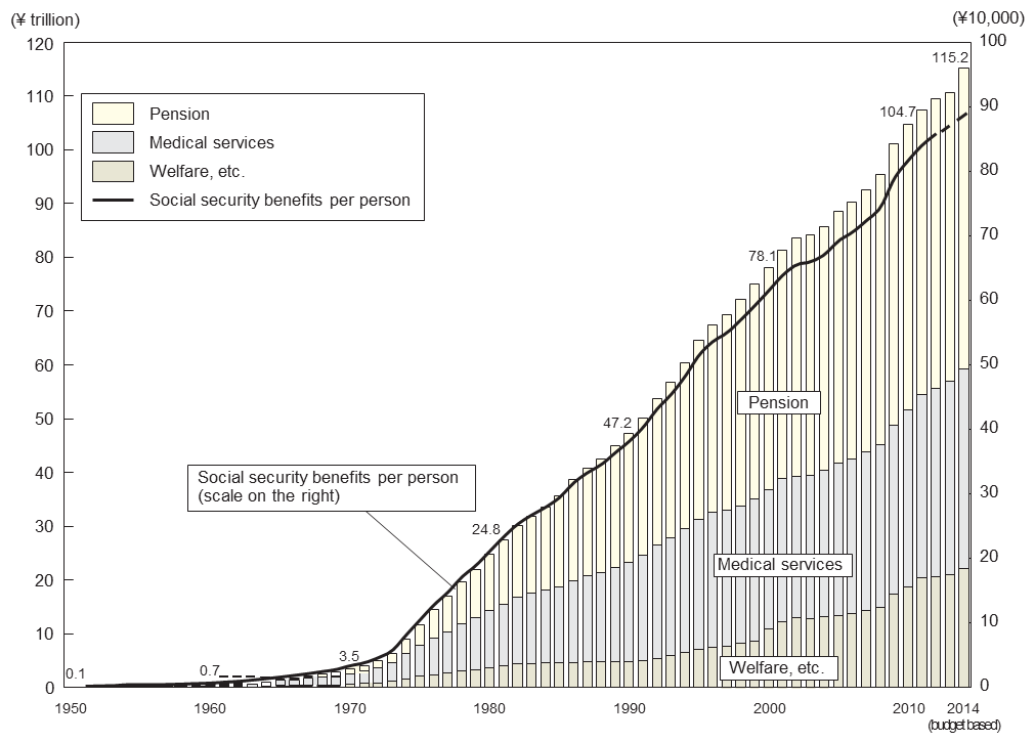
Source: Cabinet Office (2014)

Figure 7: Trends in the proportion of elderly (aged 65 and over): Medium-fertility (medium-, high-, and low-mortality) projections



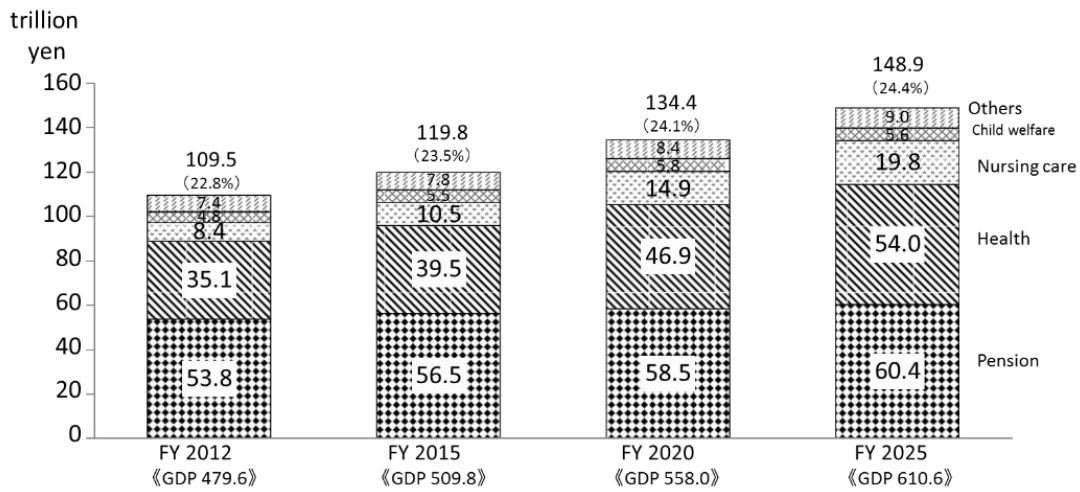
Source: National Institute of Population and Social Security Research (2012)

Figure 8: Trends in Social Security Benefits



Source: Ministry of Health, Labour, and Welfare (2014)

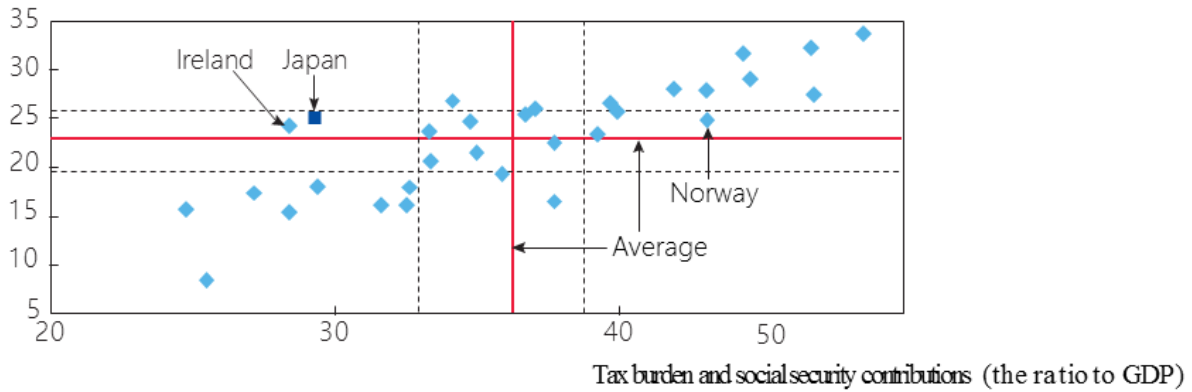
Figure 9: Total Social Security Spending Forecast



Source: Cabinet Office (2014b)

Figure 10: Social Security Spending against Tax Burden and Social Security Contributions for OECD countries

Social security spending (the ratio to GDP)



Source: Cabinet Office (2014)

