

The 2004 pension reform and the impact of rapid aging in Japan¹

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The sustainability of pensions under a pay-as-you-go (PAYGO) system, unlike pensions under a funded system, is dependent on demographic composition and political coordination. Relying on the contributions of future generations as a source of funds, pension levels in the PAYGO system are managed so that the ratio of the pension levels of the elderly to the average wages of the working generations remains constant. The fairness of pensions under the PAYGO system is grounded in the fact that each generation is guaranteed pensions of a stipulated percentage of the income of the working generations.

A declining birthrate and an aging population have necessitated increases in pension contributions to maintain this level. However, both companies and currently employed workers are strongly opposed to raising these contributions, undercutting the economic prerequisite of continuing to increase contributions in order to maintain benefits.

Putting off increases in contributions as demanded by businesses and employed workers, on the other hand, makes it essential to cut benefits, a move opposed by the elderly. The political conditions do not exist to curtail contributions while reducing benefits, and hence the economic requirements for maintaining pension financing are not compatible with political requirements.

A pension system such as the PAYGO system that calls for continually balancing the interests of different generations requires an extremely rational citizenry and a government capable of sound leadership to ensure that excessive contributions are not demanded of current and future workers. Both voters and politicians tend to give greater priority to their present livelihoods than to future contributions, though, and there is a clear risk that the government will eventually prove unable to control the PAYGO pension system. As the electorate ages, the political ability to operate a PAYGO pension system will steadily decline.

A scheme is therefore needed that will forestall short-term political intervention and stabilize the financing of the PAYGO system automatically in

accordance with changes in demographic composition.

1. Pension financing for a changing demographic structure

The key challenge for Japan's pension policy at present is establishing long-term stability in the face of an aging population while ensuring benefits of real value. The 2004 pension reforms abandoned the traditional policy of continuing to raise contributions while maintaining the same level of benefits, switching instead to a system that fixes contributions at a stipulated level, and providing benefits within that scope.

(1) Pension system reforms thus far

The history of Japan's pension system can be divided into the period prior to 1985 during which benefits expanded, and the subsequent period during which benefits contracted. Japan's pension system was established as a laborers' pension in 1942 during World War II. The pension system was initially designed as a funded system with both contributions and benefits tied to earnings. Following the chaos of the immediate postwar period, the pension system was restructured in 1954, creating a two-tier system—one offering fixed benefits and the other earnings-related benefits—which was the precursor of today's Employees' Pension Insurance. A National Pension program was established in 1959 for self-employed workers not covered under the Employees' Pension program. As the economy moved into full swing during the 1960s, conditions were favorable for raising pension levels. The government raised the multiple used for calculating pension amounts in order to match the pension levels sought by the ILO.

In the 1970s an automatic indexation system was introduced to combat the effects of inflation, and benefits were enhanced. With the total fertility rate (TFR) exceeding 2.0 and the economy still booming, a transition was made in pension financing to a PAYGO system because benefits were being expanded even as increases to contributions were

reined in. The economic slump resulting from the oil crises of the 1970s and the rapid decline in the birthrate starting in the latter half of 1970 destabilized pension financing. Political considerations kept the government from either raising contributions or reducing benefits, and by 1980 the sustainability of the pension system was in peril.

Changes to industrial structure that spurred rapid changes in the age structure of contributors also proved a destabilizing factor for a PAYGO pension system segmentalized by occupation, and the Japan National Railways Mutual Aid Association and the National Pension system were both expected to fail.

The reforms of 1985 sought to lower the level of benefits and to harmonize systems. Financing adjustments were made between the pension systems for self-employed persons and employed workers, on the verge of financial collapse due to

changes in the employment structure, and a Basic Pension program for all citizens was introduced. The benefit multiple for future generations was lowered, and substantial cuts to benefits were scheduled to be phased in over time.

Benefit increases thus reached their peak in 1973 through a process of raising the model pension benefits level: 1) raising the benefit multiple 2) introducing indexation. Since 1985, though, benefits have been lowered via a series of reforms (Table 1): the 1985 reforms (redefining the model pension and lowering the benefit multiple) 1) the 1989 reforms (raising the pensionable age) 2) the 1994 reforms (making indexation adjustments and raising the pensionable age) 3) the 1999 reforms (raising the pensionable age and lowering the benefit multiple), and the 2004 reforms (restricting the benefits of model pensions and making indexation adjustments).

Table 1 Overview of policy variables

Year of system reform	Policy variables		Year of system reform	Policy variables		
	Benefit multiple	Pensionable age		Benefit multiple	Reassessment/indexation rate	Pensionable age
1942	System introduced		1973		Introduced	
1944	↑		1976			
1954		↑	1980			(↑)
1960	↑		1985	↓		
1965	↑		1989			(↑)
1969			1994		↓	↑
1971			2000	↓	↓	↑

Note 1: Up arrows (↑) indicate a rise; down arrows (↓) indicate a drop.

Note 2: Arrows in parentheses denote changes planned by the Ministry of Labor (Ministry of Health, Labor and Welfare) that ultimately failed.

Source: Author.

(2) Policy measures to stabilize pension financing

Underlying the mounting difficulty of financing pension systems are prolonged coverage periods and extended pension benefit payment periods as a consequence of longer life expectancies.

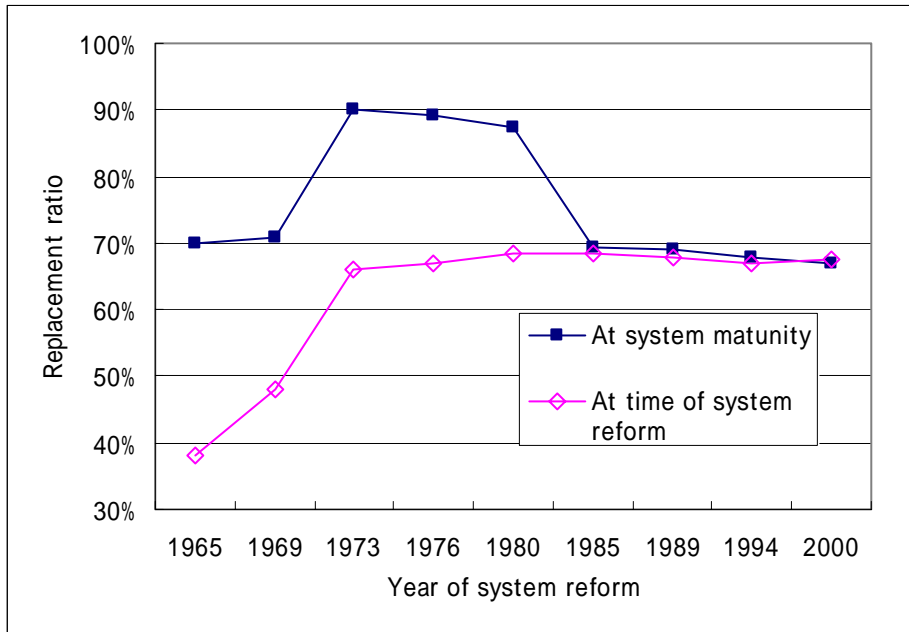
Prolonged coverage periods have boosted the level of the model pension (Figure 1). Greater life expectancies as shown in Figure 2 mean higher risk for old-age pension insurance. To address this risk and ensure the soundness of pension financing,

contributions will need to be raised, the pensionable age moved up, the level of benefits lowered, or some combination of these measures pursued.

The three policy variables determining the benefit levels for public pensions are the model pension and the benefit multiple, the indexation rate, and the pensionable age (Figure 4). These three benefit adjustment methods differ in their effectiveness. Lowering the multiple over time or changing the pensionable age can have an impact on

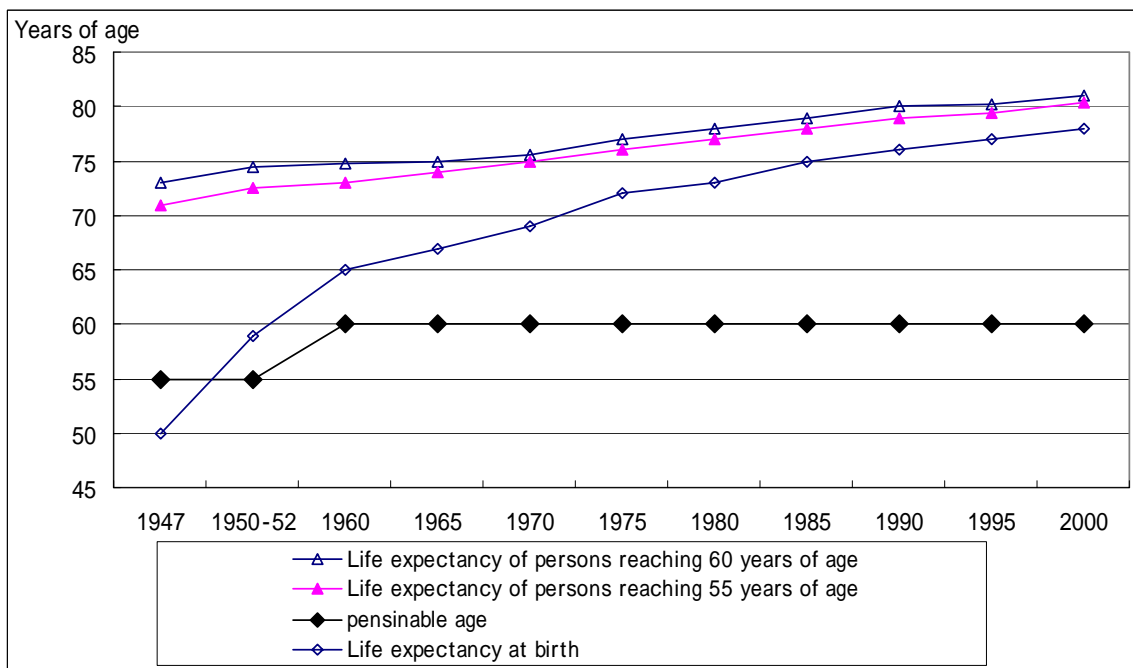
future beneficiaries but will not affect pensioners whose benefits have already been awarded. By contrast, adjusting the indexation rate targets both working and recipient generations, allowing the benefits for all generations to be adjusted.

Figure 1 Changes of replacement ratio



Source: Estimated by the author

Figure 2 Life expectancy and pensionable age



Source: Estimated by the author

Table 2 Benefit-related policy variables and effects of reform

Policy variable	Effects of reform	
	Scope of impact	Relation to policy variable
Benefit multiple	Benefit level	Benefit multiple ↑ ⇒ Benefit level ↑
Reassessment rate	Benefit level	Reassessment rate ↑ ⇒ Benefit level ↑
Pensionable age	Number of beneficiaries	Pensionable age ↑ ⇒ Benefit period ↓

Note 1: Up arrows () indicate a rise; down arrows () indicate a drop
 Source: Estimated by the author.

2. Effectiveness of the 2004 pension reforms

The baby boomer generation will become eligible to receive benefits from the first half of the 2010s, making this the most daunting challenge facing the pension system in the near term. Given the hollowing out of the pension system and problems connected with Basic Pension contributions, priority in the 2004 pension reforms was placed on financing stability.

(1) Features of the 2004 pension reforms

The 2004 pension reforms featured a demographically modified indexation for financing and the introduction of a fixed contribution program and a closed-period-balancing method.

1) Demographically-modified indexation and fixed contribution program

The most salient aspect of the 2004 pension reforms was the adoption of a demographically modified indexation program. The conventional approach of raising contributions to maintain the level of benefits has sparked concern among the younger generations over just how high pension contributions will climb. The 2004 pension reforms moved away from the standard practice of raising the level of contributions to Employees' Pensions to guarantee a 59% benefit level, instead capping future contributions at 18.3% and introducing a demographically-modified indexation program to pay out benefits within that scope. The new pension level set out in the 2004 pension reforms was 50%².

The fixed contribution program can dispel the anxieties of younger generations about unrestricted future rises in contributions. To ensure future contribution revenues on the presumption of a certain level of economic growth, though, benefits will need to be constrained.

The benefits for Employees' Pensions are determined in line with the average compensation

received during working years. Calculations of this average compensation are based on past compensation but are not simple averages thereof. The entry-level salary 40 years earlier must be converted into an approximate current value at the time of retirement using wage indexation (the wage growth rate). Once payment of benefits begins, the pensions are only raised by the rate of increase in consumer prices.

Demographically modified indexation is a scheme for adjusting the indexation to match the growth in total wages (average wage per worker × number of workers in workforce) for the economy as a whole.

Up until this point in time, pensions have been raised by the amount of increase in average wages but, with demographically-modified indexation, the indexation rate may be lowered even if average wages rise if the number of workers supporting the pension system declines. This downward shift is called the indexation adjustment rate.³

The demographically modified indexation method requires that wage indexation and price indexation only be reduced by an indexation adjustment component of 0.9%. In other words, if the economy in a given year were to see a wage growth rate of 2% and a consumer price rise of 1%, the actual wage indexation would be 1.1% and the price indexation 0.1%. As pensions would only be augmented by 0.1% despite prices climbing 1%, the real value of pensions would decline. Repeating this process until 2023 will bring the model pension for persons who become 65 years of age in 2023 to 50% of the average wages of presently employed workers. The generation already receiving pensions will see the real value of their pension benefits from age 65 decline, while lowering of the wage indexation will result in a lower level of benefits for the generations reaching 65 years of age by 2023.

2) Closed-period-balancing method

Another feature is the closed-period-balancing method. Pension financing was previously regarded as permanently maintainable (i.e., the system would not go bankrupt even after 2100; this is the thinking behind the “whole-future-balancing method”) and efforts were made to retain a seven-year reserve to that end. However, the poor performance of government assets and problematic deficits/sales of welfare facilities have prompted intense criticism of the government’s policy of maintaining enormous asset holdings. A decision was therefore made to liquidate these assets so that by 2100 only a one-year reserve is retained. This is known as the closed-period-balancing method. With an initial financing maintenance period extending to 2100, an actuarial valuation is to be conducted in five years, after which the end of the closed period will be moved ahead five years to 2105.

Switching to the closed-period-balancing method mitigates the decline in benefit level under EPI by 3 points.

Single-year balances reveal an obvious difference between the whole-future-balancing method and the closed-period-balancing method. The whole-future-balancing method consistently runs a surplus from 2015, while the closed-period-balancing method faces a rapidly expanding deficit from 2040 on. The totals of these contribution revenues and expenditures are reflected as the change in assets in Figure 3.

The reservation fund was 164 trillion yen for

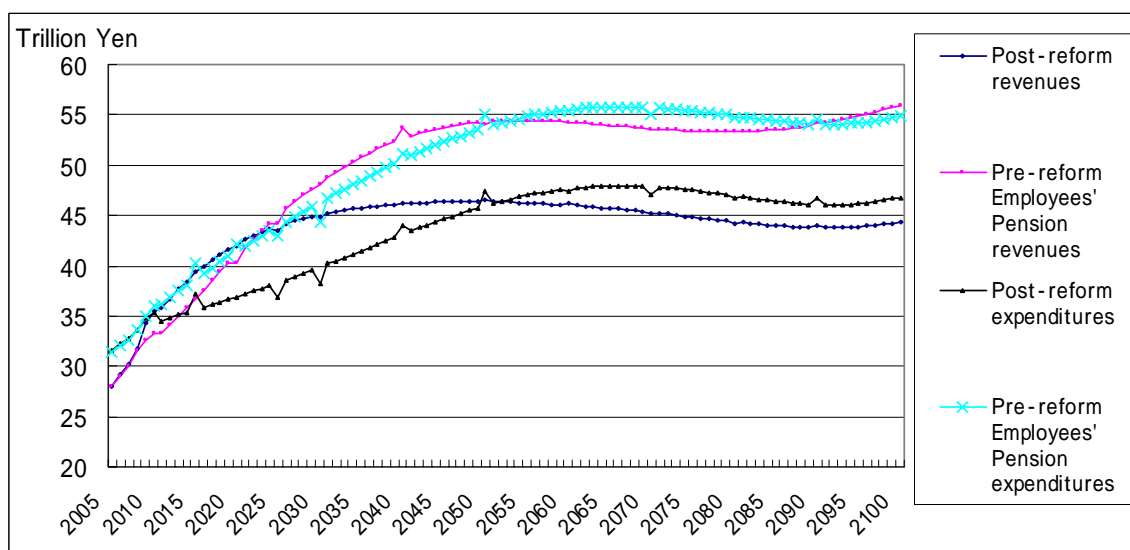
EPI and is projected to peak at 170 trillion yen in 2040. The reserve ratio in 2005 was 6.2 for EPI and it is projected to peak in 2030, and then fall consistently to reach 1.3 in 2100.

However, we have to bear in mind the difference between the immediate effect of changing the method and the long-range effect. Ultimately, the government continues to perform actuarial valuation by the closed-period-balancing method; assuming the same projection as the 2004 reform, the benefit levels should be the same results that would be obtained by the whole-future-balance method.

3) Effectiveness of 2004 pension reforms

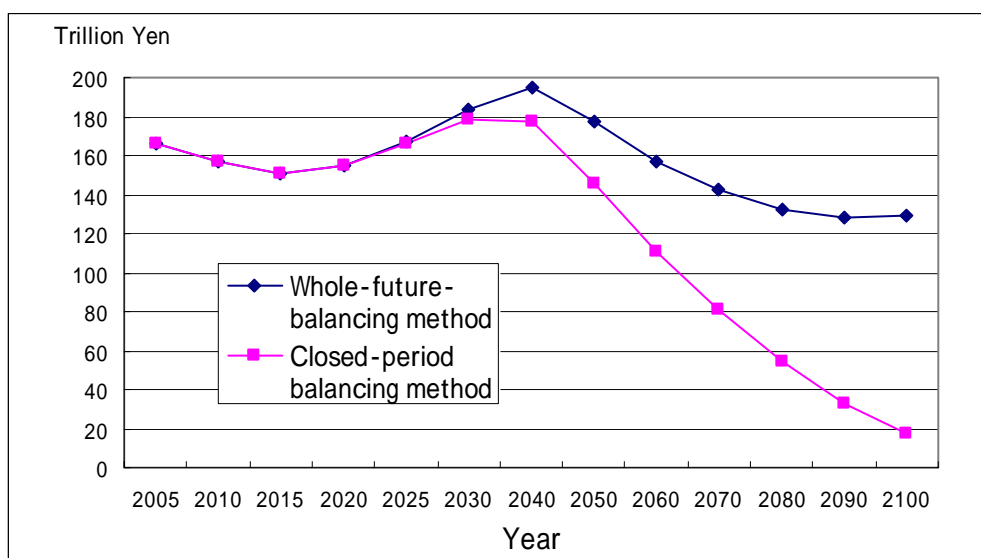
Demographically modified indexation is significantly effective in restricting benefits, and both Employees’ Pensions and Basic Pensions will be cut by 15% in real terms by 2023. Figure 7 shows the changes in revenues and expenditures for Employees’ Pensions before and after the pension reforms. The top two lines in Figure 7 show the revenues and expenditures for Employees’ Pensions before the reforms, and the bottom two lines show the revenues and expenditures for Employees’ Pensions after the reforms. A comparison of these shows that the 2004 pension reforms will result in a cumulative reduction in benefits of ¥356.3 trillion through the year 2100 (discounted by an interest rate of 2.1%), bringing the ratio of pension expenditures to GDP to 9%, below even the present level, by 2025.

Figure 3 Changes in Employees’ Pension assets



Source: Quoted from “Review of Benefits and Contributions in the 2004 Pension Reforms,” Ministry of Health, Labor and Welfare (2004)

Figure 4 Changes of revenues and expenditures



Source: Calculation based on “Review of Benefits and Contributions in the 2004 Pension Reforms,” Ministry of Health, Labor and Welfare (2004)

(2) Problems in 2004 pension reforms

1) The 2004 reforms and inter-generational equity

The conventional approach of raising contributions to maintain benefit levels makes it very likely that increases to contributions will no longer be held in check once the baby boomer generation becomes a recipient generation and greater political influence accrues to the elderly, who accord higher priority to maintaining benefits than to capping contributions. Consequently, setting a ceiling for contributions before the baby boomer generation becomes pension beneficiaries and introducing a scheme for automatically adjusting benefits were by no means misguided policies.

However, the switchover from a level maintenance program to a fixed contribution program was not without its costs, which will be borne in great part by the generation that is presently around age 55.

2) Impacts on generations

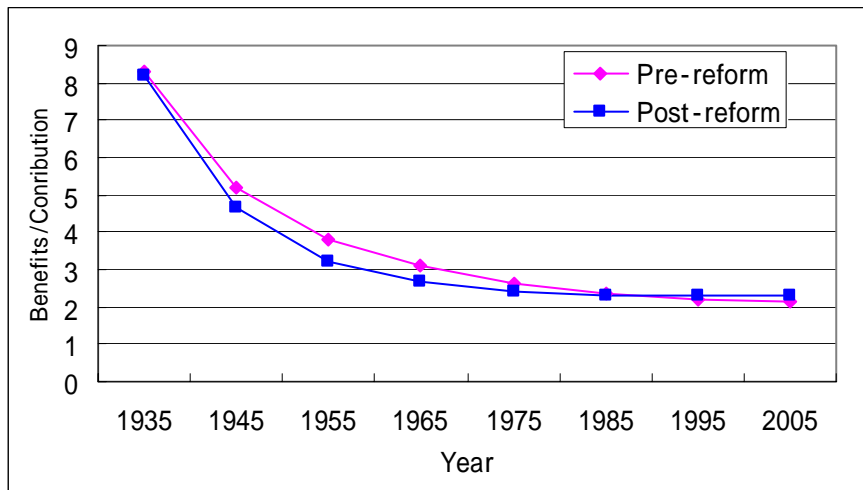
Demographically-modified indexation and the fixed-contribution program will lead to lower benefits and higher contributions, the result being that some generations will profit more than others. Figure 5 shows the multiple of benefits vis-a-vis contributions by year of birth.

“Benefits” refers to lifelong benefits for model

pensions⁴, and lifelong contribution figures do not include company contributions⁵. People born in 1935 are receiving eight times their contributions. The younger the generation, the lower the multiple it will receive because younger workers will pay in higher contributions over their working lives. The diamond line denotes the multiples before the reforms and the square line shows those after the reforms. Overall the benefit multiple for presently employed workers falls after the reforms, but the impact of these reforms differs by generation. Plotting the differential between the diamond line and the square line produces Figure 6. The higher the plot, the greater the loss suffered by that generation in the most recent pension reforms. Although the generation born in 1955 is placed at a great disadvantage by these pension reforms, the generation presently under 20 (due to receive a negative return) benefits from the fact that contributions for the Employees’ Pension will be capped at 18.3% rather than raised to 25% as previously expected.

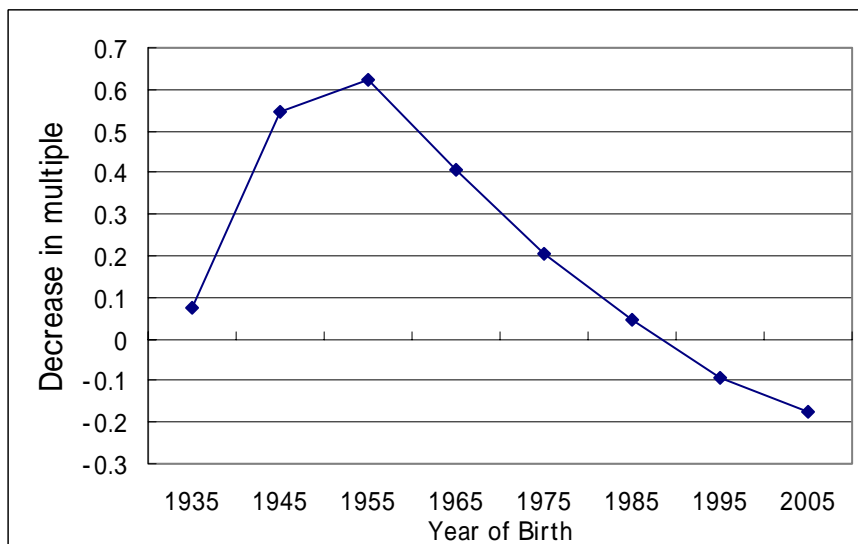
The benefit-contribution multiple thus demonstrates that the losses to pensions in the wake of these reforms will differ by generation. While the most recent reforms cannot be said to have completely eliminated inequities between generations, they have been effective in partially alleviating these disparities.

Figure 5 Benefit-contribution multiple by year of birth



Source: Calculation based on "Relationship of Contributions to Benefits between Generations in the Pension System," Ministry of Health, Labor and Welfare (2003)

Figure 6 Changes in benefit-contribution multiple by year of birth



Source: Calculation based on "Relationship of Contributions to Benefits between Generations in the Pension System," Ministry of Health, Labor and Welfare (2003)

(3) Outstanding issues and new problems caused by the 2004 pension reforms

1) Review of pension framework

The establishment of contribution ceilings and the introduction of a benefits adjustment mechanism before the baby boomer generation begins receiving pensions have many praiseworthy aspects.

At the same time, concerns about the hollowing out of the National Pension program have been addressed by deferring the extension of the program

to non-full-time workers, regarded as a major cause of this evisceration.

A further problem is that indexation adjustments will also target Basic Pensions.

Demographically modified indexation means that not only Employees' Pensions but also Basic Pensions will undergo 15% cuts in real value. As a result, the level of Basic Pensions, precariously balanced with income maintenance for livelihood protection (the sum of utility charges and food costs)

will in future fall significantly below the level needed for livelihood protection.

3. The impact of the decreasing of the total fertility rate (TFR)

The 2004 pension reform was based on the population projection with a medium fertility rate as the baseline scenario. The actuarial valuation assumptions were changed to reflect a number of scenarios: high fertility rate, low fertility rate, and no improvement in fertility in the government report.

The actuarial is less than the government population projection. As a result of it becoming clear that TFR was overestimated in the government's population projection, it is useful to compare the low fertility rate scenario and the baseline scenario.

The last TFR (2005) was 1.25. This was a record low in Japanese history and a far dip from the population projection by the government.

Figure 7 shows the projection of the number of insured in the low fertility rate scenario and the

baseline scenario.

Figure 8 shows the projection of a decreasing TFR (baseline scenario 2004 and row fertility scenario) and the impact on the EPI'S revenue and expenditure budget.

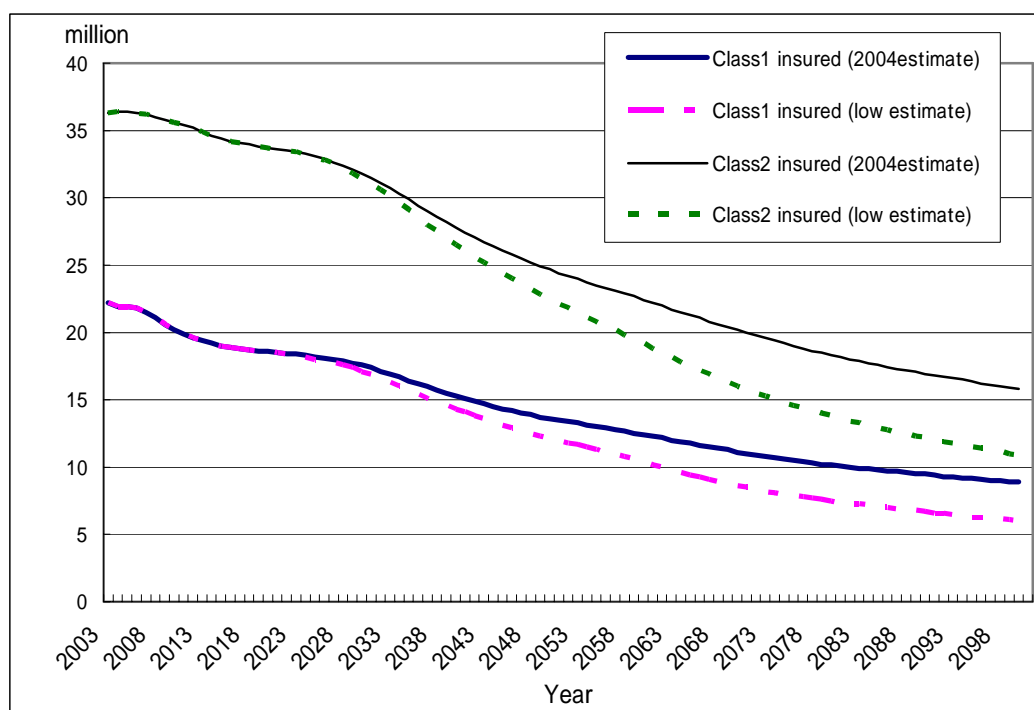
Figure 9 shows the projected impact on the national pension revenue and expenditure budget.

It will have a serious impact on the pension budget. The rule of the pension budget reformed in 2004 requests that the government controls the revenue and expense of the pension budget.

Maintaining equilibrium in pension financing throughout this 95-year period is the essence of the closed-period-balancing method, and this equilibrium is to be verified once every five years through actuarial valuation.

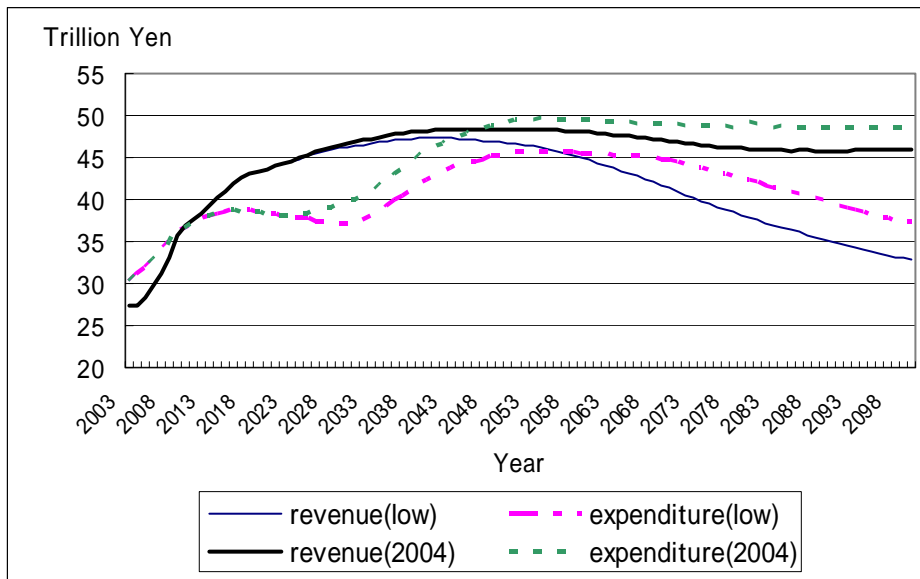
To keep equilibrium in pension financing, the government will have to continue the demographically modified indexation, which the government calls the macroeconomics indexation, and the real value of pensions, would decline by 0.9% every year.

Figure 7 Prospects of numbers of the insured



Source: Quoted from "Review of the 2004 Actuarial valuation of the public pension Planes".

Figure 8 Changes in revenue and expenditure of EPI in a low fertility rate scenario



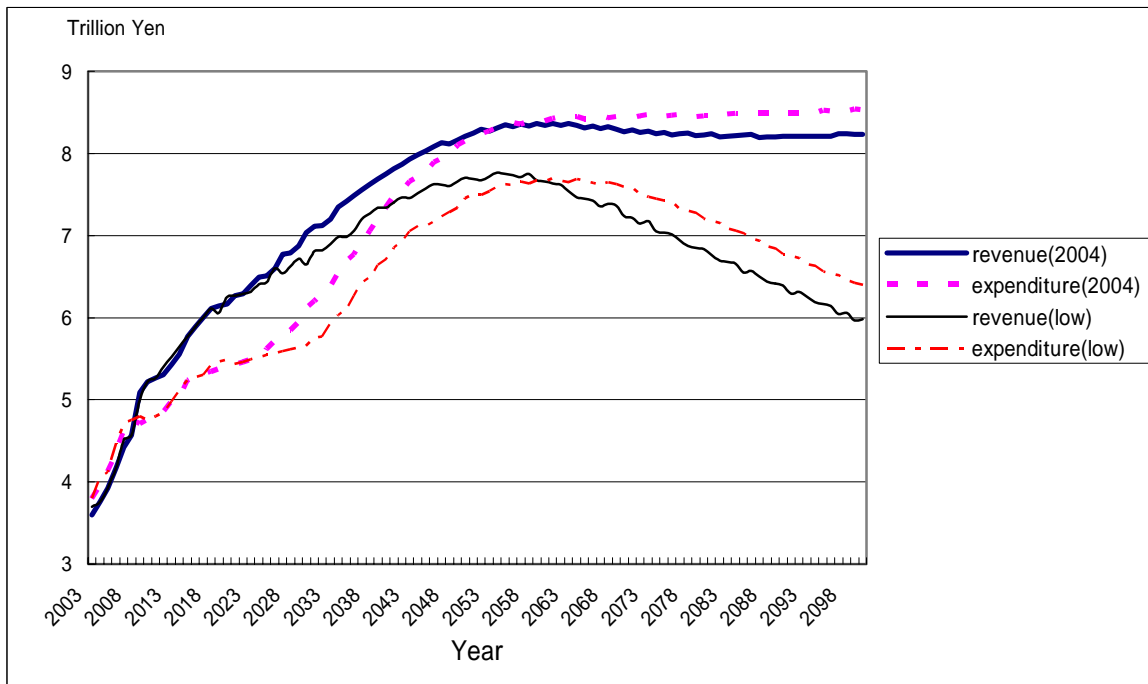
Note: The vertical axis shows the amount of revenue and the expenditure (10 trillion yen).
 Source: Quoted from “Review of the 2004 Actuarial valuation of the public pension Planes.”

If the government continues the demographically modified indexation after 2023, the replacement rate of public pensions will be under 50%; however the government has promised people that the replacement rate of public pensions would

not be under 50% after 2023.

According to the result of this report’s estimation, the government will have to continue the demographically modified indexation until 2030, so that the replacement rate will be 45%.

Figure 9 Changes in revenue and expenditure of National Pensions in a low fertility rate scenario



Source: Quoted from “Review of the 2004 Actuarial valuation of the public pension Planes.”

5. Specific challenges facing the pension system

(1) Pensions for atypical workers

In the midst of low economic growth, the service industry is experiencing a decline in the number of full-time employees and an increase in the number of atypical workers—short-term workers, temporary workers, and the self-employed who serve as subcontractors—as 1) companies downsize their full-time staff in order to cut personnel costs, 2) business owners seek to avoid paying social insurance contributions, and 3) companies endeavor to get around hiring restrictions. Designed for conventional full-time workers, the social insurance system is not adequately adapting to these changes in employment. Under Japan's compulsory pension system in which all citizens participate, many atypical workers have become Category 1 insured persons, but in fact a good percentage do not pay contributions, resulting in a serious hollowing out of the pension system.

1) Diversification of employment and the pension system

Employment patterns have diversified, and new employment patterns in which workers are neither regular employees nor self-employed are on the rise.

The range of employment patterns includes part-time/short-term workers (short-term non-full-time workers), temporary workers, and limited-term contract workers, as well as employment in subcontractor companies to whom manufacturing firms outsource some of their operations and self-employed workers who take on freelance work from companies.

According to the 2001 Comprehensive Survey on Part-time Workers, part-time workers constituted the largest single segment of the workforce: "part-time and short-term workers" numbered about 11.18 million, of whom 9.49 million were classified as "part-time" and 1.69 million as "other." Part-time and short-term workers accounted for 26.1% of all workers; 22.1% "part-time" and 3.9% "other." By sex, there were about 2.96 million male and 8.22 million female "part-time and short-time workers"⁶. Female workers make up an overwhelmingly large percentage of "part-time and short-time workers," with 11.9% of male workers and 45.7% of female workers qualifying as such.

In addition, the labor force survey notes that there are about 7.37 million limited-term contract workers, while calculations using data from the Manpower Dispatching Business Report indicate a total of around 2.13 million temporary workers (as

of 2002). While there are no precise figures available on contract-based workers registered with subcontracting companies, estimates put their number at 1.24 million.

Employees' Pension coverage is extended to these "atypical workers" as follows.

First, 1) persons employed temporarily for a pre-determined period of less than two months, 2) persons employed temporarily on a day-labor basis, or for no more than one month, 3) persons engaged in seasonal work for a period not exceeding four months, 4) persons planning to be employed for a term not exceeding six months in an office of a temporary business, and 5) persons employed at an office that has no established location are not eligible for participation in this pension system. Eligibility for other workers is determined on the basis of their working hours. If a worker is in an employment relationship as an employee and his/her working hours are three-fourths or more of the prescribed working hours for regular workers, that worker is in principle obligated to participate in employee insurance. Persons whose working hours are less than three-fourths participate in the National Pension⁷.

A temporary worker whose term of contract is two months or longer will participate in the Employees' Pension, but temporary workers sometimes encounter a waiting period following the expiration of their term of contract; if this waiting period lasts more than one month, they are no longer considered to be participating in the Employees' Pension program. Although many subcontractor workers in reality have employment relationships with outsourcing companies, "disguised" self-employment, where these companies formally sign outsourcing agreements to avoid having to pay Employees' Pension contributions, has become a problem.

2) Hollowing-out of the National Pension and expanded coverage for the Employees' Pension program

When Japan's pension system was launched as a compulsory pension system in 1959, employees were expected to participate in the Employees' Pension program and self-employed persons in the National Pension program, but many atypical workers engaged in part-time, temporary or outsourced work have since qualified as Category 1 National Pension insured persons.

Table 3 shows a comparison of the employment status of public pension participants. Category 1

insured persons classified as “self-employed” make up only 24.1%, less than one-fourth, of the total, with the most numerous classification being “non-employed persons/unknown.” Furthermore, although details about the conditions of their employment agreements are not available, 21.0% of full-time employees and 12.6% of non-full-time employees should be participating in the Employees’ Pension program as Category 2 insured persons, as

their working hours are no different than general employees; “employees” account for as much as one-third of the total of Category 1 insured persons. At the same time, “employed persons” receiving some form of income made up 36.1% of Category 3 insured persons. There have thus emerged considerable gaps in the pension system between occupational classifications and actual employment patterns.

Table 3 Participation in public pension programs by employment status

(unit: %)

	Participants				Non-participants			
		Category 1 insured	Category 2 insured	Category 3 insured		Category 1 non-insured	Category 3 non-insured	Other non-insured
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Employed persons	77.7	65.4	98.4	36.1	57.3	62.9	17.4	54.0
Self-employed	8.0	24.1	0.5	1.8	18.0	26.6	6.3	12.2
Full-time employed	58.0	21.0	97.9	2.3	15.2	15.1	0.0	15.4
Non-full-time employed persons	7.7	12.6	0.0	22.6	12.6	10.9	5.8	13.9
Others (short-term)	3.9	7.6	0.0	9.3	11.5	10.3	5.2	12.5
(Re)registered temporary workers	1.2	1.4	1.0	1.4	2.0	1.6	4.1	2.3
Non-employed persons/unknown	22.3	34.6	1.6	63.9	42.7	37.1	82.6	46.0

Note 1: Employment/insurance status of persons aged 20 - 59

Note 2: The terms used above are defined as follows (these definitions do not directly indicate social insurance coverage).

Source: Social Insurance Agency, “2001 Survey on Public Pension Participation Status”

Self-employed: sole proprietorship retail store owners, factory owners, farm owners and other business owners as well as doctors in private practice, attorneys, writers, itinerant merchants, etc.; working family members are also included.

Full-time employed: employees whose prescribed working hours per day and prescribed working days per month correspond in general to those of regular employees.

Non-full-time employed: employees other than full-time employees.

Others (short-term): employed persons other than self-employed persons and employees (e.g., students working part-time as private tutors, workers engaged in side jobs, etc.).

Registered temporary workers: temporary workers who have registered with temporary employment agencies, who have concluded employment agreements with the temporary

employment agencies to be dispatched as workers only when requested by client companies, and whose employment agreements will be cancelled and who will return to registered status upon conclusion of the term of employment.

Expanding the coverage of the Employees’ Pension program beyond workers whose working hours are three-fourths those of current full-time workers to include those whose working hours are one-half those of regular employees is an idea being considered to respond to these changes in the labor market. This was one focal point in the 2004 pension reforms, but it was shelved in the face of opposition from companies.

In addition to changes in the labor market and the adaptations of the pension system thereto, there is also the problem of a rising unemployment rate. As can be seen in Figure 12a, the higher an area’s unemployment rate is, the lower is its National

Pension payment rate. One factor in the hollowing out of the National Pension system can be found in the rise in unemployment. In Japan, participation in the National Pension program is compulsory even for the unemployed. The unemployment rate continues to climb in the midst of a prolonged economic recession, and many unemployed persons who no longer participate in the Employees' Pension program have not been paying contributions⁸. This hollowing out is not the only problem involving pensions and the unemployed; other problems include 1) numerous cases in which a person dies or sustains injury while unemployed and thus becomes ineligible under the Survivors' Employees' Pension or the Disability Employees' Pension programs and 2) the fact that despite exemptions, Old-Age Basic Pensions are reduced to one-third during unemployment, leading to worries about income later in life.

(2) The redistribution effect of the National Pension.

Figure 10 shows the movement of Gini coefficients in Japan from 1993 to 2003. There are two types of public pensions in Japan: the National Pension and the EPI.

The Gini coefficient of the National Pension for men has remained constant over 10 years. On the other hand, the Gini coefficient of the National Pension for women has decreased over the same period⁹.

The Gini coefficient of the EPI for woman rises slightly and the Gini coefficient of the EPI for men remains constant. However, the Gini coefficient of the EPI for men has increased sharply.

Figure 11 shows the distributions of EPI pension benefits in 2000 and 2001. It is easy to see that the distribution of men's pensions in 2001 shifted to left. This does not mean that the EPI pension benefits for men decreased. The cause of this shift changed because of the change in men's pensionable age for payment of EPI to begin from 60 to 61 years olds.

We will explain the shift in detail. The pensionable age of EPI is moving gradually from 60 to 65 years old. The EPI pension benefits consist of a base part and income-related part. The pensionable age of the base part pension of the EPI differs by year of birth.

The pensionable age of the base part pension of the EPI for men who were born in 1940 is 61 years old. However the pensionable age of the income-related part pension of the EPI still is 60 years old.

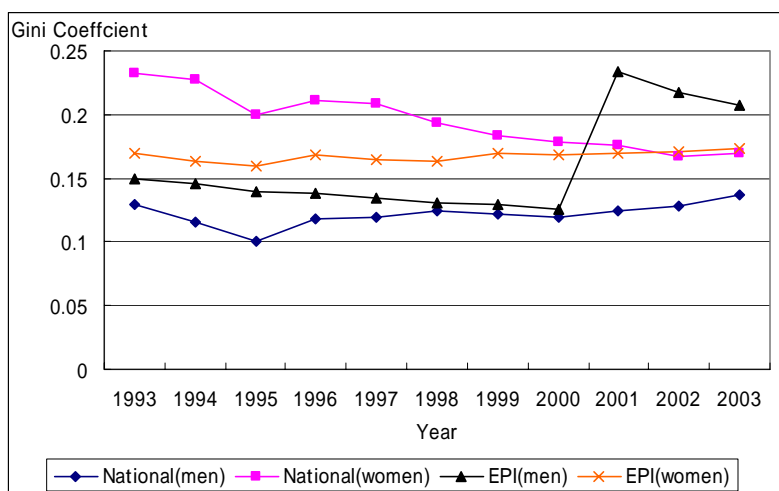
This shift affected the Gini coefficient of the EPI directly. The Gini coefficient of the EPI in 2000 was smaller than the Gini coefficient in 2001.

The pension benefit in 2000 consisted of a base part and an income-related part; however, the pension benefit in 2001 consisted of only the income-related part.

The benefit of the base part is relating to the number of contributing years to the EPI, which is similar to the National Pension. The benefits of the income-related part depended on the number of contributing years and the average wage during employment.

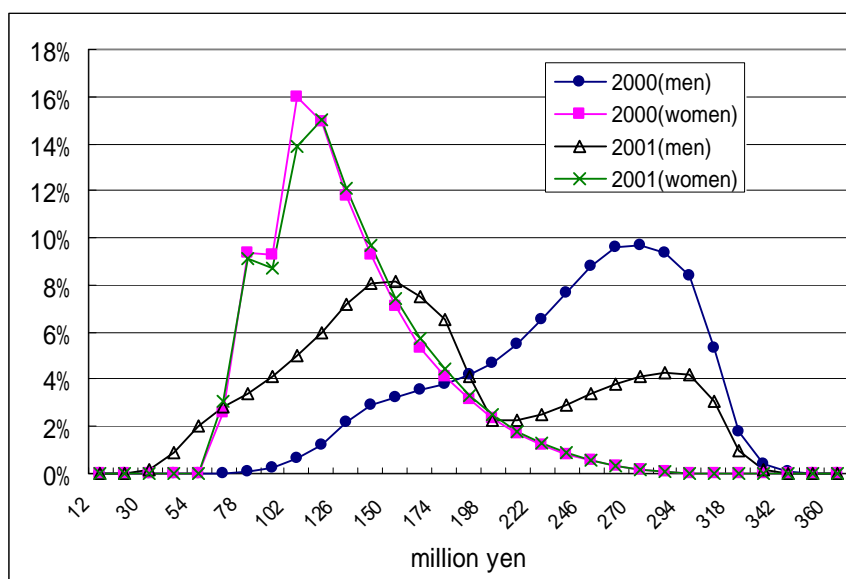
The difference between the Gini coefficient of the EPI in 2000 and the Gini coefficient of the EPI in 2001 is the impact of removing the base part of the pension (National Pension).

Figure 10 Gini coefficients of the EPI and the National Pension



Source: Calculation based on "An annual report of social insurance" Ministry of Health, Labor and Welfare

Figure 11 The distribution of pension benefits



Source: Calculation based on “An annual report of social insurance” Ministry of Health, Labor and Welfare

- ¹ This paper is the revised edition of “Challenges Facing Pension Systems” that I presented to the German-Japanese Joint Research on Social Security, Workshop on Social Security in Germany and Japan, 4-6 September 2005.
- ² A benefits level of 50% is defined as follows. Ordinarily termed the replacement ratio, the ratio of a model pension (for a household with a full-time homemaker that has paid into the Employees’ Pension Fund for 40 years) to the average take-home pay of working males at the time the beneficiary reaches pensionable age is 50%. This by no means implies that individual beneficiaries will receive pensions equivalent to 50% of the wages they earned while employed. In fact, under this system, the higher the wages actually earned while working, the lower the percentage of the pension vis-a-vis these wages.
- ³ The growing life expectancies of the elderly were also incorporated into the actual indexation adjustment rate.
- ⁴ The benefits include an Old-age Pension and the survivor’s annuity that a wife receives.
- ⁵ We must consider company contributions. For further discussion the reader should refer to Komamura and Yamada (2005).
- ⁶ Part-time and short-term workers aged 20 to 35 are termed “freeters” (“part-time jobbers”) and the growing number of such workers has become a social issue.
- ⁷ The National Pension program offers a scheme for Category 3 insured persons targeting the dependent spouses of employees, but the scheme is in fact rather complicated. Although many part-time workers as atypical workers qualify for the Category 3 insured person scheme under the National Pension, workers whose annual income

exceeds ¥1.3 million are reclassified as Category 1 insured persons and must pay contributions themselves.

- ⁸ There is a system whereby households on welfare and disabled persons are legally exempt, while households earning less than a certain income may apply for exemption. Unemployed persons can also be exempted from contributions if it is acknowledged that payment of contributions would impose an undue burden.
- ⁹ he National Pension received is proportional to the contribution period and is unrelated to earnings.

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