Long-term Economic Forecast of the Japanese Economy (2001-2025)

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①If Japan continues to postpone the resolution of the problems its the economy faces today, the outstanding public bonds will balloon to 3.5 times the size of GDP and the country will proceed along the path of collapse to become a net debtor country.

②If public investment is reduced and funds are redirected to research and development, then economic growth will average about 0.6% per year until the year 2025. The current account balance may continue to mark surpluses, but outstanding public debt will still reach crisis levels.

③If the economy can respond positively to the situation, encouraging technological advance from the private sector, the enhanced participation of women in the workplace, and fiscal rebuilding by tax increases, then growth will be above 1% and the public debt problem can be resolved.

The Japanese economy is on the verge of entering into another phase of stagnation. The bad debts problem has not been fully resolved, and this has prevented the financial system from functioning smoothly. Regarding the fiscal balance, Japan now has the largest budget deficit in the world, and the share of outstanding public bonds to GDP is also the highest in the world. This is because while tax revenues are falling due to reductions in tax rates and, on the spending side, economic stimulus packages have been spewed out to no success. Meanwhile, the household sector, feeling an uncertain anxiety about the future, is playing it safe and restraining their spending.

Can Japan successfully break itself free of such gridlock and head towards a revival in the 21st century? In this long-term economic forecast, we use a quantitative macro model of the Japanese economy which incorporates flow and stock variables to estimate what paths the Japanese economy may take.

This model is a supply-side oriented model that focuses on technology (total factor productivity = TFP). The model was constructed under the assumption that research and development activities and investment into education have a profound effect on TFP levels.

The first case scenario is one where Japan is unable to confront the issues it faces with and postpones the resolution of its problems (economic stagnation scenario). In this scenario, a collapse in the external as well as fiscal balances cannot be averted. The second case is a scenario in which there is partial reform (moderate case). Although fiscal collapse is avoided, the economy still faces a great risk due to the increase in government debts. The third scenario is one where some

fundamental reforms take place (positive case). Under this scenario, the Japan makes large advances in resolving the socioeconomic issues, giving the country the capacity to pursue slightly more aggressive policies.

In the first case, no changes are made to the taxation system, and final public consumption and public investment are maintained at the per capita real level of the year 2000. In this case, real economic growth averages 0.1% over 25 years -- thus the economy marks only about zero growth.

Investment is at a standstill and production capacity does not expand. The exporting capacity will falls, net exports of goods and services will start to record deficits from the year 2010, and the current account balance also will begin marking deficits around the same year. After this, the size of the deficit will expand, and the current account deficit will grow to 7% of the nominal GDP by the year 2025. Although Japan will spend most of the 25 years as a creditor nation, it will finally becomes a net debtor nation by the end of the forecast period.

Japan as a whole will experience a shortage in savings as will be manifested in the external balance. There will be no alternative but to procure funds from overseas, leading to a rise in long-term interest rates.

If long-term interest rates increase, then interest payments will also be inflated. Without fiscal structural reforms excess investment (i.e., the fiscal deficit) of the central and local governments will balloon, growing to 104 trillion yen in the year 2025. A vicious circle will begin where interest payments lead to accumulated debt (and therefore more interest payments), and outstanding public bonds will rise to 2,109 trillion yen or 3.5 times the nominal GDP in the year 2025. Moreover, as this huge debt is too massive to be shouldered by only the Japanese people, net external assets will disappear and Japan will become a debtor nation.

In this way, if Japan is unable to confront its several structural issues and continues to delay reform, then we must be prepared for the country to head towards a collapse not just in its external, but also its fiscal balances.

Research and development (R&D) activities expand production capacity by boosting the level of total factor productivity. Japan's expenditure on R&D has been greater than 3% of GDP and is one of the highest in the world by this measure. Even during the recession of the second half of the 1990s, Japan was active in R&D. However, of the total expenditure in R&D, the government's share was relatively low.

In the second moderate scenario, we assume that the government expands its activities in R&D -- in coordination with industry for example -- thereby lowering the risk of these activities of industry. These are to be funded from a reduction in public investment.

That is, we lower the ratio of public investment as a share of nominal GDP to one more in line with the other industrialized countries, about 3% by the year 2025. About half of this reduced amount the government is to spend a half of the reduction in investment on R&D, as a part of government consumption. By spending only half of the amount reduced from public investment ,

the fiscal balance is improved.

Average real growth in the economy will be raised to about 0.6% per year due to a rise in TFP. The real GDP in the final year will be 13% higher than in the first case scenario.

The deficit in the saving and investment balance of the general government will steadily shrink as expenditure declines and tax revenues increase. Although the deficit will not be eliminated by the year 2025, the primary balance of the central and local governments (excludes interest payments) will be marking a surplus shortly after the year 2010, and will steadily increase thereafter.

The outstanding public bonds, at the end of the forecast period, will total about 1.87 times GDP. Japan's bond ratings are already lower than the other industrialized countries' as a result of the accumulated outstanding debt. If outstanding debt to GDP were to continue to rise into the next quarter century, this could trigger a large erosion of the confidence in government debts. With a reform in the expenditure structure to only this extent, there will continue to be large problems in the sustainability of the fiscal accounts.

Thanks to a sustained production and export capacity, the net exports of goods and services will continue to record surpluses, albeit shrinking ones. In contrast to the first case scenario, net external assets will exceed 600 trillion yen by 2025. Net receipts of income from overseas will expand and the current account balance will be around 2% of GDP.

In the third, "positive" scenario, we consider the effects of more active reforms that involves the private sector. In response to an expansion of government R&D activity, the private sector also expands its R&D spending by about the same amount. In addition, many of the female labor force who are working only part time become permanent employees and work longer hours in this scenario. Moreover, because reforming only fiscal expenditures is not a sufficient remedy, the consumption tax is raised to 8% in 2005.

Under these assumptions, the fiscal balance improves significantly, and the government will be able to put some more money into public investment. Public investment is to be raised about the same growth rate as economic growth after 2006, as Japan still has shortfalls in social infrastructures, such as urban transportation and environment.

With a stability in the fiscal structure, the household sector will be more confident about the future and can spend more aggressively. The household saving rate will fall to below 3% around 2025.

With an expansion in investment, real economic growth will rise to an average of 1.1% over the forecast period. Export capacity will expand further and, in the latter half of the forecast period, the amount of the current account surplus will be over 3% of GDP.

The greatest difference between this and the other scenarios is seen in the saving and investment balance of the general government account; the primary balance of the central and local government will begin to run a surplus in the year 2006, and will increase to a high of 30 trillion yen. As a result, the fiscal balance after interest payments of the central and local governments will also

turn to a surplus towards the end of the forecast period. The outstanding public debt will peak around the year 2015 at 1.5 times the GDP. The net liability (after subtracting the financial assets of the central and local governments) as a share of GDP will be about 0.88 in the year 2025 -- less than 1, and return to about the same level it was in 1998. As a result, although there will be a large debt load for the first 15 years of the forecast period, an actual elimination of the debt problem will be on the horizon. The potential national burden rate will peak at about 49%, and the goal to restrain the national burden rate to under 50% will be met.

What conditions have to be met to make the results of this positive scenario a reality?

First, the size of fiscal expenditure must be reduced and the allocation of funds must be changed. Each expenditure item must be reassessed in light of its relation to policy targets with a clear vision of the future in mind. Assuming this kind of fiscal expenditure reform, we should accept a greater burden. The Japanese tax system, income taxes in particular, has become weak. In order for the people to take ownership of the fiscal situation rather than shaking it off as a government issue, it is important that fiscal discipline be much more stringent.

Second, it is important that the activities that enhance the possibilities for the economy , such as R&D, are highly evaluated. Education is very important to this end, and the government must be more actively involved in R&D.

Third, it is important that an environment be created that encourages women and the elderly to join the workforce, and this is not just from the perspective of supplementing the shrinking labor force. Childcare and daycare, and nursing care facilities play a major role in attaining this goal, and this is where public works spending can be directed.

Japan will be experiencing an absolute decline in its population before the rest of the world does. From a “flow” perspective, it will be difficult for Japan to maintain its position as an economic superpower. However, we must be careful not to place too much importance on the growth rate. In these three scenarios, the variation in economic growth between the three scenarios is at most only 1%, but the differences in investment-saving balance, assets and liabilities outstanding of economic sectors are significant. The what is vitally important is the positiveness of reforms.

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Table 1. Real GDP Growth

	2000-05	2005-10	2010-15	2015-20	2020-25	2000-25
Stagnation Case	0.3	0.1	-0.1	-0.1	0.2	0.1
Moderate Case	0.9	1.0	0.5	0.3	0.3	0.6
Positive Case	1.4	2.2	1.0	0.6	0.5	1.1

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Table 2. Major Ratios

	1998	2005	2010	2015	2020	2025
Stagnation Case						
Current Account /GDP	3.2	1.0	−0.5	−2.5	−4.8	−7.0
Fiscal Balance/GDP	−13.0	−9.2	−9.7	−10.7	−12.4	−17.1
Potential National Burden Rate	51.1	49.7	53.7	58.0	62.1	68.8
Outstanding Public Debt/GDP	114	163	199	240	288	347
Moderate Case						
Current Account /GDP	3.2	2.4	2.2	2.7	2.3	2.6
Fiscal Balance/GDP	−13.0	−6.0	−4.8	−3.8	−3.0	−2.1
Potential National Burden Rate	51.1	45.6	47.3	49.0	49.7	49.9
Outstanding Public Debt/GDP	114	149	163	175	183	187
Positive Case						
Current Account /GDP	3.2	−2.0	1.9	3.2	3.5	3.8
Fiscal Balance/GDP	−13.0	−4.1	−2.6	−1.4	−0.5	0.4
Potential National Burden Rate	51.1	46.9	47.6	49.1	49.3	49.1
Outstanding Public Debt/GDP	114	146	148	150	149	144

Note: Fiscal Balance refers to saving-investment balance of the central and local governments.
Potential National Burden Rate is the share of the sum of taxes and social security contributions and (minus) general government saving-investment balance to national income.
The denominator is nominal GDP. Based on 1968SNA.

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