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Ensuring that Japan Remains an Economic Powerhouse

— Female Labor Participation Key to Building World-Class Workforce —

Japan Center for Economic Research*

The Japanese economy remains mired in a slump now known as the “lost two decades.” Japan was once said to have “second-rate politics but a first-rate economy”. However if present trends continue, the economy could also sink to second-rate status—or worse. What lies ahead is not just a mild decline. Our 39th Medium Term Forecast for the Japanese Economy [<http://www.jcer.or.jp/eng/economic/medium.html>] warns that the burden on government finances from the rapid aging Japanese society and the world’s largest public debt could ultimately lead to an economic collapse.

Overcoming the many economic challenges the nation faces will require sound economic growth. In this era of accelerating globalization, another critical issue will be how the framework for international politics and economics is to be built. If Japan is to influence this process, the country will need a certain degree of economic leverage. Japan must remain within the ranks of the world’s leading economies, targeting a per-capita gross national income (GNI) of \$50,000—the level which the US and advanced economies of Europe are now achieving.

Economic growth is rooted in continued innovation and the human talent which creates that innovation. It cannot be said that Japan is devoting sufficient resources to education compared to other countries. We have the seeds of technology but insufficient capacity to grow them into flourishing business enterprises. Overhauling the nation’s higher education system, for example by promoting college-born venture companies, could provide a promising way out of this dilemma. Promoting economic integration by joining the Trans Pacific Partnership (TPP) would likely expand opportunities for friendly competition between domestic and overseas companies and industries, leading to a stronger economy. Meanwhile, women in Japan remain a largely untapped resource, their full potential stifled by outdated employment practices, tax rules and other sundry constraints. Fully exploiting this resource will require that employment practices be changed to enable mothers to combine work with

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childrearing. Female labor participation should be seen as the key linchpin in the effort to building a world-class workforce.

Harnessing this vitality will require that Japan's social institutions be viable. The population decline must therefore be halted one way or another. If present trends continue, the tax and social insurance systems will be unable to function. We suggest that stabilizing the population at about 100 million should be made a national goal.

Placing government finances on sound footing is another critical task. If the government commits itself to a clear reform plan incorporating tax hikes and spending cuts, adopting policies friendly to economic growth would be easier, removing the need to choose between either balancing the budget or stimulating the economy. Given stable growth, job opportunities will increase and career options will diversify. The road to a brighter future should be pioneered through innovations aimed at creating a quality workforce and a diversity of work styles.

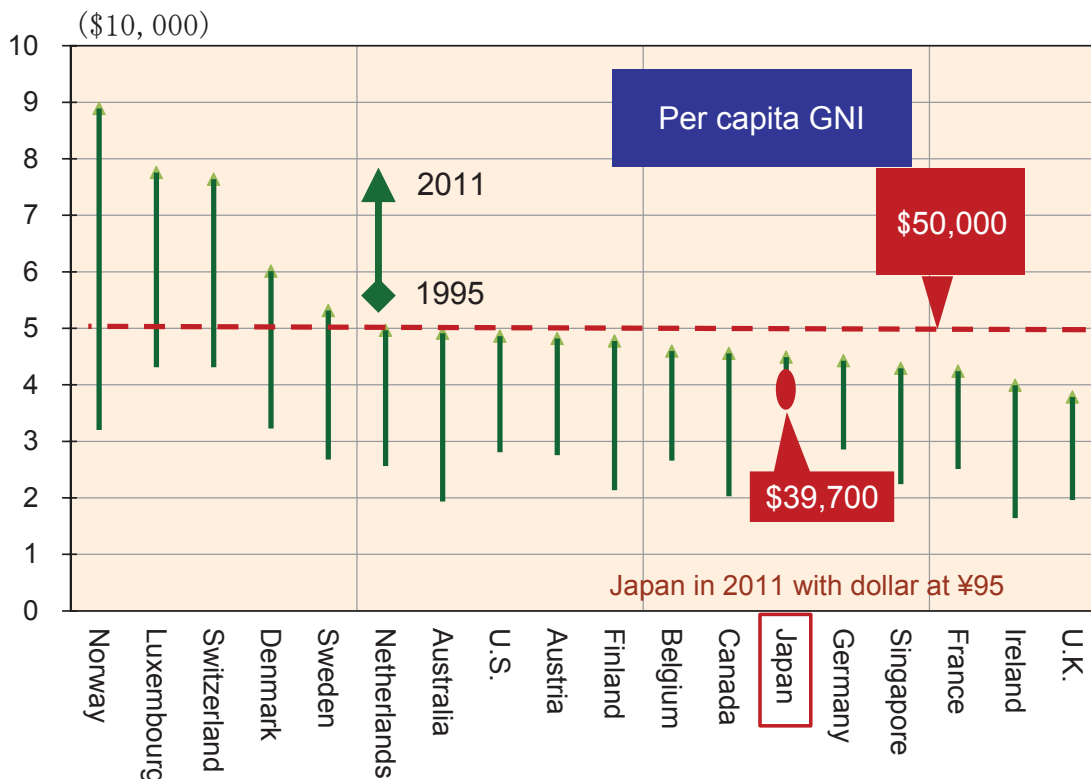
This year, the Japan Center for Economic Research (JCER), a public interest corporation, celebrates the fiftieth anniversary of its founding. In marking this occasion, we have referred to our long-term economic forecast in presenting policy proposals focusing on actions we believe should be taken to ensure that Japan's economy in 2050 will abound with vitality and promise. As 2013 gets under way, we present our views on the challenges to be overcome and the steps to be taken.

1. The \$50,000 Hurdle: Ticket to Leading Nation Status

One parameter used in considering whether a nation can be ranked as a leading economy is per capita gross national income (GNI), which takes into account income earned in other countries. World Bank data show that Japan’s per capital GNI for 1995 ranked among the top five worldwide. This was due in part to strong yen as the dollar declined below ¥80, but Japan’s per capita GNI at \$41,350 nevertheless topped that of the U.S. and those of such European countries as Denmark and Norway as well (Figure 1). However, even though the yen had strengthened in 2011, raising Japan’s per capita GNI a bit higher to about \$45,000, Japan ultimately slipped below tenth place among the world’s advanced developed nations. During this time, European countries such as Norway, Switzerland, Denmark, and Sweden surpassed the \$50,000 level, and countries like the United States and Canada also pulled ahead of Japan.

The equilibrium dollar-yen rate can be regarded as being around ¥95. If the dollar were trading at ¥95, Japan’s per capita GNI would fall below the \$40,000 level to about \$39,700, making the \$50,000 hurdle that much higher. If the leading countries of Europe and North America continue to move steadily forward, Japan could become the sole laggard. Per capita GNI of \$50,000 would seem a reasonable benchmark for judging whether any country should ranked among the leading nations.

Figure 1 Europe and North America Pass Japan



Source: World Bank, *World Development Indicators*. Data for some smaller countries omitted.

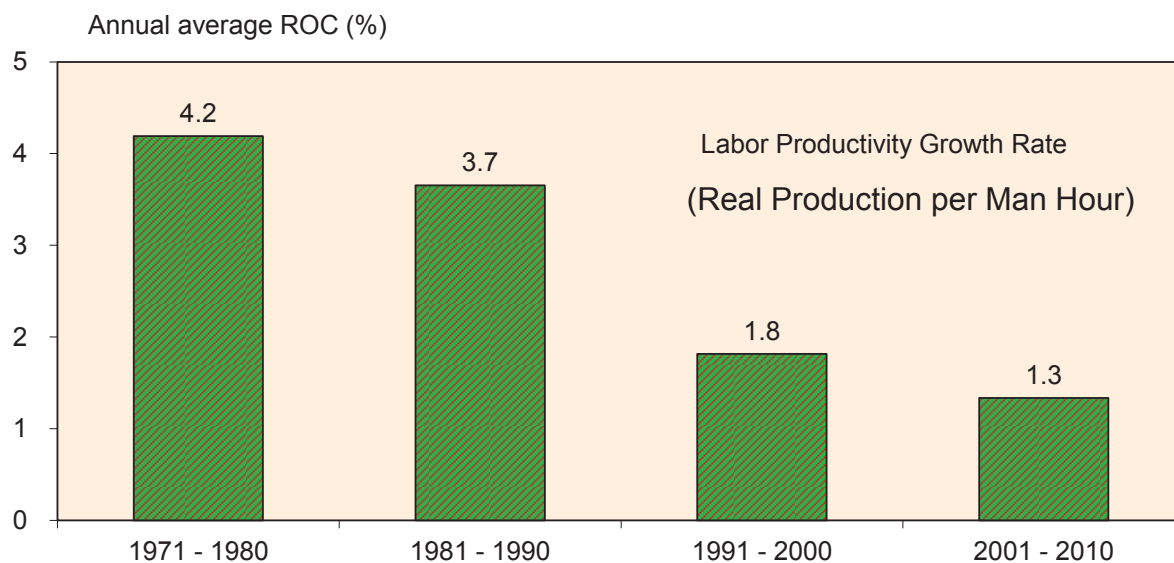
2. Room to Improve Labor Productivity: Foster Innovation with Reforms

Economic growth is the product of three factors, namely the labor force, the stock of facilities (capital stock) and technological advances. However, increasing the tangible factors of production such as labor and capital alone does not lead to sustained economic growth. The Japanese population has begun to fall, and the labor force is therefore set to decline. The effectiveness of efforts to offset this trend simply by increasing capital stock would gradually diminish (due to diminishing marginal productivity). As the size of the capital stock grew bigger, ever larger investments would be needed just to replace aging facilities, making it increasingly difficult to improve productivity. Ultimately, technological advances would be the sole means of boosting per capita income.

Figure 2 presents the growth rate of Japan's labor productivity (output per unit of labor) by the decade, showing that it grew at about 4% from the 1970s (the decade when the two oil shocks occurred) through the 1980s. However, it fell to 1.8% in the 1990s as the bubble economy deflated and further to 1.3% in the 2000s, when the Lehman Shock occurred. The "lost two decades" therefore represents a twenty-year period of declining productivity.

Technological progress does not refer just to engineering and technical innovations such as the creation of the Internet. It also includes technical progress in the broader sense, including improvements in business models such as Toyota's *kanban* logistic control system or Uniqlo's specialty store/retailer of private label apparel (SPA) structure, as well as shifts in labor and capital to fields of greatest productivity. This is why efforts to promote improvements in productivity must focus on the economy overall with a view to furthering innovation and economic integration.

Figure 2 Falling Productivity During the Lost Two Decades



Source: JCER estimates based on the *System of National Accounts (SNA)*, *Monthly Labor Survey*, and the *Labor Force Survey*. Labor productivity is defined as real GDP divided by total labor inputs (the number of employed \times hours worked). Calendar year basis.

Universities Can Help Drive Growth

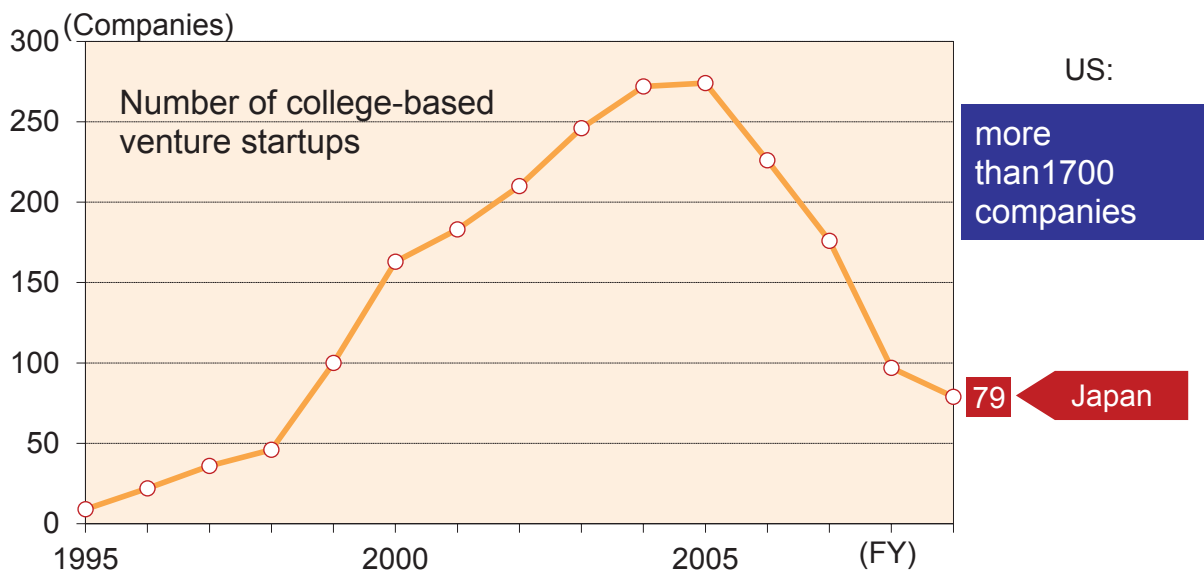
Economic growth is born from sustained innovation and the human resources that give birth to that innovation. Education should therefore be a key policy target.

We do not believe Japan has been devoting sufficient resources to research, development and education when compared to other countries. Japanese research and development spending is by no means negligible compared to that of Western countries and ranks high as a share of GDP as well. Nevertheless, it doesn't translate into cutting-edge business startups. Japan compares especially unfavorably to the United States, where highly competitive companies such as Google, Amazon and Apple appear on a consistent basis. Some Japanese observers are deeply concerned that U.S.-based entrepreneurs might even be first to commercialize applications for induced pluripotent stem cells (iPS cells), for which Professor Shinya Yamanaka of Kyoto University won his Nobel Prize. After all, no links or framework exists among industry, government and the academic community in Japan to translate research findings into commercial applications.

University reforms might offer a way out of this dilemma. R&D spending by colleges as a share of all such spending in Japan is just 20%, and the number of venture startups in Japan doesn't compare to that of the United States. This number fell below one hundred in fiscal 2008 (April 2008–March 2009), the year of the Lehman Shock, and shrank to just seventy-nine in FY2009 (Figure 3). The number for the U.S. exceeds 1,700 annually, and this succession of IT and biotechnology venture companies is a major source of American competitive prowess.

Although options such as expanding tax incentives and through an angel tax system exist, transforming Japanese universities into engines of innovation will require that colleges be more than ivory towers, that they establish close links with businesses engaged in economic activity at home and abroad. For example, internships might be used to further the smooth flow of knowledge between the private sector and colleges. Reforms of Education, Science and Culture Ministry regulations should also be made to encourage many more appointments of people from the private sector to teaching positions in the colleges. Even as efforts are made to enhance freedom in the colleges, some framework is necessary to allow poorly rated colleges to close. Opinions will vary, but it may be the time to give serious consideration to privatizing the national universities.

Since it is very difficult for research scientists to commercialize promising research findings on their own, there is a need for experts specialized in marketing and finance and coordinators who can establish links with industry circles. Toward that end, "open universities" are essential. In Singapore, people at the global level having extensive knowledge in various fields are known as "peak and deep talent." Japanese colleges should take the cue from this example, reinventing themselves into rich sources of outstanding talent.

Figure 3 College-Born Startups: Japan Far Short of U.S.

Source: *Academic Startups Survey 2011*, National Institute of Science and Technology Policy, Ministry of Education, Culture Sports, Science and Technology.

Unleash People, Goods and Money: Tax Incentives for Talented Foreigners

It is critical that Japan join in negotiations for a Free Trade Area of the Asia-Pacific (FTAAP) which is keyed to the Trans-Pacific Strategic Economic Partnership Agreement (TPP). Such a move would enable Japan to tap into the wealth of demand in Asia, which by around 2020 will represent an economic region seven times the size of Japan's economy. Japan should also sign an economic partnership agreement with the European Union and bring the nation's share of trade covered by free trade agreements up to 80% or more. Displaying greater vigor than Japan in electronics and automobiles, South Korea has been aggressively pursuing trade liberalization. Japan therefore needs to frontload trade liberalization efforts if it wants to remain internationally competitive

Such active participation in economic partnership negotiations is also important to ensure that Japan has a voice in the creation of new rules regarding trade, services and investment. Important issues in this context will not be limited to liberalization of goods and capital but will include internationalization of human resources as well. Some observers have called for hiring of licensed practical nurses (LPNs) and personal care assistants (PCAs) from abroad, and the first step in this process would be attracting such talented workers to Japan. This could be facilitated by easing immigration procedures for foreigners having strong technical and other skills in the way that European countries or Singapore have done. It would also be worth considering tax incentives to lighten their income tax burden.

In addition to these efforts regarding personnel, it may also be worth considering major reforms of the tax system, even waving of the corporation income tax in some instances, to make it easier for highly productive foreign and domestic companies to invest in Japan.

Energy and Anti-Disaster Investment to Spur Growth

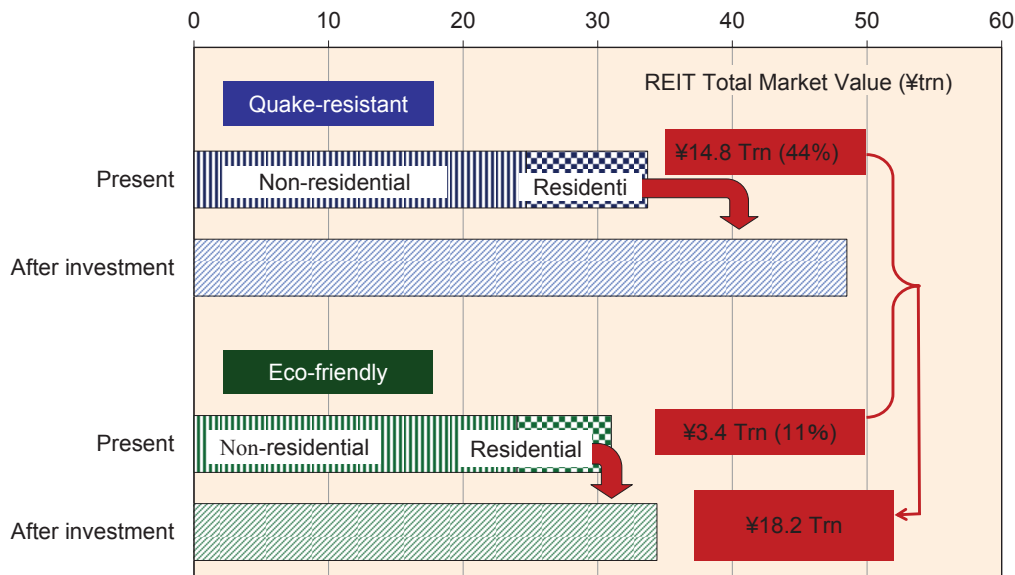
Commercialization of ideas capable of satisfying potential demand can in many cases lead to improvements in productivity.

Determined to strengthen the national infrastructure through measures dealing with natural disasters and aged facilities, the Abe government appears set to step up efforts to invest in public works. The government is considering a supplementary budget of some ¥10 trillion, but priorities need to be ranked if the kind of pork-barrel politics of the 1990s is to be avoided. Priority should be given to investment for the future, as for promoting recovery from the Great East Japan Earthquake, disaster prevention and reduction, and development of renewable sources of energy, just as ideas on how to mobilize private-sector know-how and capital will also be important.

Specifically, we would propose the creation of a power grid which would make it possible to maximize the exploitation of potential sources of renewable energy. Plans have gotten under way to bring wind power generation on line in Tohoku and Hokkaido, but there is no means to deliver the electric power to the cities. Electric power companies have been short of resources as their earnings have deteriorated since nuclear power plants were taken off line. The state should therefore state its policy and step in to shoulder part of the cost. The government and the private sector should work together in building the power grid. Strengthening the grid will boost the capability of power companies to share power and thereby help reduce or prevent disasters.

Shoring up the grid will do more than promote disaster reduction and the proliferation of renewable energy. Over the longer term, it will enhance competitiveness in the electric power market and provide a basis for promoting liberalization of electric power. Increases in electricity rates will be unavoidable in view of the increase in thermal generation to replace nuclear power following the accident at the Fukushima Daiichi nuclear plant, and in view of the costs necessary for the cleanup and decommissioning of reactors. It will therefore be critical to promote competition in the electric power industry to bring down electricity rates if only a little. But even if steps are taken through institutional reforms to enable new operators to enter the market, the competition among operators necessary to bring down electricity rates is unlikely to arise unless a system is in place for transmitting electric power throughout the country. The new government comprising the Liberal Democratic and Komei parties has indicated it will continue studying proposals to reform the electric power system made when the Democratic Party of Japan was in power, and strengthening of the power grid would conform with such efforts. Disaster reduction, promotion of renewables and furthering competition in the electric power industry would be killing three birds with a single policy stone.

Figure 4 Large Potential Demand for Environmental and Quakeproofing Work



Source: See our report, “Investment in Prime-Environment Real Estate could Boost Land Values by ¥18 Trillion,” October, 2012.

In view of chance for a Nankai Trough earthquake or a Tokyo inland earthquake, a system to easily share power between east and west Japan is needed. Steps must therefore be taken to standardize frequencies between the two regions. Estimates put the cost at ¥10 trillion, but the government plans to continue the nuclear fuel cycle program despite its ¥19 trillion price tag. Creation of an electric power supply system that is truly national is not the responsibility of the private sector but of the government. Also needed are infrastructure repairs to rectify aging of roads, bridges and tunnels, but if a disaster strikes, priority should be given to the nation’s critical key regions and main corridors.

Support might also be given to improving the earthquake resistance and energy efficiency of office buildings. The government might certify buildings which meet certain standards and enact bold investment tax credits as to allow lump-sum depreciation quake-resistant and energy-efficient facilities. Perhaps interest-free loans for condominiums and other housing might be considered. Our estimates indicate there is a potential for ¥64 trillion in new investment in prime-environment real estate the value of which could be greatly enhanced through quake-proofing and energy efficiency investment, and that investment could potentially add some ¥18 trillion to the existing value of the properties (by total market value) (Figure 4). Packaging prime-environment real estate as Japanese real estate investment trusts (J-REITs) could also attract investment from institutional investors.

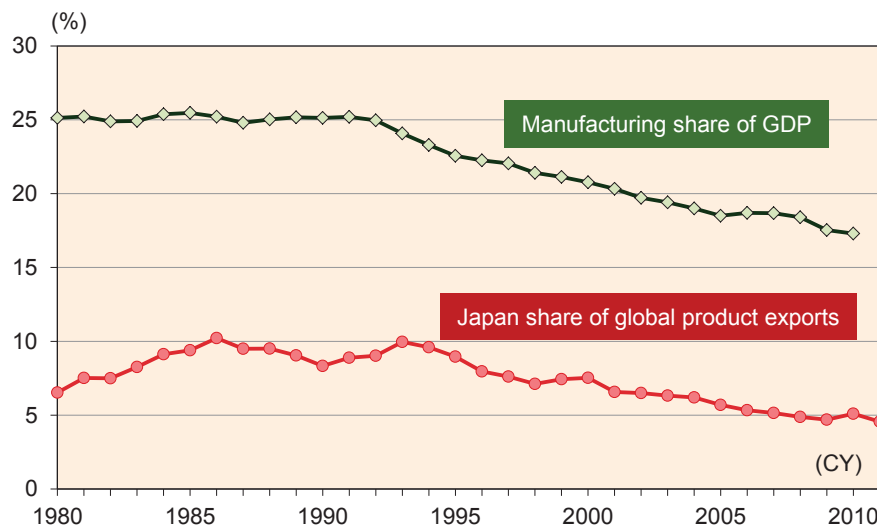
Kick Start Manufacturing Industry Now

In our 39th Medium Term Forecast for the Japanese Economy, we noted that both demand and jobs would in the future be concentrated in the services industry, including medical care and care giving. Although lifting productivity in this field is critical,

manufacturing is no less important. According to McKinsey Global Institute, the manufacturing industry accounts for 90% of the world's private-sector R&D and 70% of exports. It accounts for 16% of world GDP but it accounts for 37% of increases in productivity. The role of the industry may be even more significant than appearances would indicate if promotion, customer support, distribution-related financing and insurance and other associated services are included.

The share of the Japanese manufacturing industry in global trade has fallen (Figure 5), and it has lost some of its former status. Prospects for Japan's IT and software industries in particular don't look good when compared with those of South Korea or the United States. Unless the industry can reinvent itself as one that could truly be described as a new manufacturing industry combining Japan's unique strength in craftsmanship and IT-related services, hope for increased productivity will remain a pie in the sky.

Figure 5 Lost Luster of Japan's Manufacturing Industry



Source: Cabinet Office, *System of National Accounts*; International Monetary Fund, *International Financial Statistics*.

But new trends in the industry are already evident. In the Higashida district of Kitakyushu, for instance, the Ministry of Economy, Trade and Industry has provided support for a smart grid experiment jointly implemented by the city of Kitakyushu, Nippon Steel, Japan IBM, Fuji Electric, Nippon Steel (now Nippon Steel & Sumitomo Metal Corporation), Yaskawa Electric and others. The project has demonstrated that power consumption can be reduced by more than 10% through variations of electricity rates about five-fold in accordance with the balance of power supply and demand. At present, a display installed in the home only notifies customers of electricity rates for the following day based on weather forecast and other data. In the future, however, control of household appliances will be linked with changes in electricity rates and electricity supply conditions. Such technical innovation through the use of information technology requires not just the manufacture of semiconductors and devices but system operations know-how. International standardization of the various types of devices

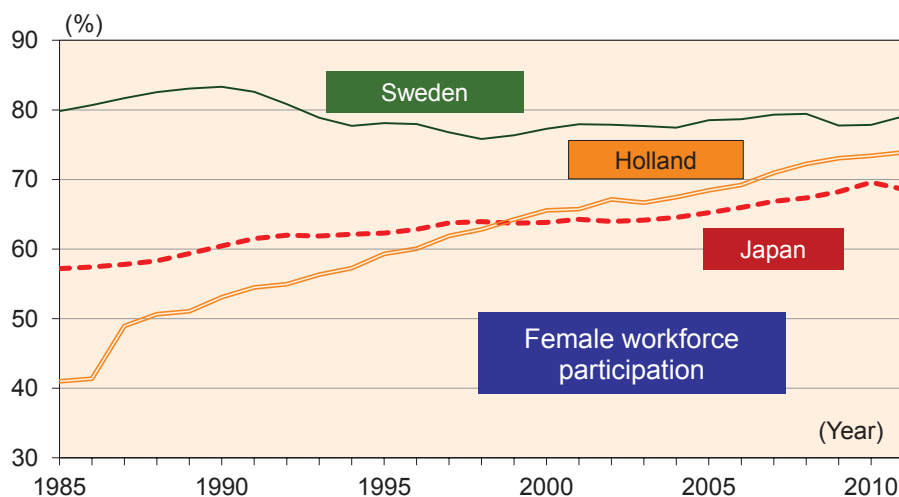
used with smart grids will be necessary for the technology to become widespread, and competitiveness will be enhanced as companies vie to propose adoption of different methods and systems. For this reason too, Japan must step up efforts to become a nation of free and open markets.

3. More Women in Workforce to Lift Growth Rate

The number of working women has risen since the Gender Equality in Employment Opportunity Act of the mid-1980s, but the share of women in Japan's workforce is low compared to Holland and other northern European countries (Figure 6). The International Monetary Fund (IMF) has estimated that Japan's GDP would rise by 8% as of 2030 if Japan closed this gap. On an annualized basis, this finding means that Japan's economic growth rate would improve by about 0.4% point. Women in Japan could therefore be seen as a largely untapped resource for growth.

Hampered by an eroding population with falling birth rates and an increasingly aged population, Japan more than any other country needs to harness the power of women. The Organization for Economic Cooperation and Development (OECD) points out that there is a 40% disparity between wages paid to men and women between the ages of forty and forty-five, which is second only to South Korea as the largest disparity among OECD countries. One reason is that women are pressured into leaving their jobs after becoming mothers, after which it becomes hard for them to return to work as regular employees.

Figure 6. Female Workforce Participation: Japan Lags Holland, Northern Europe



Source: Organization for Economic Cooperation and Development (OECD)

The relationship between the female employment rate and the wage disparity is an inseparable one and partly explains why Japan is not fully benefiting from the power of women. Known for its progressive working environment with equal pay for equal work, Holland has rapidly increased female participation in the workforce over the past twenty years and achieved status as a \$50,000 per capita GNI nation. By making no distinctions in wages,

promotions, taxes and social security between regular and irregular workers, Japan could accelerate the participation of women in the workforce, create an environment in which both husband and wife could work while raising their families, and halt the erosion of the population while boosting the growth rate at the same time.

In the context of employment practices based on the seniority system, Japan therefore needs to create an employment and wage system based on job duties and spheres of responsibility. Along with traditional model provided by the regular employment system, Japan should also have an employment model which accommodates expert workers able to change jobs smoothly by leveraging their specialized talents. This would diversify the career paths available and help increase opportunities for different work styles.

Marriage and motherhood are obstacles for working women. Once mothers stop working, their experience is rendered meaningless, and in most cases they can only find jobs as irregular employees even if they do go back to work after raising their children. What is most urgent for married women are the problems of time and travel since they have to work through a fixed working day and commute to their workplace. The key is to have a system with greater freedom of working hours and location so that mothers while remaining regular employees can opt for shorter working hours and work at home when childrearing demands. Our previous studies have found that if a short workday system were in place then about 30% of the women choosing to leave their jobs to have children would not need to resign at all. Only 10% of business firms believe that adoption of work styles stressing home life would undermine their competitiveness.

However, this would require changes in employment practices and working styles for male regular employees based on the principle of long working hours. In Holland, the reforms were successful because the government mediated between labor unions and employers. In this way, the government, workers and employers must all work together.

4. Establish Population Target: Maintain 100 Million for Next Century

Japan's social insurance system, comprising the national pension and medical care systems, was designed under the assumption that a certain population level would be maintained into the future, so if that population continues to erode, the system is sure to collapse.

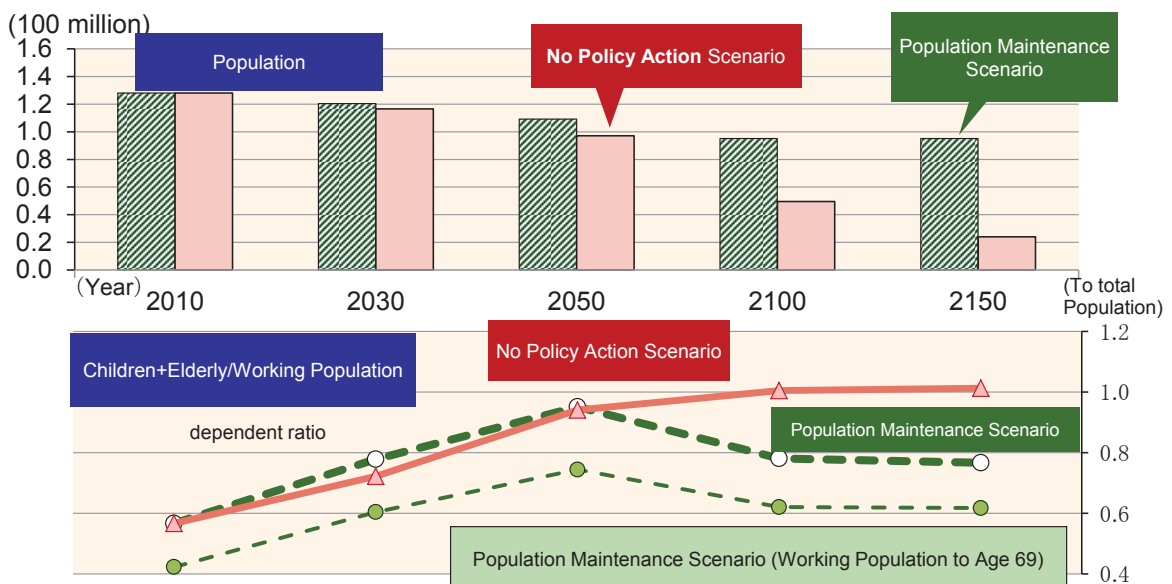
According to median projections by the National Institute of Population and Social Security Research (IPSS), assuming that Japan's total fertility rate remains unchanged at about the 1.3 level, the total population will likely fall below 100 million prior to 2050. If that happens, the dependency ratio (or the ratio of children plus elderly to the total working age population aged 15 through 64) would trend higher, reaching nearly 100% in 2050 (Figure 7). This means that one member of the working generation would be supporting an additional member of the elderly or child population.

On the other hand, if all policy measures are brought to bear to boost the fertility rate in stages such that by 2030 it comes in line with France’s present rate of about 2.1 and is then maintained, the population would settle at about 95 million around 2100. Although the dependency ratio would rise for a time owing to the increase in the child population, it would turn down again from around 2050 and by 2100 fall to around 78%, or just under 80%.

One possible plan for holding down the rise in the dependency ratio would be to change the definition of the elderly population, making changes in the compulsory retirement system and the age at which payment of pension benefits is commenced. If, for example, the definition of an elderly person was age seventy or more and those able to work continued to do so as long as possible, the dependency ratio as of 2100 could fall to as low as 62% if the population can be maintained, versus 76% if nothing is done. The ratio of 62% represents essentially the level of the present dependency ratio.

If these population targets are to be achieved, it will be crucial for the government to institute tax and social welfare measures to support childbirth, childrearing and education while closely monitoring the participation of women in the workforce, and even then it is difficult to imagine the fertility rate recovering easily. Being a major nation, it may be time to Japan to seriously consider taking in more immigrants. A possible target might be taking in around 200,000 immigrants each year, but instead of regarding them as so much manpower, efforts should be made to turn the second and third immigrant generations into forces to drive growth. Providing educational programs for immigrants and their families to promote their assimilation into Japanese society would be an investment for the future.

Figure 7 Ease Burden on Working Population by Maintaining Population



Source: National Institute of Population and Social Security Research. JCER estimates for the Population Maintenance Scenario assume that the total fertility rate remains unchanged at 2.1 from and after 2030. (The total fertility rate represents the number of children borne by a single woman during her lifetime.)

5. Government Agenda Now: Beat Deflation, Balance Budget, Achieve Growth

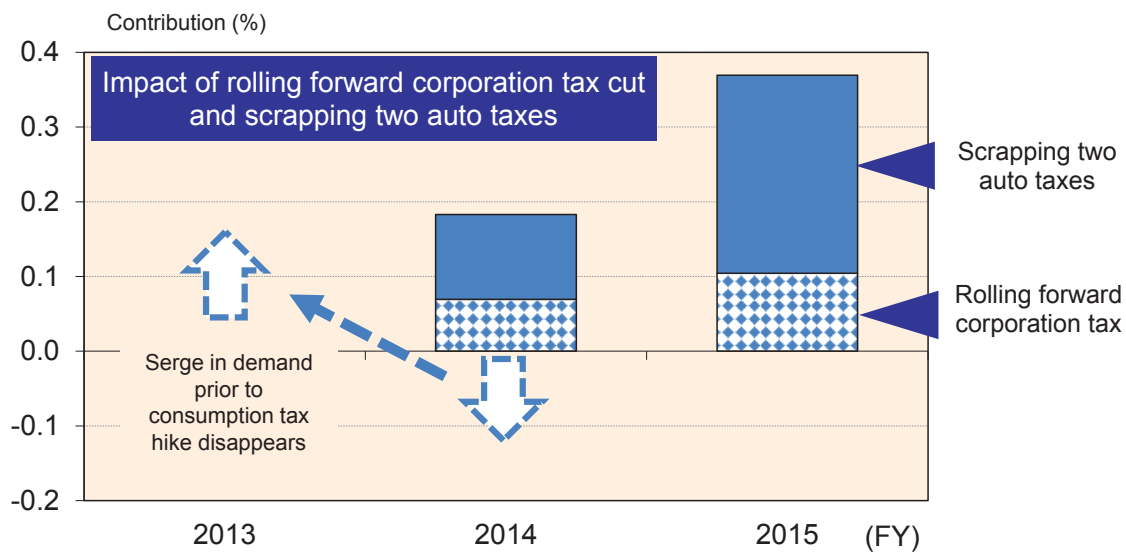
In our 39th Medium Term Forecast for the Japanese Economy released in December of 2012, we argued that Japanese government finances would not improve even if the consumption tax were raised by 10%. We also predicted that Japan's current account balance would turn negative around 2020 and that the margin of the deficit would rapidly expand. Once Japan is beset by these twin deficits, it will be difficult to rely any longer on domestic savings to finance issues of government securities, raising the possibility of a government default.

Keep Promise to Raise Consumption Tax

Despite these severe constraints, there is a way to overcome deflation, balance the budget and achieve growth all at the same time. First, it will be important to clarify the steps to be taken in raising taxes and cutting spending. Once there is a government commitment (promise) to do this, it will be possible to roll forward measures designed to revitalize the private sector, including cutting the corporate income tax and lightening social insurance premiums. Putting off increases in the consumption tax planned from FY2014 would be unwarranted. It would undermine confidence in the Japanese government at home and abroad, and it would not only hamper issuances of government securities but undermine the government's freedom to conduct fiscal policy.

Rather, the government should find any and all means to ease any negative impact from the higher consumption tax. Options include rolling forward the planned corporation income tax cuts or scrapping the automobile weight tax and the automobile acquisition tax. The corporation income tax cut was postponed to FY2015 to help finance the recovery from the Great East Japan Earthquake. The tax cut should be rolled forward one year. Such a move would lighten the corporate tax burden by ¥700 billion in FY2014. If the two auto-related taxes are abolished in tandem with the hike in the consumption tax, the tax burden incurred when buying a car in FY2014 would be lighter. This would help prevent demand from being pulled forward and concentrated in FY2013, only to retract once more in FY2014. If we estimate the impact of rolling forward the corporation tax cuts while scrapping the two auto-related taxes (about ¥900 billion), the impact of the tax cuts would be extended and help shore up the economy for two years from FY2014 (Figure 8).

Estimates are that a concentration of demand for cars ahead the tax changes would contribute about one tenth of a percent to GDP, but since eliminating the two auto-related taxes along with the consumption tax hike would remove the incentive for consumers to roll their auto purchases forward to FY2013, it would prevent a contraction of buying in FY2014, the combined impact of the corporation income tax cuts together with the scrapping of the two auto-related taxes would lift the FY2014 growth rate by four tenths of a percentage point.

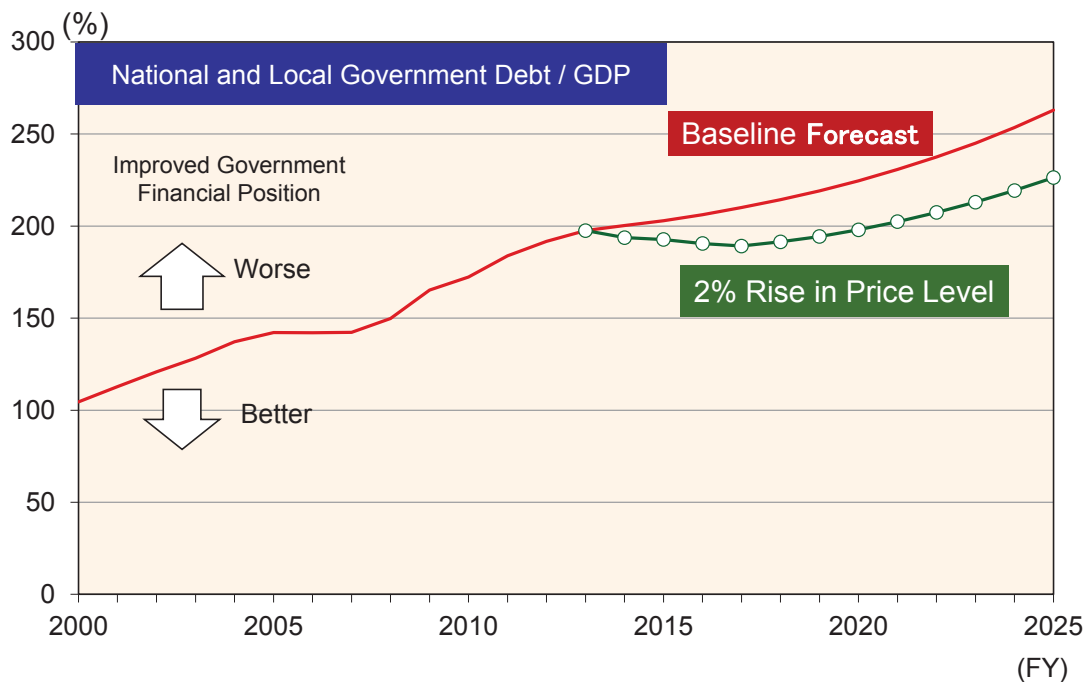
Figure 8 Ease Negative Impact of Consumption Tax Hike

Source: JCER estimates.

Escaping Deflation while Improving Government Finances

Some observers argue that any attempt by the government to escape deflation by targeting a 2% rise in the price level would cause long-term interest rates to rise, increasing the cost of servicing the government debt and in turn worsen the government's financial position.

However, it would be natural to assume that as prices rise, the economy will improve and GDP will rise. Our estimates indicate that even if a rise in long-term interest rates were to lift debt servicing costs and in turn expand the public debt, the overall health of the government's financial position as gauged by the ratio of government debt to GDP would decline as the size of the economic pie expanded, meaning that the sustainability of the government's financial position (Figure 9) would be enhanced. It should be noted, however, that this scenario relies not just on fiscal policy but on rising GDP with the expansion of private demand and exports. Attempting to boost growth through an expansionary fiscal policy alone would risk raising the government's debt ratio higher than our baseline forecast.

Figure 9 Price Level Rise of 2% Would Lower Government Debt Ratio

Source: JCER estimates.

With the recent output gap at around -3%, estimates show that boosting the rate of increase in consumer prices to 2% would require sustaining a real growth rate exceeding 2% for a number of years. This would correspond to a growth track of 2.3%, or 1.4 percentage points higher than the 0.9% average growth rate for FY2014 through FY2017 projected in our Medium-Term Forecast (see Box, upper-right panel). There are three conceivable paths of demand expansion that might achieve this target either alone or in some combination. The first would be a rise in exports on such factors as a recovery in the world economy or a weaker yen. The second would be a stimulus package. The third would be an expansion of domestic private demand.

With regard to increasing exports, the dollar is seen trading at an equilibrium level of around ¥95, so if the yen trends weaker, an expansion of Japanese exports could to some extent be expected thanks to the milder yen. The average dollar-yen rate for FY2011 was ¥79. The rate of ¥95 just represents a 20% devaluation of the yen against the dollar. The Cabinet Office's econometric models indicated that a 10% weakening of the yen would boost the real growth rate by two tenths of a percentage point on an annualized basis over the coming three years, meaning that if the yen weakens by 20%, the boost to growth would be four tenths of a percentage point annualized.¹

Having regained control of the government, the Liberal Democratic Party appears

¹ See Cabinet Office of Japan, "The ESRI Short-Run Macro econometric Model of the Japanese Economy (2011 version): Basic Structure, Multipliers, and Economic Policy Analyses"
http://www.esri.go.jp/en/archive/e_dis/abstract/e_dis259-e.html

inclined to pursue the second path, namely fiscal stimulus. A stimulus package might be fine as a very short-term measure, but stimulus packages are of little value in boosting growth on a sustained basis. Even greater outlays become necessary in subsequent fiscal years. Measuring the impact of an investment of about ¥5 trillion corresponding to 1% of GDP over three years over and above normal spending and using the Cabinet Office's multiplier shows an annualized increase in the growth rate of 0.26%.² As mentioned already, reservations are necessary in this regard, given the risk that stimulus packages may hamper efforts to improve government finances.

Assuming these two goals can be achieved, the growth rate would rise by a total of seven tenths of a point annualized. Nevertheless, this boost will still not set the economy on a growth path accompanied by a steady 2% rise in the price level. Achieving sustained growth will still require an expansion of domestic private demand. Realizing this goal will not be easy by any means, but the government could and should proceed decisively with deregulation with a view to kick-starting innovation and creating new markets.

A New International Financial System to Cope with Sovereign Debt Crisis

Signs are that the sovereign debt crisis nagging the advanced nations of Europe and North America is gradually easing, but the crisis is not yet over. Boosting the economy under these conditions will importantly require that the yen remain stable. The most effective means to achieve that end would be for Japan to help stabilize currency markets and prevent financial crises. In the end, this would help set the stage for a global economic recovery while helping Japan break out of deflation.

One concrete step toward this end would be for the Bank of Japan and the Ministry of Finance to jointly establish a ¥50 trillion "financial crisis prevention fund" capable of providing funds in yen and buying foreign debt securities. The Bo increased its asset purchases to ¥10 trillion in December of 2012, but the international community would likely welcome a willingness by MOF and the Bo to jointly purchase overseas debt as demonstrating Japan's readiness to help to stabilize financial markets. Such purchases (amounting to about \$50 trillion) would focus on safe assets such as debt issued by international organizations, the European Financial Stability Facility (EFSF) or OECD countries with credit ratings of AA or above. These purchases would stabilize international financial markets and achieve the purposes of monetary policy.

We would also like to propose a new framework for the international financial system. Under the Bretton Woods II system, the currencies of Asian nations were in practice fixed at

² Media reports indicate that the government of Prime Minister Shinzo Abe is considering increasing public works investment (in the form of government projects and local grants) by about this amount through a FY2012 supplementary budget. However, this includes the portion for recovery projects from the Great East Japan Earthquake and operations scheduled to be financed through the FY2013 budget brought forward. As a result, it is very likely that the net extra portion will be under ¥5 trillion. See: "Supplementary Budget to Exceed ¥12 Trillion," *Nihon Keizai Shimbun*, evening edition, January 7, 2013.

an undervalued level through the dollar-peg, with central banks accumulating external reserves by intervening in international currency markets to buy U.S. treasuries. Japan should propose that the international community depart from this system to a “Bretton Woods III” regime.

The first pillar of this new system would be increasing the financing capacity of the IMF to strengthen its ability to serve as a lender of last resort. The second pillar would be to strengthen the IMF’s role in restructuring when a state experiences a debt crisis. In order to accomplish this, the IMF would issue IMF bonds denominated in special drawing rights, making it possible for states to obtain capital from the market. The third pillar would be to establish a meeting of experts within the IMF to set international rules for the stabilization of currency rates among the major reserve currency powers. With regard to intervention in the currency market, for example, under present circumstances there exist only rules regarding the accommodation of highly volatile situation. Many issues should be considered, such as whether such rules should be clarified in the form of numerical standards or whether criteria for divergence from equilibrium exchange rates should be added.

Under a “Bretton Woods III” regime, Asian countries would have less incentive to fix their currencies to the dollar and build up foreign exchange reserves, and since it would be easier to adjust currency rates and resolve current account imbalances, it would be possible to avoid currency wars in which different countries compete by devaluing their currencies. In the international financial system, the role of the IMF should be strengthened so that it can grow into a bank of the world.

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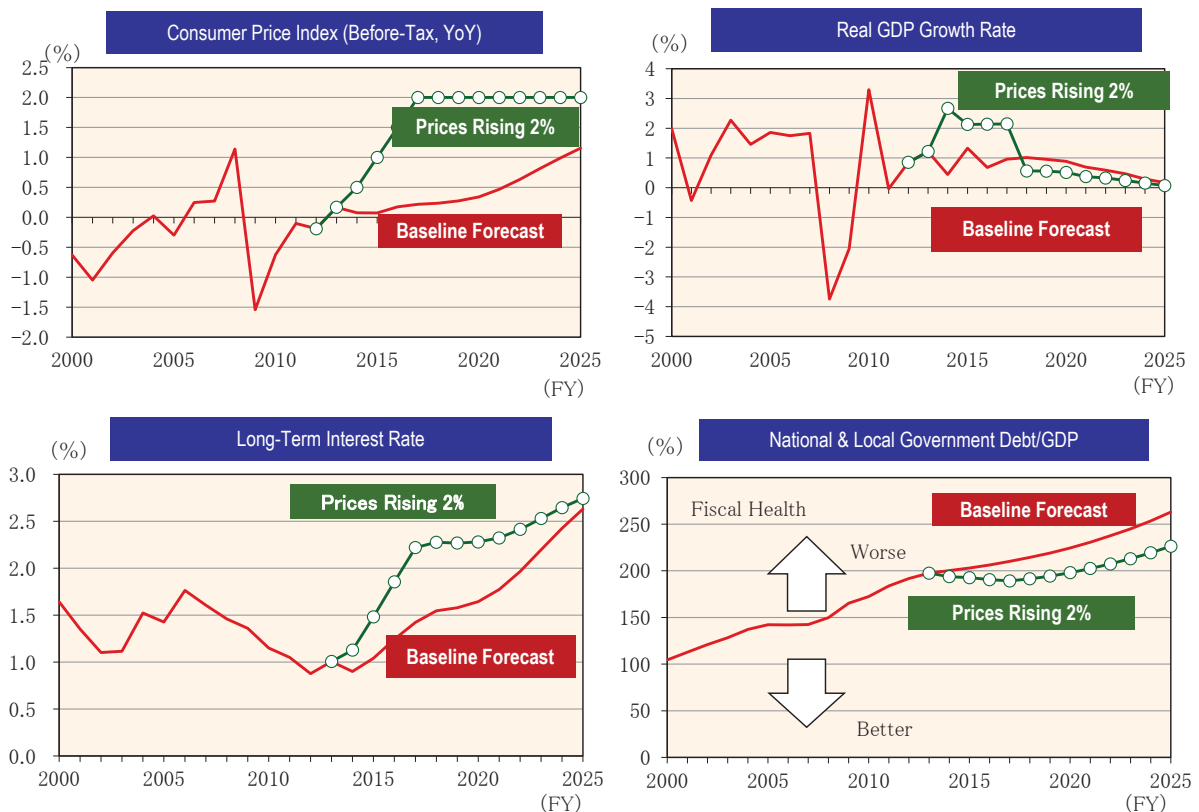
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[BOX]

If the Price Level Rises by 2%

Some observers believe that, if prices are rising by 2%, long-term interest would rise, increasing the cost of servicing government debt and bringing pressure on the government's financial position. But if prices begin to rise, it would be natural to assume that GDP will expand in tandem and narrow the output gap. Below we have performed trials based on a number of assumptions, such as treating GDP as an exogenous factor. By influencing long-term interest rates, rising prices would indeed increase the government's debt servicing burden, leading to an increase in the government debt. However, the underlying economic pie in the form of GDP would expand, causing a decline in the debt to GDP ratio, which is one yardstick gauging the sustainability of government finances. One necessary caveat here, however, is the presumption that the private sector will drive growth without relying on government policy measures.



(Assumptions underlying computations)

- (1) We assume that the CPI growth rate (after tax) will rise in stages from FY2014, reaching 2% from and after FY2017.
- (2) We assume real GDP will grow at a pace consistent with the rise in prices. It is assumed that GDP will expand in tandem with the rise in prices, narrowing the output gap. We have computed the GDP gap corresponding to (1) and real GDP from the following formula (with potential GDP as constant).

$$\text{CPI (after tax, Y/Y)} = 0.64 + 0.31 \times \text{GDP gap (vs. GDP)}$$

(Using data from FY1981 through FY2010.)

(3) We have set long-term interest rates based on our own estimation function. In the function adopted in our October, 2012 report “Growing Sovereign Risk May Boost JGB Yields to 10%,” we used panel data for selected nations, estimating short-term interest rates, the rate of increase in the CPI and the outstanding balance of government debt as independent variables. In the present estimates, we have assumed that short-term interest rates will rise by the same margin of increase as the CPI growth rate (the coefficient for the long-term interest rate being 0.409). We assume the CPI will rise in line with (1), (the long-term interest rate coefficient being 0.011). For the balance of government debt (to GDP Y/Y), we have used the finding in (4), (the long-term interest rate coefficient being 0.011).

(4) The balance of government and local government debt is estimated as: government debt = previous year government debt + primary balance + net interest payments. The primary balance is taken from our 39th Medium Term Forecast for the Japanese Economy (fixed), with the interest rate on net interest payments being the six-year moving average of the long-term interest rate.