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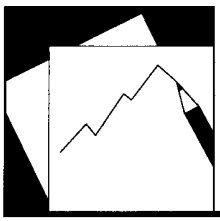

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Pension Reforms in Japan

Kenichiro Kashiwase, Masahiro Nozaki, and Kiichi Tokuoka

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Pension Reforms in Japan

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Abstract

This paper analyzes various reform options for Japan's public pension in light of large fiscal consolidation needs of the country. The most attractive option is to increase the pension eligibility age in line with high and rising life expectancy. This would have a positive effect on long-run economic growth and would be relatively fair in sharing the burden of fiscal adjustment between younger and older generations. Other attractive options include better targeting by "clawing back" a small portion of pension benefits from wealthy retirees, reducing preferential tax treatment of pension benefit incomes, and collecting contributions from dependent spouses of employees, who are currently eligible for pension benefits even though they make no contributions. These options, if implemented concurrently, could reduce the government annual subsidy and the government deficit by up to 1¼ percent of GDP by 2020.

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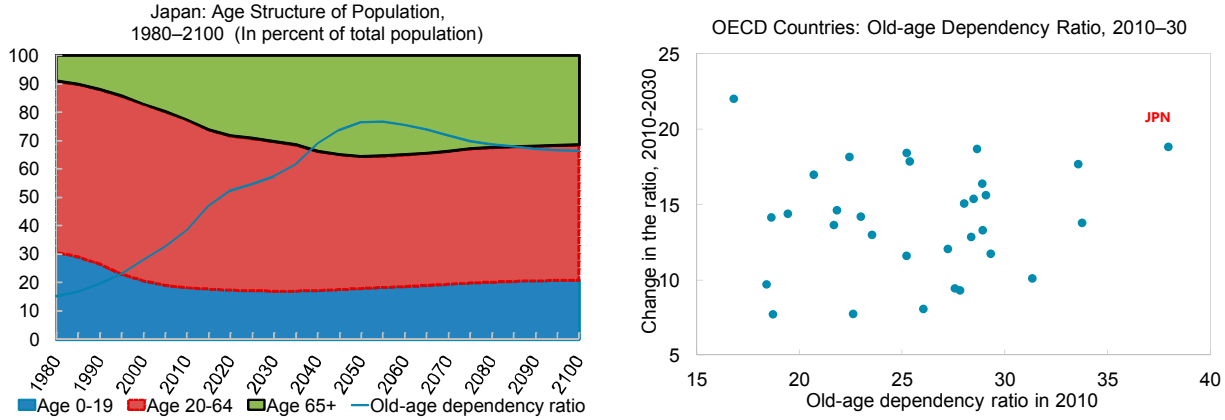
I. INTRODUCTION

Japan is taking the global lead in population aging. Its life expectancy has increased to 83 years which is the highest in the world today. As the baby boom generation (born in 1947–49) started retiring in 2007, the old-age population will continue to increase disproportionately in coming years. At the same time, the fertility rate declined markedly during the past decades. As a result, Japan's old-age dependency ratio (the ratio of the population aged over 65 years to the working age population) reached the highest in the world and is expected to rise from 38 percent in 2010 to 57 percent in 2030 (Figure 1).[2]

Figure 1. Japan: Population Aging in Japan and OECD Countries[1/]



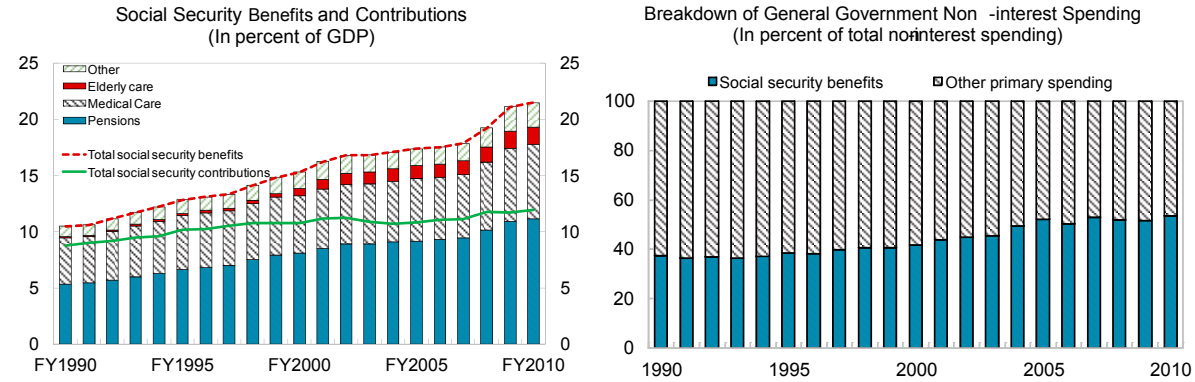
Sources: OECD (2011) and United Nations database.
[1/]The old-age dependency ratio is defined as population of age 65 or higher divided by population of age 20–64.

Containing social security spending is a key fiscal policy challenge in Japan. Social security spending (mostly pension, medical, and old-aged care spending) has been rising steadily and now takes up nearly 55 percent of the total non-interest spending by the general government, reflecting the rapid population aging (Figure 2). Although the increase in this spending will be moderate compared with other advanced countries (IMF, 2011; IMF, 2012), Japan needs to reduce its fiscal deficit (10 percent of GDP in 2012), which calls for rationalizing social security. Moreover, already large intergenerational imbalances (where younger generations bear a heavier fiscal burden than older generations) could be aggravated if reforms are delayed.[3] Importantly, well-designed reforms would strengthen growth potential. In particular, raising the pension eligibility age could encourage continued participation in the labor force by older-aged workers, resulting in higher life-time income and consumption.

[2] South Korea is the only country where population aging advances more rapidly than Japan.

[3] See Tokuoka (2012).

Figure 2. Japan: Social Security Spending



Sources: Ministry of Health, Labor, and Welfare (Japanese Government) and staff estimates.

Source: IMF WEO database.

At the same time, it would be critical for Japan to strike a balance between achieving fiscal savings and providing social safety nets. Japan's public pension plays an important role in helping reduce old-age poverty as the system has a redistributive feature, supported by a government subsidy of about 2 percent of GDP. Going forward, the 2004 pension reform (discussed in detail below) is projected to contain public pension spending relative to the pace of population aging. Against this background, a key issue is how further reform could preserve the public pension's role in providing social insurance while yielding fiscal savings.

Against this background, this paper focuses on the impact of various pension reform options on fiscal consolidation, equity, and economic growth. The most attractive option is to increase the pension eligibility age in light of high and rising life expectancy in Japan. This would have a positive effect on economic growth in the long run by helping to raise labor force participation, and would be relatively fair in sharing the burden of fiscal adjustment between younger and older generations. Other attractive options include: better targeting by "clawing back" a small portion of pension benefits from wealthy retirees, reducing preferential tax treatment of pension benefit incomes, and collecting contributions from dependent spouses of the Employees' Pension Insurance program (EPI)-eligible employees. These options, if implemented concurrently, could reduce the government annual subsidy by up to 1¼ percent of GDP by 2020. Across-the-board cuts in the replacement ratio and higher pension contributions are less desirable options. Cuts in the replacement ratio would undermine the pension's role in alleviating old-age poverty, while higher contributions would discourage labor market participation and aggravate already large intergenerational imbalances. Apart from parametric reforms to pension benefits and contributions, raising returns from public pension funds, including through further diversifying investments, could help enhance sustainability of the pension system and strengthen its role as a safety net.

Japan would also need to contain non-pension social security spending. Health spending is expected to rise faster than pension spending and increase by 1 percentage point of GDP during 2010–2030, which would create additional pressure on public finances. Health spending could be contained by better targeting benefits to lower income households and

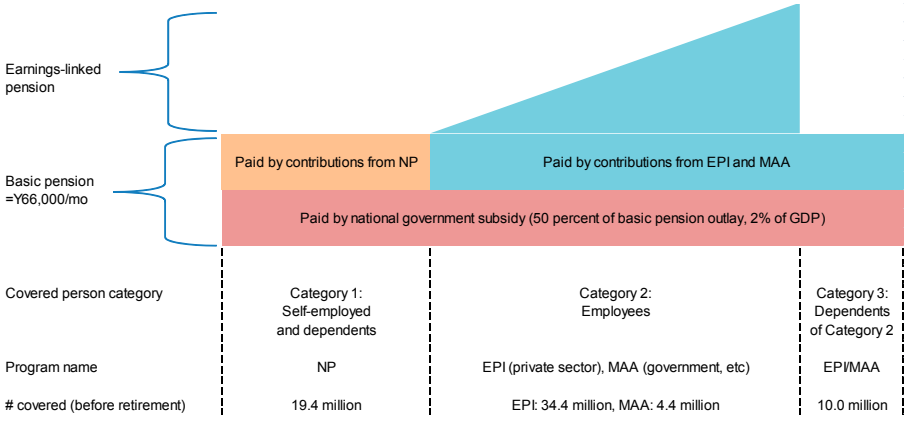
increasing efficiency (for example, by relaxing entry of private institutions in the old-aged care area and encouraging wider use of generic treatments). Raising contributions for higher income and old-aged households could also help ease fiscal pressure.

This paper is organized as follows. Section II describes the current public pension system and reviews recent reform efforts. Section III identifies reform options with estimated fiscal savings and discusses the effect on economic growth and intergenerational imbalances. Section IV concludes. This paper does not examine the issue of sustainability of Japan's public pension system.

II. The Pension System and Past Reforms in Japan

Japan has a universal, defined-benefit public pension system. Japan's public pension is, in principle, a pay-as-you-go system. Pension benefit spending totaled 10.6 percent of GDP in FY2010, consisting of old-age pension (8.9 percent of GDP), disability pension (0.4 percent of GDP), and survivor pension (1.3 percent of GDP). The system's main characteristics are as follows (Figure 3).

Figure 3. Japan: Public Pension System



Source: Japanese Government.
Note: NP = National Pension; EPI = Employees' Pension Insurance, and MAA = Mutual Aid Associations.

- ***Participants.*** All residents aged 20 or older are obliged to participate in the system and are grouped into three categories. Category 1 participants are the self-employed and their spouses, and are covered by the National Pension (NP) program.[4] Category 2 participants are employees of private sector enterprises and central and local governments, with private sector employees covered by the EPI program and government employees by the

[4] In 2007, it became clear that the government had lost track of some of the pension contribution records, which led to a loss of public confidence in the public pension system. Partly reflecting this, participation in the NP has been on a trend decline and fell from 64 percent in FY2007 to 60 percent in FY2010.

Mutual Aid Associations programs (MAAs).[5] Category 3 participants are dependent spouses of Category 2 participants.

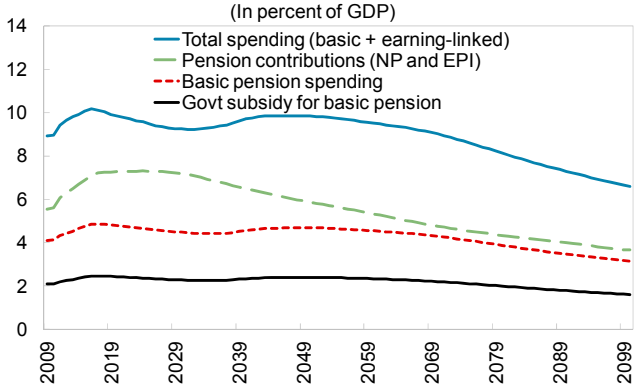
Contributions. Category 1 participants pay flat rate contributions, while Category 2 participants contribute by paying payroll taxes (the payment is equally shared between an employee and an employer). The contribution rates are being raised through 2017 to ¥16,900 per month in 2004 prices (from ¥15,020 per month in 2011) for Category 1 participants and to 18.3 percent of gross earnings (from 16.4 percent in 2011) for Category 2 participants, and will remain at these levels thereafter. Category 3 participants are not obliged to contribute. Total pension contributions from households and employers reached 6.5 percent of GDP in FY2010.

- ***Basic pension.*** All participants are eligible to receive a flat-rate basic pension benefit.[6] The central government provides a subsidy to finance half of the basic pension benefit payments. The rest is paid by pension contributions collected by the program to which participants belong and by a drawdown from a reserve fund if contributions are temporarily insufficient to cover the payment.
- ***Earnings-linked pension.*** Category 2 participants (in the EPI and the MAAs) receive earnings-linked benefits, in addition to the basic pension benefit.[7] Category 1 and Category 3 participants are not eligible for this benefit. The payment is fully financed by contributions paid by Category 2 participants and by a drawdown from reserve funds, if necessary.

The system was reformed substantially in 2004. The reform introduced an automatic adjustment of benefit levels to changes in demographic structures—the so-called "macro indexing"—although it has not been activated yet (Box 1). As a result, aggregate pension benefit expenditure and contributions from households and employers will not increase as a percent of GDP in the long run, despite rapid population aging (Figure 4).

Figure 4. Japan: NP and EPI Pension Spending and Contributions, 2010–2100

(In percent of GDP)



Sources: Official 2009 actuarial report and IMF staff estimates.

[5] There is also a MAA for teachers in private schools.

[6] Those who have paid contributions for 25 years or more and have reached age 65 are eligible for basic old-age pension benefits. The benefit depends on the number of years for which contributions are paid.

[7] The earnings-linked benefit is calculated from an individual's lifetime average earnings and an accrual rate. The accrual rate for those who were born after April 1946 is 0.5481 percent per month.

Box 1. Japan: How Does Macro Indexing Work?

This box explains the macro indexing of pension benefits introduced in 2004 in a simplified framework. To maintain the sustainability of pension finances, macro indexing will cut benefit levels automatically in accordance with population aging, while contribution rates are moderately increased to reach a constant level in 2017. The reform was a major shift from pension reforms prior to 2004, which had not resorted to benefit cuts.

The pension system's financial balance at time t equals

$$B(t) = c \cdot W(t) \cdot L(t) - P(t) \cdot N(t)$$

where c is the pension contribution rate, $W(t)$ is the average wage earned by the working age population, $L(t)$ is the number of participants of working age, $P(t)$ is the pension benefit per person, and $N(t)$ is the number of retirees. The reserve fund outstanding, $R(t)$, increases by the rate of return $i(t)$ and the financial balance:

$$R(t) = B(t) + (1 + i(t)) \cdot R(t-1)$$

Macro indexing adjusts pension benefits downward in line with changes in the number of working age participants and life expectancy, until period t^*:

$$\Delta P(t) = \begin{cases} \Delta W(t) + \Delta L(t) - \mu, & t \le t^* \\ \Delta W(t), & t > t^* \end{cases}$$

where Δ indicates a growth rate, for example, $\Delta W(t) = (W(t) - W(t-1)) / W(t-1)$. μ is an estimated rate of increase in life expectancy, and is fixed at 0.3 percent. With $\Delta L(t)$ expected to be negative owing to a decline in the working-age population, the adjustment improves the financial balance. The end period of adjustment, t^*, is determined such that pension finances achieve sustainability (i.e., the reserve fund outstanding suffices to cover benefit payments in the 100 years from now). That is,

$$R(t+99) \ge P(t+100) \cdot N(t+100).$$

The replacement rate, $P(t) / W(t)$, will decline until t^*, and remain constant thereafter.

The 2009 actuarial review projects that the macro index adjustment will continue until 2038. The replacement ratio (where the pension benefit is measured for a representative single-earner couple) is projected to decline from 62 percent in 2009 to 50 percent in 2038, and remain constant thereafter.

The adjustments are restricted in several cases. First, the replacement rate should not decline below 50 percent. If such an event is envisaged to occur in the next five years, a system overhaul is called for. Second, macro indexing is suspended during periods of deflation. More precisely, benefit levels will never decline over time in nominal terms since the benefit adjustment follows

$$\Delta P(t) = \max(\Delta W(t) + \Delta L(t) - \mu, 0), \qquad t \le t^*.$$

Third, macro indexing has not started yet, although the 2009 actuarial review presumed it would begin in 2012. Ad hoc suspension of price indexation during deflation in the early 2000s raised the pension benefit from the level implied by the original indexation rule. Elimination of this discrepancy is the precondition for macro indexing to begin.

In addition, the 2004 reform increased the ratio of the government subsidy to the basic pension benefit from ⅓ to ½. Consequently, the subsidy increased from 1½ percent of GDP in 2008 to 2 percent of GDP in 2009 and is expected to remain around 2–2½ percent of GDP in the medium and long run. While this helped put Japan's pension system on sustainable footing, it has added to the spending pressure on the government.

III. Pension Reform Options to Reduce the Fiscal Burden

In broad terms, three reform measures are available to improve pension finances: an increase in the pension eligibility age, a reduction in the pension replacement ratio (benefit), or an increase in contributions. There are trade-offs across these measures; for example, a higher retirement eligibility age can be combined with lower contributions without negatively affecting pension finances. These options, however, differ in the impact on economic growth (see Box 2) and intergenerational imbalances (Karam and others, 2010; Tokuoka, 2012; Kashiwase and Rizza, 2012).

Reform measures recently proposed by the government are unlikely to generate fiscal savings. In line with the tax and social security reform plan adopted in February 2012, parliament in August 2012 approved laws to broaden the eligibility to receive basic pension benefits by reducing the minimum number of years for which contributions need to be paid (from 25 years to 10 years); extend the coverage of the EPI to part-time workers; and consolidate the EPI and the MAAs. On a net basis, these measures are not expected to reduce the fiscal burden. A bill to eliminate the past ad hoc nominal freeze of pension benefits by 2015 (a precondition of macro indexing) was also approved by parliament in November 2012.

Table 1. Japan: Options to Reduce Government for Basic Pension
(In percent of GDP)

	Annual savings in 2020
Raise basic pension eligibility age to 67	¼
Reduce benefits for wealthy retirees	¼
Eliminate preferential tax treatment for pension benefit income	¼-⅓
Collect contributions from dependent spouses	¼-½
Reduce replacement ratio across-the-board by 3 percentage points	½
Raise contribution (payroll tax) rate by 1 percentage point	½
Reduce contribution (payroll tax) rate by 1 percentage point	-½

Source: IMF staff estimates.

Some specific reform options to reduce the fiscal burden are presented in Table 1, alongside estimates of potential fiscal savings to reduce the government subsidy to the basic pension.[8] As discussed below in detail, the most attractive option is to increase the pension eligibility age in light of high and rising life expectancy in Japan. This would have a positive effect on economic growth in the long run by helping to raise labor force participation and would be

[8] See the Appendix I for data and methodologies.

Box 2. Japan: Growth Impact of Pension Reform Options

Containing pension benefits could have a positive impact on output.

- Raising the pension eligibility age. On the theory front, using the IMF's Global Integrated Monetary and Fiscal (GIMF) model, Karam and others (2010) showed that raising the pension eligibility age could boost the level of U.S. GDP by 3 percent over the long term by encouraging longer working lives. With a longer working period, households increase consumption as their lifetime income is higher. Similarly, using an overlapping generations (OLG) model with an explicit lifecycle,[1] Cournède and Gonand (2006) reported that, in Europe, fiscal consolidation involving raising the pension eligibility age would boost labor supply and would be more growth-friendly than tax-based fiscal consolidation. The point that fiscal consolidation involving a higher pension eligibility age could be less costly is confirmed by running a lifecycle OLG model in the context of Japan (see text charts).[2]

  Empirical findings are consistent with these theoretical observations. Internationally, labor force participation is positively correlated with the pension eligibility age (see, for example, Gruber and Wise, 2002; 1999; 1998).

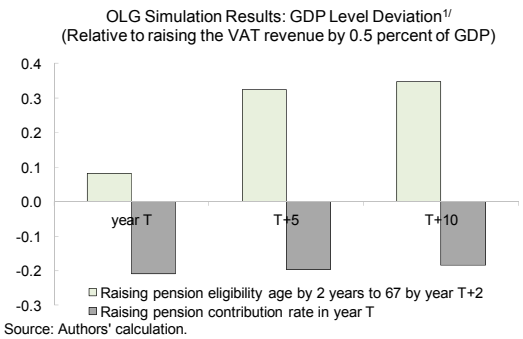
- Reducing the pension replacement rate. Qualitatively, reducing the pension replacement rate would have a similar positive impact on output to raising the pension eligibility age. The GIMF simulation by Karam and others (2010) showed that reducing the pension replacement rate would also boost output over the long term, although the positive impact would be less because in their setup, the incentive for increasing labor supply is weaker.[3]

  International empirical evidence shows that labor participation is strongly and negatively correlated with the generosity of pension benefits, which is determined by the pension replacement rate and the pension eligibility age. This may be because the generosity of pension benefits functions as an implicit tax on work (Gruber and Wise, 1998).

Raising the pension contribution rate would have a detrimental effect on output.

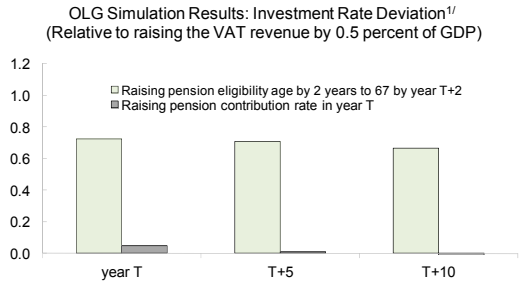
- Theory shows that a higher pension contribution rate has both substitution and income effects because pension contributions are proportional to earnings, as with personal income tax. While these effects have opposite impacts on labor supply, simulation analysis typically concludes that the former is dominant, and a higher contribution rate reduces labor supply and thus output (see text charts and Karam and others (2010)).

In terms of output, raising the pension eligibility age would be less costly than revenue increases…



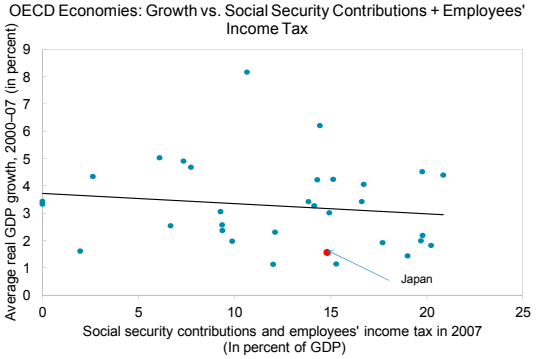
Source: Authors' calculation.
1/ For all options, fiscal savings that improve the structural primary balance by 0.5 percent of GDP are assumed.

...as the former stimulates labor supply and capital accumulation.



Source: Authors' calculation
1/ For all options, fiscal savings that improve the structural primary balance by 0.5 percent of GDP are assumed. Investment rate is obtained by calculating GDP minus consumption, all the tax payments, and social security contributions divided by GDP.

- Data also show that growth is negatively correlated with the burden from social security contributions and personal income tax (text chart). More formally, Arnold (2008) reported cross-country regression results that indicated that higher personal income tax, whose impact on output is similar to that of higher social security contributions, reduces GDP growth (for a comprehensive literature review, see OECD (2010)).



Sources: OECD and IMF WEO database.

[1] The GIMF is also an OLG model, but it makes stylized assumptions about the lifecycle (for example, a constant rate of decline in productivity over the lifecycle, a constant probability of death). An OLG model with an explicit lifecycle (for example, with a hump-shaped wage profile) could produce results with a different magnitude.

[2] For details about simulation assumptions, see Tokuoka (2012).

[3] This partly reflects the assumption in the model that the size of labor force (length of work life) is exogenously determined. In a model where the size of labor force is endogenously determined by the level of pension benefits, a reduction in pension benefits could have a larger positive impact on labor supply.

relatively fair in sharing the burden of fiscal adjustment between younger and older generations. Other attractive options include better targeting by "clawing back" a small portion of pension benefits from wealthy retirees, reducing preferential tax treatment of pension benefit incomes, and collecting contributions from dependent spouses of the EPI-eligible employees. These options, if implemented concurrently, could reduce the government annual subsidy by up to 1¼ percent of GDP by 2020. Across-the-board cuts in the replacement ratio and higher pension contributions are less desirable options. Cuts in the replacement ratio would undermine the pension's role in alleviating old-age poverty, while higher contributions would discourage labor market participation and aggravate already large intergenerational imbalances.

While the focus of this paper is a reduction in the government subsidy, fiscal savings from pension reforms could also be used, for example, to reduce pension contributions (payroll taxes), which could improve incentives to work. Although reform of the earnings-linked pension would not reduce the government subsidy because the benefit is fully financed by contributions, it would complement reform of the basic pension, including by reducing the pension contribution rate, and could reduce the burden for employers and employees thereby stimulating economic activity.

A. Raise Pension Eligibility Age

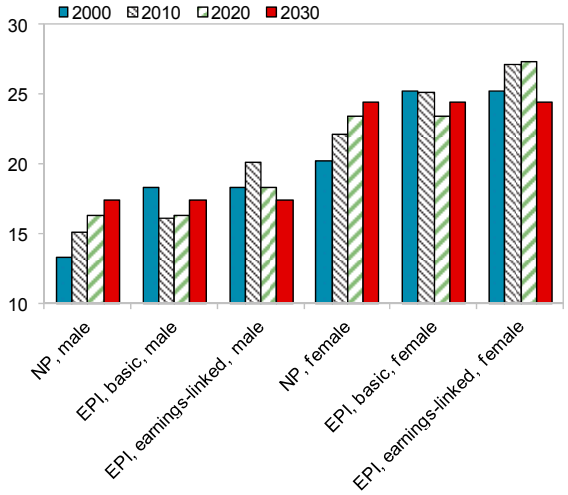
The pension eligibility age is being raised to 65. The pace of the increase differs between the basic pension and the earnings-linked pension, by program (the NP or the EPI), and by gender. The eligibility age for the basic pension is currently 65 for the NP participants and is being raised to 65 by 2013 for male EPI participants (and by 2018 for female EPI participants). For the earnings-linked pension, the eligibility age is currently 60, and will be raised gradually to 65 for men during 2013–2025 (and for women during 2018–2030).

A higher eligibility age for the basic pension would generate substantial fiscal savings. Increasing the pension eligibility age for the basic pension to 67 for all categories of participants by 2020 would reduce the government subsidy to the basic pension by ¼ percent of GDP by then (compared with the base case projection included in the 2009 actuarial review). If it were raised further to 69 by 2030, the fiscal savings could reach ¾ percent of GDP in 2030.

Taking account of rising life expectancy, there is scope to increase the eligibility age. Life expectancy at birth is expected to increase from 85.2 years to 89.4 years for women (from 78.3 years to 82.4 years for men) during 2000–2030. For participants in the NP, life expectancy after the pension eligibility age is expected to increase by 4 years during this period, if the eligibility age remains constant at 65 (Figure 5). For participants in the EPI, it will decline reflecting the gradual rise in the pension eligibility age, but from a much higher base in 2010 compared with the NP. Moreover, old-aged Japanese are expected to remain healthy and less likely to be disabled, which would allow them to make the choice to work

longer. Sanderson and Scherbov (2010) showed that the ratio of adults with disability to those without disability in Japan is projected to rise only marginally to 13 percent by 2050 from 10 percent in 2005–2010 despite the sharp rise in the (standard) old-age dependency ratio during this period.

Figure 5. Japan: Life Expectancy After Pension Eligibility Age, 2000–2030



Sources: United Nations Population Division Database and IMF staff calculations.

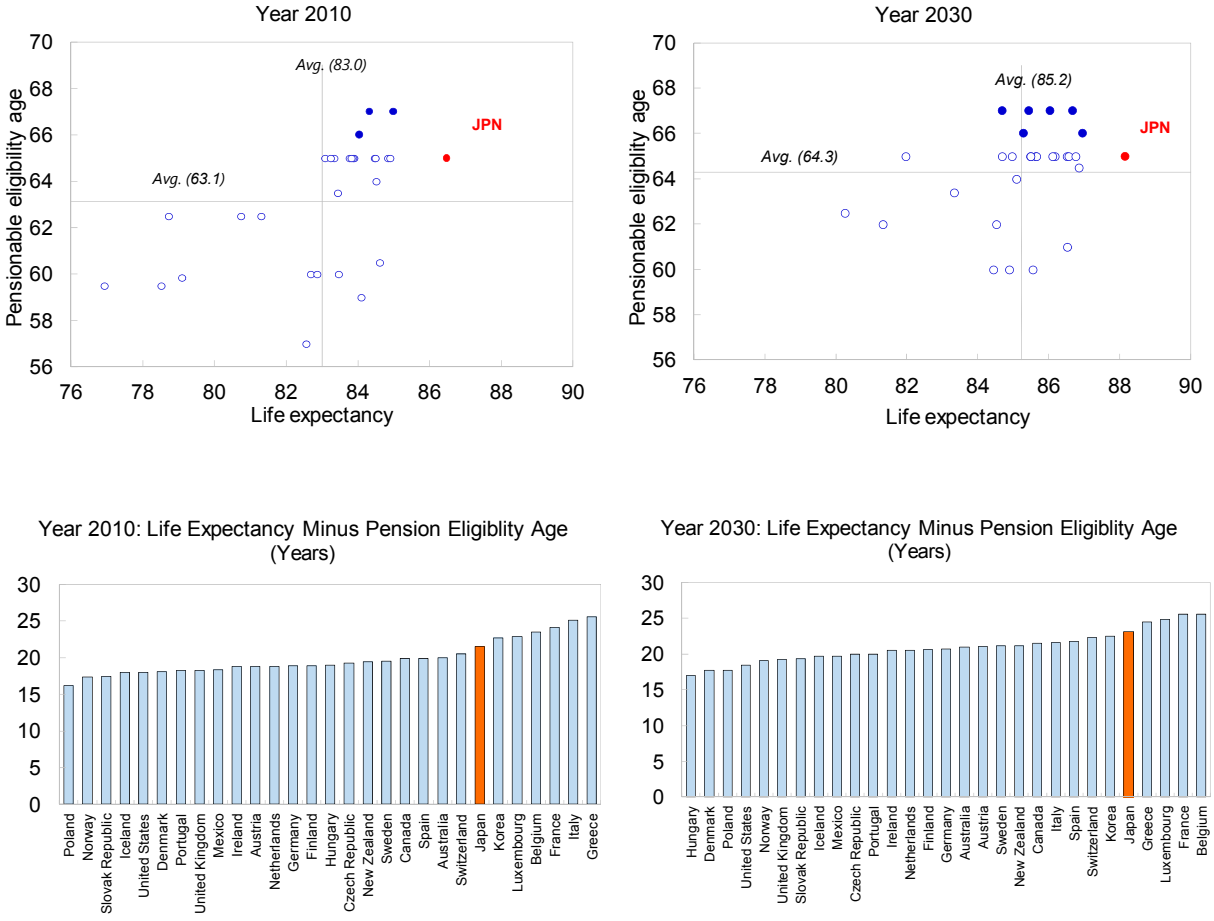
The gap between life expectancy and the pension eligibility age is larger in Japan than in most other countries. As shown in the top row of Figure 6, three OECD countries (Iceland, Norway, and the United States) have a higher pension eligibility age than Japan in 2010. By 2030, three other countries (Australia, Denmark, and the United Kingdom) will set their eligibility age above 65. As other OECD countries also raise the eligibility age in line with longer life expectancy,[9] the average pension eligibility age is expected to increase from 63.1 in 2010 to 64.3 in 2030. While Japan continues to take the global lead in life expectancy, the pension eligibility age remains capped at 65.

Raising the pension eligibility age would also have a positive effect on economic growth and could be fairer from an intergenerational resource perspective. It would promote continued labor force participation of old-aged workers and raise consumption through improved lifetime earnings (Box 2). Unlike the option of raising the contribution rate, the burden would be more equally shared between younger and older generations (Tokuoka, 2012). Although a higher pension eligibility age for the earnings-linked pension would not reduce the government subsidy, it would bolster long-run economic growth (by encouraging labor participation), lessen intergenerational imbalances, and complement the planned reform of the basic pension.[10] It would also allow for a reduction in the contributions, thereby lowering labor costs and increasing household disposal income.

[9] During 2010–2030, Australia will raise the pension eligibility age from 63.5 to 66, Denmark from 65 to 67, the United Kingdom from 62.5 to 66, and the United States from 66 to 67. Austria, the Czech Republic, France, Greece, Hungary, Italy, South Korea, Slovak Republic, and Switzerland will also increase their retirement age. Iceland and Norway expect to keep the retirement age at 67.

[10] The government plans to reform the pension system into a simpler two-tier system: a noncontributory flat-rate pension and an earnings-linked pension with a payroll tax rate of 15 percent. The latter has features of a notional defined contribution system (such as one adopted in Sweden). That is, contributions are accumulated in an individual account with a notional rate of return and the pension benefit is calculated by dividing the pension wealth by remaining life expectancy at retirement. This would make the choice of retirement age actuarially fair as it does not penalize late retirement. This would also transfer the risk of higher longevity from younger generations to retirees, and help alleviate intergenerational imbalances.

Figure 6. OECD Countries: Pension Eligibility Age and Life Expectancy in 2010 and 2030



Source: OECD (2011).

An increase in the pension eligibility age should be accompanied by an expansion of the safety net, especially for those with disabilities. Total spending for disability pension benefits amounted to 0.4 percent of GDP in Japan, which is low compared with other advanced countries (Momose, 2008). Disabled retirees will become vulnerable as macro indexing also reduces disability pension benefits in the future. In the United States, about one-fourth of all workers in their sixties may find work difficult on account of disabilities or poor health (Munnell, Soto, and Golub-Sass, 2008). Although Japanese aged over 65 years are relatively healthy and less likely to be disabled (as noted earlier), they should be protected by a well designed disability pension and social assistance programs to ensure that an increase in the pension eligibility age does not raise old-age poverty.

B. Lower Replacement Ratio

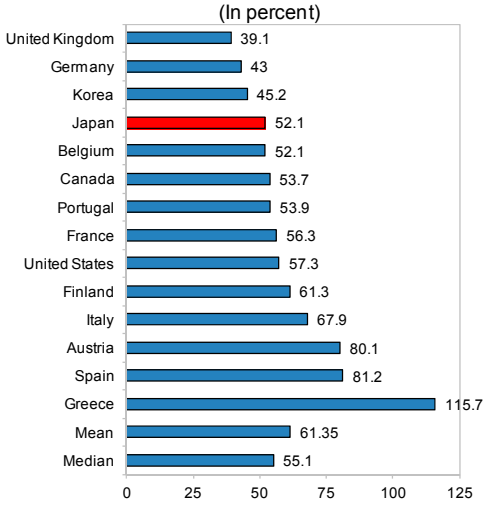
A lowering of the pension replacement ratio is already planned under macro indexing. The ratio is officially defined as a pension benefit for a representative couple divided by the average wage of the working age population. The representative couple comprises a private sector employee covered by the EPI and a spouse who does not work. The 2009 actuarial survey projects that the replacement ratio is set to decline to 57 percent by 2020 and to 50 percent by 2038.

Although cutting the replacement ratio further, beyond macro indexing adjustments, could reduce the government subsidy to the basic pension, doing so could worsen old-age poverty. An across-the-board reduction in the replacement ratio by 3 percentage points would reduce the government subsidy by ½ percent of GDP by 2020. This option could have a positive effect on economic growth similar to the higher pension eligibility age (Box 2), and would help correct intergenerational resource imbalances by placing a larger fiscal burden on older generations than on younger ones. However, with the current level of the basic pension benefit (¥66,000 per month) barely covering the basic consumption needs (food, housing, and utilities) of a retiree, an across-the-board cut would undermine the pension system's ability to contain old-age poverty (see Box 3). Moreover, the fiscal savings would be offset by higher demand for social assistance spending.[11]

International comparisons also suggest that Japan's pension benefits on average are on the low side. The replacement ratio for a representative couple, of about 50 percent, is below the median and mean for OECD countries (Figure 7). More broadly, one can look at gross pension wealth, which measures the value of retirement incomes over a lifetime (OECD, 2011). This indicator takes account of life expectancy, the pension eligibility age, the replacement ratio, and the way in which retirement benefits are indexed. Japan's gross pension wealth is also low compared with other OECD countries.

Figure 7. Pension Benefit Replacement Rate for Single Earner Couples[1/]

(In percent)



Source: OECD Pensions at a Glance 2011.

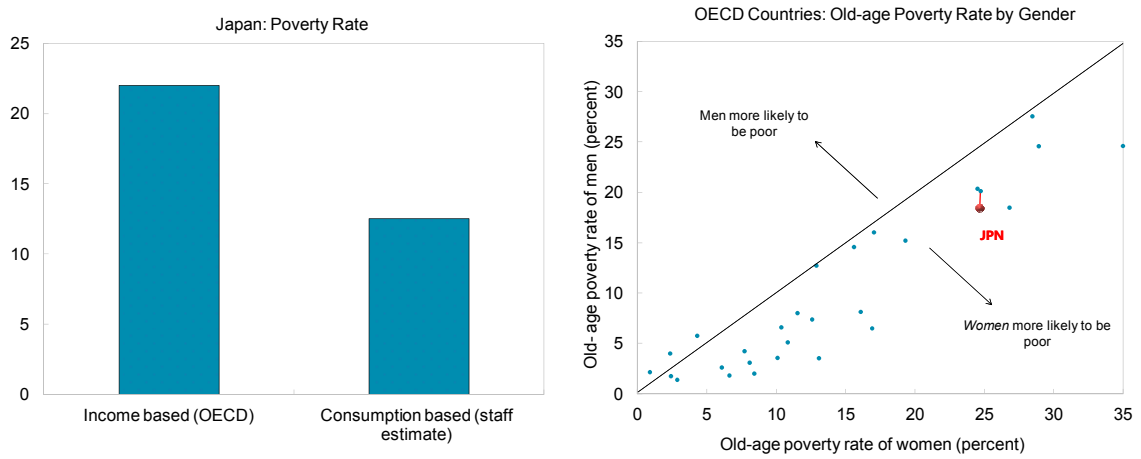
[1/]Countries with public defined benefit or notional defined contribution pensions. From OECD pension models based on 2006 parameters and rules. Replacement rates for a worker who enters the system today and retires after a full career.

[11] The social assistance system pays the difference between the guaranteed minimum income and own-source incomes of the poor. The minimum income level for individuals is determined by area and age, and ranges from ¥63,000 per month to ¥81,000 per month for an individual of age 65.

Box 3. Japan: Old-age Poverty in Japan and the Role of Pensions

Despite the low income replacement rate, Japan's pension reforms have helped reduce the relative poverty rate[1] among old-aged persons. When the poverty rate is measured based on a threshold (50 percent) of median household income, Japan's old-age poverty rate is around 20 percent in recent years and high compared to other OECD countries (OECD, 2011). In the absence of the old-age pension, however, this rate would increase threefold (Abe, 2011). Pension benefits alleviate relative poverty among the old-aged and help maintain their consumption level during retirement. When relative poverty is measured instead by consumption expenditure, which is financed partly by assets, the rate falls to below 15 percent and has come down quite significantly since the 1980s (Ohtake, 2005). As past pension reform often sets benefits to a sufficient standard of living, Japan's public pension system helps attain a more equitable consumption level (Shikata, 2010; Yamada, 2010).

Relative Income Poverty Rates[1/]



Sources: OECD (2011), Japan National Survey of Family Income and Expenditure, and National Institute of Population and Social Security Research.
[1/]Income poverty rates are percentage of people with an income below 50 percent of the median household income, and based on data from the mid-2000s. Those aged 65 and older are included.

The relative poverty rate among the old-aged is disproportionately high for women. Across different household types, old-aged people who live alone face a particularly high poverty rate, followed by a household of a retiree who lives with his/her daughter (Abe, 2011). As Japan's typical household structure is expected to change[2] and women typically live longer than men, future pension reforms may need to be supplemented by a targeted safety net program to those who are vulnerable.

More analysis on the distribution of income and wealth data would be necessary to develop a well-designed safety net program. For example, if a household with a large amount of assets invests the majority of its assets in bank deposits, its income could be low in the current low interest rate environment but such a household can still enjoy a high level of consumption. Therefore, cash transfers solely based on income levels might provide financial support to wealthy households. Identifying those really in need would require information on not only income but also assets.

[1] Unlike the absolute poverty rate, which measures the share of population who do not meet the minimum standard of living, the measure of relative poverty draws an inference about the underlying income inequality.

[2] A family of parents with children living together in a given household has been the norm in Japan for decades, and accounted for 30–42 percent of total number of households during 1980–2005. Based on the most recent projection by National Institute of Population and Social Security Research (2008), a single person household is expected to become the largest among all household types, and reach 37.4 percent in 2030 from 29.5 percent in 2009. With population aging, most of this increase comes from a single-person household of 65 years of age or older.

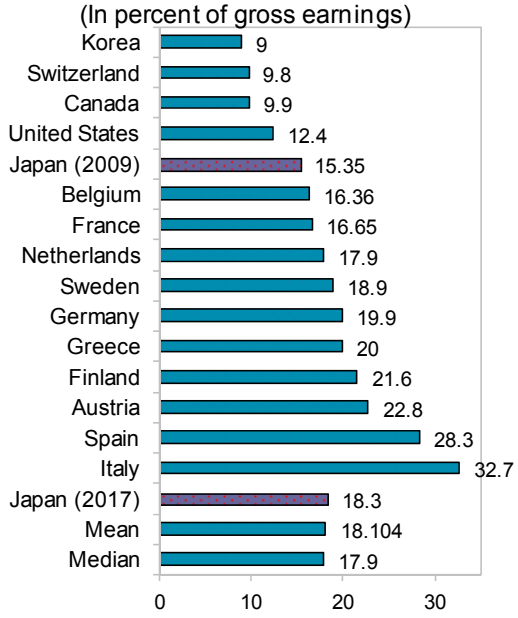
A more targeted reduction in the replacement ratio, therefore, would be appropriate, instead of across-the-board benefit cuts. In the current pension system, the government subsidy finances half of the basic pension benefit payments, regardless of the income level of retirees. Alternatively, the subsidy could be targeted toward poorer retirees and reduced for wealthier retirees, by introducing a "claw-back," similar to that adopted in Canada. For example, a 10 percent cut or "claw-back" of the pension benefit for 10 percent of the wealthiest retirees (with annual pension benefit equivalent to ¥2.5 million or higher per person) would reduce the government subsidy by ¼ percent of GDP in 2020.[12, 13] In reality, a "claw-back" could be applied more broadly, for example, to the wealthiest one-fourth of retirees, which would either generate larger fiscal savings or allow for higher average benefits than currently planned for lower-income retirees.

C. Higher Contribution Rates

A higher contribution rate would generate fiscal savings. In 2017, Japan's pension contribution rate (for the EPI, levied on payroll) will be close to the average of advanced countries (Figure 8). Raising the contribution rate for the basic pension by 1 percentage point would increase contributions by ½ percent of GDP in 2020, which could be used to reduce the government subsidy to the basic pension.

This option, however, would have a detrimental effect on growth and aggravate intergenerational imbalances. Empirical studies find that a higher pension contributions rate has a negative effect on labor supply (see Box 2).[14] A higher contribution rate also increases the burden on younger generations disproportionally because pension contributions are paid by the working-age population.

Figure 8. Pension Contribution Rate, 2009
(In percent of gross earnings)



Source: OECD Pensions at a Glance 2011.

[12] In Canada, a "claw-back" of 15 percent is applied to retirees with an annual income equivalent of US$70,000 or higher.

[13] At the individual level, the "claw-back" amount under this scheme will be less than the government subsidy (except for 0.2 percent of the richest retirees).

[14] Some euro area countries are considering a revenue-neutral shift from social contributions toward a VAT to improve export competitiveness. Such a reform has been known as "fiscal devaluation."

D. Reducing Preferential Treatments

Eliminating the preferential tax treatments of pension income would also generate sizeable fiscal savings. At present, a substantial part of the public pension benefit (basic and earnings-linked combined) is deducted from taxable income when calculating personal income tax liability.[15] For those aged 65 or older, the public pension benefit is fully exempt from tax up to ¥1.2 million per year. Even for the wealthiest 2 percent of retirees, 40 percent of the pension benefit is exempt from income tax. On an aggregate level, about three-fourths of pension benefit income is exempt from taxable income. We estimate that eliminating this preferential treatment or a tax expenditure would reduce the government subsidy by ¼–⅓ percent of GDP. Some other countries, such as France and New Zealand, do not exempt pension benefit from taxable income (OECD, 2011).

Collecting pension contributions from dependent spouses could also contribute fiscal savings. Under the current system, dependent spouses of employees covered by the EPI (Category 3 participants) will receive basic pension benefits even though they do not pay contributions now. They comprise 15 percent of total working-age participants of the public pension system. Because benefits for Category 3 participants are paid out of contributions from both single and married employees, they are effectively cross-subsidized by single employees. This preferential treatment also creates a disincentive to work, because a spouse can be qualified as a Category 3 participant only if his or her annual earnings are lower than ¥1.3 million. The government subsidy would be reduced by ¼–½ percent of GDP in 2020 if all Category 3 participants contributed to the NP.

IV. Conclusion

This paper analyzes various reform options for Japan's public pension system, reviewing the size of fiscal savings and the impact on intergenerational equity and economic growth. The most attractive option is to increase the pension eligibility age in light of high and rising life expectancy in Japan. This would have a positive effect on economic growth in the long run by helping to raise labor force participation and would be relatively fair in sharing the burden of fiscal adjustment between younger and older generations. Other attractive options include better targeting by "clawing back" a small portion of pension benefits from wealthy retirees, reducing preferential tax treatment of pension benefit incomes, and collecting contributions from dependent spouses of the EPI-eligible employees. These options, if implemented concurrently, could reduce the government annual subsidy by up to 1¼ percent of GDP by 2020. Across-the-board cuts in the replacement ratio and higher pension contributions are less desirable options. Cuts in the replacement ratio would undermine the pension's role in alleviating old-age poverty, while higher contributions would discourage labor market participation and aggravate already large intergenerational imbalances.

[15] In Japan, pension contributions (and investment returns of the reserve fund) are tax exempt, and pension benefit incomes are added to taxable incomes after the deductions.

Appendix I. Methodologies to Calculate Fiscal Savings from Reform Options

Raise basic pension eligibility age to 67

The calculation is based on the projected number of pension benefit recipients as well as the level of basic pension benefits in 2020. The number of recipients is estimated by the official population projection by gender. The ratio of age 65–66 population to age 65 or older would be 9.5 percent for male and 7.7 percent for female in 2020. The level of basic pension benefits in 2020 reflects macro indexing as envisaged in the official 2009 actuarial report. If the eligibility age for the basic pension becomes 67 for all recipients (i.e., Categories 1–3 and both male and female) by 2020, aggregate basic pension spending would be reduced by ¼ percent of GDP, compared with the status quo of the current schedule of eligibility age increases. The calculation also takes account of early retirement.

Reduce benefits for wealthy retirees ("claw-back")

Data on the distribution of old-age pension benefits are available for the NP and the EPI.[16] They indicates that 10 percent of the wealthiest retirees receive about 25 percent of aggregate old-age pension benefits in 2010 (the basic and the earnings-linked pension benefits combined). If 10 percent of benefits are reduced or "claw-backed" for such retirees, then aggregate old-age pension benefits would be reduced by 3.1 percent or by ¥1.1 trillion (¼ percent of GDP). For 99.8 percent of retirees, monthly pension benefits were less than ¥300,000 in 2010; thus, the benefit claw-back would be less than ¥30,000 on an individual basis (i.e., less than 50 percent of the basic pension benefit). If an aggregate "claw-back" rate of 3.1 percent is applied to aggregate old-age pension benefits in 2020, pension benefit spending would be reduced by ¼ percent of GDP.

Eliminate preferential tax treatment for pension benefit income

Data on the distribution of old-age pension benefits is available for the NP and the EPI.[17] With these data, income tax collections from pension benefit recipients are estimated for 2010, assuming that pension incomes are the only source of income for them. Based on the current schedule of income tax rates, elimination of preferential tax treatment of pension benefits would have increased tax collections by ¥1.4 trillion (0.3 percent of GDP). The calculation incorporates the basic deduction of ¥380,000 from annual taxable incomes (applied to all income tax payers), but does not take account of spouse deductions since data for the marital status of retirees is not available.

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[16] Available via the internet at: http://www.mhlw.go.jp/topics/bukyoku/nenkin/nenkin/toukei/nenpou/2008/toukei-list22.html

[17] Available via the internet at: http://www.mhlw.go.jp/topics/bukyoku/nenkin/nenkin/toukei/nenpou/2008/toukei-list22.html

Collect contributions from dependent spouses

According to the official 2009 actuarial report, the monthly contribution rate for the NP would be ¥19,728 in 2020 (in 2020 prices), and the number of Category 3 participants would be 8.9 million. Thus, if all of Category 3 participants contribute, contributions will increase by ¥2.1 trillion (0.4 percent of GDP).

Reduce replacement ratio across-the-board by 3 percentage points

According to the official 2009 actuarial report, the average monthly wage in 2020 is expected to be ¥459,000. To reduce the replacement ratio by 3 percentage points, monthly basic pension benefits for a retiree and a spouse need to be reduced by ¥13,770, or ¥6,885 individually. If this reduction is applied for all retirees, excluding those who receive basic pension benefits of less than ¥6,885, aggregate basic pension spending would be reduced by ¥2.7 trillion (½ percent of GDP).

Raise contribution (payroll tax) rate by 1 percentage point

According to the official 2009 actuarial report, the EPI participants' annual wage will add up to ¥201 trillion in 2020. Therefore, a 1 percentage point increase in the contribution (payroll tax) rate would raise contributions by ¥2 trillion. This translates into an increase of monthly contribution per person by ¥4,322 (¥2 trillion divided by Category 2 participants in the EPI and Category 3 participants). If the higher contribution rate of ¥4,322 is applied to Category 1 participants and Category 2 participants in the MAAs, contributions will increase by ¥0.8 trillion. Thus, the total increase would reach ¥2.8 trillion (½ percent of GDP).

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