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# Will the Increase in the Maximum Limit on Contributions to Defined Contribution Pension Schemes Be Enough?

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## Overview of the Public Pension Reform Law (2004)

On 5 June 2004 discussion of public pension reform in Japan reached a final stage when the Law to Reform the National Pension Insurance and Other Schemes (hereafter, the Pension Reform Law) was passed by the Diet.

Figure 1 summarizes the details of those sections of the Law relating to contributions to and benefits from the Employees' Pension Insurance System. The main points are as follows:

- (1) The contribution rate will be increased by 0.354% a year from its present level of 13.58% until fiscal 2017, when it will be fixed at 18.3%.
- (2) Once the contribution rate has been fixed, the effects of a declining birthrate and increasing longevity will have to be absorbed by adjusting benefits. According to the National Institute of Population and Social Security Research, the ratio of workers to retirees will decline from 4:1 (its level in 2000) to 2:1 by 2030. Given a declining birthrate and increasing longevity, a reduction in benefits would therefore appear to be inevitable. According to estimates by the Ministry of Health, Labor and Welfare, a typical household (where one spouse has been the breadwinner and both husband and wife receive a pension) can expect the income replacement rate of their pension (i.e., their pension benefits as a percentage of the average income of the active workforce) to decline from its current level of 59.3% to 50.2% by 2023, when it will level off.
- (3) The contribution from the current account will be increased from its current level of one third of the basic pension to a half. The cost will be borne partly by raising taxes on beneficiaries (e.g., by abolishing the tax allowance on public pension benefits paid to those aged 65 and over as well as the tax allowance (of ¥500,000) for those aged 65 and over with a total income of not more than ¥10 million and by extending the cut in pension benefits for those aged 65 to 69 who are still working to those aged 70 and over.

**Figure 1 Overview of Public Pension Reform Law (2004) (as it relates to contributions to and benefits from Employees' Pension Insurance System)**

		Existing system	Reformed system
Sections related to contributions	Contribution level	Phased increases Capped temporarily 13.58%	Introduction of fixed upper limit rate Cap to be lifted To be fixed at 18.30% by 2017 (9.15% from employer and employee)
	Cost to the general account	One-third of basic pension	To be increased to a half, starting in fiscal 2004 and continuing in fiscal 2005 and 2006. Increase to be completed by fiscal 2009.
	Periodical review	Every five years	A scheme's current status and its prospects for the next 100 years or so will be reviewed at least every five years.
Sections related to benefits	Benefit level	Income replacement rate of 59.3% for a typical household	To be reduced to 50.2% by fiscal 2023. A "macroeconomic sliding scale" to be introduced.
	Treatment of those of retirement age still in work	Payment of benefits to those aged 65 to 69 still in work is reduced or stopped altogether if their total income (earnings plus pension) is greater than the average male income.	Payment of benefits to those aged 70 or over will be treated in the same way as that to those currently aged 65 to 69.
	Taxation of benefits	Tax allowance on public pension benefits: benefits of up to ¥700,000 are tax-free for those aged under 65 while benefits of up to ¥1,400,000 are tax-free for those aged 65 and over.  Tax allowance for those aged 65 and over with a total income of not more than ¥10 million: ¥500,000.	Tax allowance on public pension benefits: tax-free allowance for benefits of up to ¥1,400,000 for those aged 65 and over to be reduced to same level (¥700,000) as that for those aged under 65.  Tax allowance for those aged 65 and over with a total income of not more than ¥10 million: to be abolished.

Source: NICMR.

## **Public Pension Reform in Other Countries and Efforts by the State to Encourage Private Pension Provision**

Japan is not the only country to have cut its pension benefits as a result of reform to its public pension system. The United Kingdom and Germany have also decided to do this. What is noteworthy about the public pension reforms in both these countries is that, as well as cutting benefits, the governments have tried to improve private pension provision.

It is well known that the United Kingdom was one of the first industrialized countries to make a start on reforming its public pension system. In 1999 the government announced that it would abolish the earnings-related component of the country's two-tier public pension system (similar to Japan's), which consists of a basic pension plus an earnings-related component. The government decided that the public pension system should consist simply of a basic pension designed to provide pensioners with a minimum level of income and a supplemental pension for those on

low and average incomes, while the rest would have to come from private pension provision. This clearly followed the principle that the function of the public pension system was to provide a minimum level of income.

At the same time, the UK government set about trying to improve the country's private pension system. In 2001 so-called "stakeholder pensions" were introduced, which were targeted mainly at those on low and middle incomes. The main features of these pensions are (1) that they are intended to encourage those who belong to neither a company scheme nor a private scheme to make provision for their old age, (2) that they are defined contribution schemes, and (3) that management and administration charges are capped at 1%.

Germany began its long-awaited and thoroughgoing program of public pension reform in 2001—the Riester reforms, named after the then Secretary of State for Employment, Walter Riester. Under this program, contribution rates will increase from their current level of 19.5% to less than 20% by 2020 and to less than 22% by 2030 while the income replacement rate will decline from its current level of 70% to 67%-68%.

At the same time so-called "Riesterrenten" (defined contribution personal pension plans) were introduced. Although it is up to each person to decide whether or not to take out such a plan, those who do will be able to deduct their contributions from their taxable income or be eligible for a government subsidy. The main aim of these plans was to bridge the "3% gap" that will open up as public pension benefits are cut.

## **Estimates of the Effect of Raising the Maximum Limit on Contributions to Defined Contribution Pension Schemes**

Japan's Pension Reform Law, which also involves an attempt to reform company pension schemes, envisages raising the maximum limit on contributions to defined contribution schemes as follows:

- (1) Defined contribution schemes of companies that do not offer a defined benefit scheme: monthly contributions to be increased from ¥36,000 to ¥46,000.
- (2) Defined contribution schemes of companies that do offer a defined benefit scheme: monthly contributions to be increased from ¥18,000 to ¥23,000.
- (3) Employees working for companies offering neither defined benefit nor defined contribution schemes join a personal defined contribution scheme: monthly contributions to be increased from ¥15,000 to ¥18,000.

The question is whether raising the maximum limit will be enough to offset the effect of lowering public pension benefits as currently envisaged. In order to answer this question, we estimated the effect on a typical household (where one spouse has been the breadwinner and both husband and wife receive a pension), who, according to estimates by the Ministry of Health, Labor and Welfare (see above), can expect the income replacement rate of their pension to decline from its current level of 59.3% to 50.2% (Figure 2).

First, we calculated what this 9.1% percentage point decline would be equivalent to in terms of a lump sum at retirement on the basis of a number of assumptions. The result was ¥10.23 million. What this means is that a pension beneficiary will need to have this amount when he or she retires in order to offset the effect of the cut in benefits envisaged by the Pension Reform Law.

Next, we calculated whether the increase in the maximum limit on contributions to defined contribution schemes as envisaged by the Pension Reform Law would be enough to produce ¥10.23 million. We assumed the biggest possible increase in the limit (i.e., the case of a company offering only a defined contribution scheme) and calculated the value of the assets a new four-year college graduate recruit would accumulate in the 38 years until he or she retired.

First, we assumed the simplest case (i.e., that all the employees receive the maximum possible contribution)<sup>1</sup>. If we assume a return of 4%, the increase in the maximum limit on contributions produces an additional ¥10.52 million in assets—more than the cut in public pension benefits (see Column A in Figure 2).<sup>2</sup> However, it is not clear whether an average return of 4% is feasible. Given that most Japanese defined contribution pension schemes currently assume a return of less than 3%, 4% seems to be a tall order.

Moreover, our calculations assume that all the participants of the scheme, including those who have just joined the company out of college, receive the maximum amount of ¥46,000 a month. However, most schemes do not work this way. We therefore recalculated our estimate, assuming, as is more generally the case, that participants receive a fixed proportion of their salary rather than a fixed amount. In this case, even assuming a return of 4%, there was a shortfall of ¥3.58 million. Assuming, more

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<sup>1</sup> In defined contribution scheme (corporate type) in Japan, only the employer is allowed to make contributions to an employee's account

<sup>2</sup> Although participants of defined contribution pension schemes are themselves responsible for how their contributions are invested and the actual return will therefore vary from one participant to another, a return needs to be assumed when a scheme is established so that the appropriate amount of the contributions can be set and the expected benefits from defined contribution schemes can be compared with those from existing defined benefit schemes.

realistically, a return of 2%, the shortfall was ¥5.65 million (see Columns C and D in Figure 2). Even if we assume a return of 5% as in the Pension Fund Association's model portfolio, there is still a shortfall of ¥2.11 million.<sup>3</sup>

We should point out that we have set the contribution rate so that a participant receives the maximum contribution amount in the year in which his or her salary reaches its maximum. A higher contribution rate naturally means that a larger amount will accumulate. However, if a participant's salary were to continue to increase after his or her contributions had reached the regulatory maximum, the effect would be for the contribution rate to decline. As companies are legally obliged to apply the same contribution rate to all their employees, a higher contribution rate cannot be assumed in our calculation.

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<sup>3</sup> The Association's model portfolio is an asset allocation model designed to enable the Association to pay benefits to deferred beneficiaries and participants of schemes that are closed. When the portfolio was revised in September 2002, its expected rate of return was set at 5.07%. Generally speaking, it will be difficult for a scheme participant who is not an investment specialist to consistently achieve the same investment return as a major institutional investor such as the Association, and so an investment return of 5% must be considered a major hurdle given current investment conditions.

**Figure 2 Effect of Raising the Maximum Limit on Contributions to Defined Contribution Pension Schemes**

- Assumptions
- ① Calculating the capital needed to offset the effect of the reduction in the incomereplacement rate:
    - An average annual income of ¥5.62 million, consisting of the average employee's standard monthly remuneration (assumed for contributions to the Employees' Pension Insurance System) of ¥360,000 and a bonus of 3.6 months.
    - An average benefit period of 20 years, reflecting the fact that in fiscal 2023, when the income replacement rate is expected to be 50.2%, average male life expectancy is projected to be 79.64 years and average female life expectancy 87.34 years.
    - A discount rate of 0% for the benefit period as appropriate for post-retirement.
  - ② Calculating the amount of fixed rate contributions:
    - As the basic wage for calculating contributions we used the figure used by the Institute of Labor Administration for calculating the pension of university graduates.<sup>(1)</sup>
    - To calculate the contribution rate in such a way that the contribution amount would not peak out, we assumed that the maximum contribution was paid in the year in which a participant's salary was at its highest. The rate for a maximum contribution of ¥36,000 was 9.0% and for one of ¥46,000 11.4%.
  - ③ For the period between retirement and the first payment of benefits:
    - The defined contribution account assets are not drawn down.
    - The investment return is 0% as appropriate for post-retirement.

(¥10,000)

Assumed Investment return	Fixed amount contributions		Fixed rate contributions	
	A: Additional funds	B: Difference	C: Additional funds accumulated	D: Difference
1%	554	-469	385	-638
2%	680	-343	458	-565
3%	842	-181	549	-474
4%	1052	29	665	-358
5%	1324	302	812	-211

**Note: 1**

Institute of Labor Administration, "Rosei Jiho Bessatsu 2003-nenban Taishokukin/Nenkin Jijo" [Special Edition of "Rosei Jiho" on Pensions, 2003].

**Note: 2**

The following formulae were used:

$$(\text{Reduction in pension benefit in Year } n) = (\text{average income}) \times (\text{reduction in income replacement rate}) \div (1 + \text{discount rate})^n;$$

$$(\text{Capital required to offset reduction in income replacement rate}) = (\text{reduction in benefit in Year 1}) + (\text{reduction in benefit in Year 2}) + \dots + (\text{reduction in benefit in Year } N), \text{ where } N = \text{benefit period.}$$

Fixed contribution amount:

$$(\text{Balance of account at end of } n \text{ years of service}) = (\text{balance of account at end of } n-1 \text{ years of service}) \times (1 + \text{investment return}) + (\text{maximum contribution limit}) \times (1 + \text{investment return})^{1/2}$$

Fixed contribution rate:

$$(\text{Balance of account at end of } n \text{ years of service}) = (\text{balance of account at end of } n-1 \text{ years of service}) \times (1 + \text{investment return}) + (\text{basic salary for Year } n) \times (1 + \text{contribution rate}) \times (1 + \text{investment return})^{1/2}$$

$$(\text{Additional funds accumulated}) = (\text{Balance of account at end of 38 years of service after increase in maximum contribution limit}) - (\text{Balance of account at end of 38 years of service before increase in maximum contribution limit})$$

$$(\text{Difference}) = (\text{additional funds accumulated}) - (\text{capital required to offset reduction in income replacement rate}).$$

Source: NICMR.

## **Defined Contribution Pensions as a Means of Encouraging Private Pension Provision**

Ever since defined contribution pension schemes were introduced in Japan, the maximum contribution limit has been criticized as being too low. The increase incorporated in the latest pension reform is therefore welcome.

As we have already seen, the proposed increase in the maximum limit on contributions to defined contribution pensions would be enough to offset the cut in public pension benefits provided a return of 4% on the fixed contribution amounts could be achieved. However, so long as contributions are fixed, contribution rates will decline as salaries increase. This will make it difficult for companies to provide key, highly paid employees with an adequate pension, which contradicts the very purpose of providing a pension scheme. On the other hand, fixed rate contributions of the kind generally adopted will, as our calculations showed, fail to offset the cut in public pension benefits even if the return on investment is 5%. We therefore would have to conclude that the increase in the maximum limit on contributions to defined contribution pensions is not enough.

The Pension Reform Law (2004) aims to set a cap on the maximum rate of contributions to Employees' Pension Insurance schemes by offsetting the effects of a declining birthrate and increasing longevity by cuts in public pension benefits. It makes sense to look to defined contribution pension schemes as a means of helping people to provide for their old age at a time when cuts in public pension benefits seem unavoidable and companies continue to close their (defined benefit) Employees' Pension Fund and Tax-Qualified Pension schemes. Is Japan's pension system shifting towards defined contribution schemes? If so, what is the appropriate maximum contribution amount for defined contribution schemes and is granting such a tax benefit feasible? Now that the Pension Reform Law has passed the Diet, it seems that further discussion is needed.