

# lakyara

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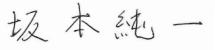
**Special Edition** 

Demographic Aging and Japan's Public Pension System

#### **Preface**

I often receive inquiries about Japan's social security pension schemes from researchers and other interested parties overseas. In the course of responding to such inquiries, I felt that it would be convenient for both myself and the inquiring parties to have a booklet that could serve as a basic guide to Japan's social security pension schemes. I therefore decided to publish this booklet.

Part 1 summarizes recent pension reforms in response to prevailing incessant decline of birthrate and continual improvement of longevity. Part 2 provides an overview of Japan's social security pension schemes in Q&A format. Although this booklet is not a sufficient reference for those doing in-depth research, it aims to direct such researchers to the information they need. As such, it comprehensively outlines Japan's social security pension schemes in considerable detail. I hope you find it useful.





#### Introduction

In many OECD countries, the elderly are living longer, women are having fewer children, and both these trends have progressed beyond previous projections. These countries are experiencing demographic aging<sup>1)</sup> more pronounced than previously anticipated.

Among OECD countries, demographic aging is unfolding most rapidly in Japan. With each successive update of Japanese population projections, forecasts of growth in the pensioner population have been revised upward while estimates of the future working-age population have been revised downward. In response, public pension schemes that operate based on the principle of intergenerational support have repeatedly revised their funding and benefit regimes to stabilize their finances.

Such modifications have included sizable benefit reductions and increases in the pensionable age. When debated in the Diet (parliament), these measures have provoked fierce dissension between the ruling and opposition parties. Whenever pension reform is on the agenda, the Diet has repeatedly descended into partisan conflict focused entirely on the proposed reforms without stepping back to consider how Japan as a society should address the underlying issues of increased longevity and a falling birthrate.

Such political dissension is not unique to Japan. Many other OECD countries have experienced similar conflicts. To avoid such fruitless political conflict, several countries have incorporated automatic balancing mechanisms into their public pension schemes. These balancing mechanisms automatically adjust benefit levels if demographic aging accelerates beyond previous forecasts, thereby restoring financial balance without legislative action. Japan adopted a similar mechanism, called modified indexation, as part of its 2004 pension reform.

Because such mechanisms automatically adjust benefit levels in response to unanticipated acceleration of demographic aging, they could substantially reduce future public pension benefits. However, pension schemes that pay inadequate benefits fail to fulfill their intended societal purpose. As used herein, "adequate benefits" mean benefits sufficient to prevent people who have encountered economic risks in their lives such as old-age, disability and death of the breadwinner from being impoverished.

In light of public pensions' societal mission, Japan has statutorily established a minimum benefit level. This part of the booklet presents an overview of Japan's recent pension reforms to highlight how its public pension system has evolved in response to progressive demographic aging.



# Pension reforms in response to demographic aging

#### 1985 pension reform

Japan enjoyed an economic boom in the 1960s and 1970s. During this era, public pension benefit levels rose in the wake of rapid economic growth. In 1973, price-indexation of pension benefits and wage revaluation were introduced to enable pensioners to catch up with the standard of living or to maintain pension benefits' real purchasing power. At the same time, however, pension benefits were set at a very high level.

The average Japanese life expectancy at age 65 has steadily increased since the mid-1960s, as shown in Exhibit 1. This trend's implications for pension finances emerged as a concern in the latter half of the 1970s. In response, an increase in the pensionable age was proposed as part of the 1980 pension reform, but the proposal was defeated by ruling party opposition.

However, the Employees' Pension Insurance (EPI) scheme's 1980 actuarial valuation yielded a projection that the contribution rate would eventually have to rise to around 35%

of monthly pensionable remuneration if benefit levels remained unchanged. To ensure its sustainability, the EPI scheme needed to stabilize its finances by lowering its benefit level, for example. A benefit reduction was consequently proposed as part of the 1985 pension reform bill. The reduction was to be achieved by restraining any increase in benefit amounts even though the periods covered would become longer in the future as the scheme matured. This benefit reduction was strongly opposed by the erstwhile Socialist Party. Although the reform bill was ultimately passed into law, the ruling and opposition parties subsequently remained at loggerheads over pension reform.

While the 1985 pension reform is well known for introducing the basic pension and establishing spousal rights to pension benefits (the compulsory coverage of dependent spouses of employees as Category 3 enrollees), it also reduced benefits. In this respect, it was the first of a series of pension reforms in response to longevity growth except for the 1954 reform.

Meanwhile, Japan's total fertility rate (lifetime average number of childbirths per woman) was already in decline by around

Exhibit 1. Life Expectancy and Total Fertility Rate

	Life Expectancy (Years)					
Year	Men		Wo	Total Fertility Rate		
	Age 0	Age 65	Age 0	Age 65		
1947	50.06	10.16	53.96	12.22	4.54	
1950 – 52	59.57	11.35	62.97	13.36	3.65	
1955	63.60	11.82	67.75	14.13	2.37	
1960	65.32	11.62	70.19	14.10	2.00	
1965	67.74	11.88	72.92	14.56	2.14	
1970	69.31	12.50	74.66	15.34	2.13	
1975	71.73	13.72	76.89	16.56	1.91	
1980	73.35	14.56	78.76	17.68	1.75	
1985	74.78	15.52	80.48	18.94	1.76	
1990	75.92	16.22	81.90	20.03	1.54	
1995	76.38	16.48	82.85	20.94	1.42	
2000	77.72	17.54	84.60	22.42	1.36	
2005	78.56	18.13	85.52	23.19	1.26	

Source: Compiled based on material published by the Ministry of Health, Labour and Welfare.



1980 (Exhibit 1). However, its decline was initially seen as a transitory dip. The specter of a sustained decline in the birthrate had not yet dawned on policymakers' consciousness. Indeed, policymakers were more concerned about how to prepare for future population growth, partly reflecting that the first half of the 1970s were rife with predictions of a population explosion.

1994 pension reform

It was not until 1994 that pension reform began to factor in a declining birthrate in addition to longevity growth.

The National Institute of Population and Social Security Research (formerly the Institute of Population Problems) has long published quinquennial population projections based on national census data. In 1992, it projected for the first time that Japan's total fertility rate (TFR) was on track to fall below 2.0. Specifically, it projected a future TFR of 1.8, reflecting the TFR's then-prevailing rate of decline.

In response, the Ministry of Health and Welfare (currently the Ministry of Health, Labour and Welfare) drafted a reform proposal that revolved around raising the pensionable age and indexing pensionable remuneration to disposable income<sup>2</sup>). However, labor unions were strongly opposed to raising the pensionable age.

To overcome this opposition, the government set out to harmonize employment policies with pension reform to make the employment environment conducive to raising the pensionable age. It amended existing laws to prohibit companies from setting a mandatory retirement age below 60 and impose a best-efforts duty to raise the mandatory retirement age to 65 or rehire retirees until age 65. It also modified the employment insurance system by introducing employment continuation benefits for workers over age  $60^{3}$ ). The government also decided to limit its proposed pensionable age increase to pension benefits' flat-rate component only.

These reforms of changing the indexation basis from gross

salary increase to disposable income increase per worker and of raising the pensionable age of the EPI flat-rate part from 60 to 65 were passed into law. The timeframe between the bill's drafting and its passage coincided with a political realignment that saw former opposition parties rise to power in a series of coalition governments (Hosokawa, Hata and Murayama Cabinets). Their ascendance to power forced them to tone down their previous opposition to pension reform. This change in the political climate was another factor that contributed to passage of the 1994 pension reform.

#### 2000 pension reform

However, when updated population projections were next released in 1997, they forecasted that demographic aging would progress more rapidly than previously projected. They projected further improvement in the elderly population's mortality rate and a decline in the TFR to 1.61 in response to a continued decline in the birthrate.

In response, the Ministry of Health and Welfare proposed another round of reforms to ensure sustainable pension contribution levels and stabilize the pension system's financial foundation. The proposed reforms included (1) raising the pensionable age to 65 for both the flat-rate and earnings-related components of pension benefits, (2) changing the benefit indexation basis from disposable income to consumer prices from age 65 onward, (3) reducing pension benefits' earnings-related component by 5%, and (4) extending EPI coverage to workers aged 65-69.

Opposition parties were vehemently opposed to the proposed reforms and the Japanese Trade Union Confederation staged protests in front of the Diet Building, but the ruling party rammed the reform bill through the Diet.



# 2004 pension reform

# Further acceleration in demographic aging

Japan's public pension system was thus repeatedly modified from the 1980s onward to stabilize its underlying finances and adapt to structural change in demography in the form of rising life expectancy and a falling birthrate.

Nonetheless, demographic aging continued to accelerate beyond the official projections. The updated population projections published in 2002 forecasted a further increase in life expectancy and decrease in the birthrate. In 2002, future life expectancy was estimated at 80.95 for males and 89.22 for females, respectively revised upward by about 1.5 and 2.8 years from 79.43 and 86.47 as of 1997 (Exhibit 2).

Meanwhile, the estimated future TFR was revised downward to 1.39 in 2002 projection from 1.61 in 1997 projection, indicating that the birthrate was declining faster than previously projected.

Exhibit 2. Advance of Demographic Aging

		2002 projection	1997 projection
Ultimate life expectancy	Men	80.95	79.43
(years)	Women	89.22	86.47
Ultimate total fertility rate	1.39	1.61	

Source: Compiled based on material published by the National Institute of Population and Social Security Research.

# A fork in the road for pension reform

The 2002 population projections undermined the demographic assumptions underlying the 2000 pension reform. Additional measures were needed to stabilize pension finances under the assumption of further acceleration in demographic aging.

However, the political climate had turned extremely inhospitable to pension reform in response to the previous series of reforms to stabilize public pensions' financial foundation. The repeated pension austerity measures had prompted the media to deride

public pension benefits as an ever-receding mirage, creating a major risk of a public backlash against further reforms.

The government consequently faced highly uncertain prospects of gaining the public's support through its conventional approach of reforming the pension regime by presenting a revised contribution schedule after adjusting benefit levels and/or the pensionable age.

This conventional approach has the major advantage of clarifying the reformed pension benefit regime. Nonetheless, it faced a substantial risk of public rejection in 2004.

The government consequently sought a different approach. Its attention was soon drawn to an approach used in Sweden in the 1990s.

One distinguishing characteristic of this Swedish pension reform was adoption of a fixed contribution rate coupled with adjustable benefits. If the pension system's finances drift out of balance, the benefit level is automatically adjusted in accord with predetermined rules to restore financial balance<sup>4</sup>. This model is the automatic balancing mechanism mentioned in the Introduction above. It found favor among Japanese policymakers.

One key concern about Japan's public pension system was a fear of endless growth in future contributions. The Swedish model eliminates this concern by setting contributions at a fixed level and paying benefits within the constraints imposed by the contribution level. Pension participants' future contribution burden is consequently known in advance.

Another concern about the public pension system was uncertainty about how much benefits would be reduced in the future. The Swedish model does not adequately address this concern. Because benefits are reduced whenever the automatic balancing mechanism is activated, future benefit adjustments' cumulative magnitude is uncertain.

Despite this shortcoming, the Swedish model has the major advantage of averting political conflict by obviating the need to



pass pension reform legislation whenever actuarial assumptions change due to further acceleration of demographic aging.

Public pensions cease to fulfill their intended mission once their benefit level becomes inadequate. Anxieties about how far benefit levels could fall therefore had to be addressed. To apply the Swedish model to the Japanese pension system, a new framework had to be devised that would dispel such anxieties while still avoiding political conflict.

After deliberating on such issues, the government abandoned its previous orthodox approach to pension reform in 2004 in favor of the Swedish approach. Specifically, it decided to pursue adoption of a regime with a fixed contribution schedule and a mechanism to restore financial balance through automatic adjustment of benefit levels. It also decided to set a statutory floor for benefits to alleviate anxiety about downside risk to benefit levels.

For the National Pension scheme, self-employed participants' monthly contributions were scheduled to rise from ¥13,300 to ¥13,580 in April 2005 and then increase by ¥280 every fiscal year until reaching a thereafter-fixed ceiling of ¥16,900

in FY2017. However, these amounts are expressed in terms of

FY04 value and indexed to the gross wage growth rate.

ceiling of 18.3% in September 2017.

prescribed fixed contribution schedule<sup>5)</sup>. For the EPI scheme,

the contribution rate was scheduled to rise from 13.58% to 13.934% in October 2004 and subsequently increase 35.4 basis points every September until reaching a thereafter-fixed

# Increase in national subsidy rate for basic pension benefits

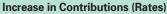
Another key element of the 2004 pension reform was an increase in the rate at which the national government subsidizes basic pension benefits.

To fund basic pension benefits, the public pension schemes pay into the National Pension Special Account's Basic

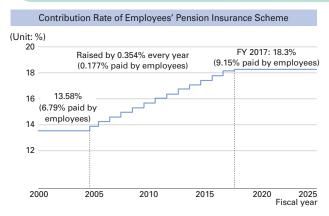
# Statutory contribution schedule

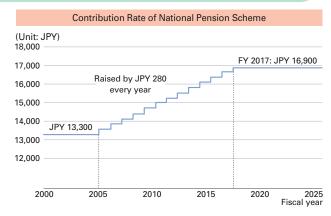
As noted above, the 2004 pension reform featured statutorily

#### Exhibit 3. Contributions (Rates) Stipulated by Law for Employees' Pension Insurance and National Pension Schemes



Employees' Pension Insurance Scheme: Raised by 0.354% (0.177% paid by employees and 0.177% paid by the employer) every year starting in October 2004 National Pension Scheme: Raised by ¥280 (in terms of FY 2004 monetary values) every year starting in April 2005





Notes: The contribution rate of the Employees' Pension Insurance scheme is the percentage of annual income (total pensionable remunerations). The contributions of the National Pension scheme are in terms of the FY 2004 values (nominal amounts until FY 2003). The actual contributions in and after FY 2005 are calculated by multiplying the amount specified above by wage increases in and after FY 2004. Source: The Ministry of Health, Labour and Welfare.



Pension Subaccount in proportion to their respective numbers of covered participants, plus the participants' dependent spouses, aged 20-59 (see Q21 of the Part II).

These payments are called basic pension benefit transfers. Before the 2004 reform, the national treasury subsidized basic pension benefits with funding equivalent to one-third of the pension schemes' basic pension benefit transfers. The 2004 pension reform mandated that this subsidy rate be raised to one-half by 2009.

As of FY08, this subsidy rate has been raised by 3.20 percentage points (i.e., to approximately 36.5%)<sup>6)</sup>, but additional funding is needed to raise it to one-half. As FY09 approaches, the government parties decided to finance the increase by utilizing the surplus of the Special Account for the Fiscal Investment and Loan Program for the time being. However, the permanent financial resources have not been decided yet. Incidentally it should be noted that the government parties declared that the consumption tax rate should be raised by FY2011 if the economic environment permits.

#### Modified indexation

As noted above, with the 2004 reform, the government decided to pursue adoption of a fixed contribution schedule coupled with a mechanism to rebalance pension finances through automatic adjustment of benefit levels.

Given that the funding resources for pension benefits come out of the aggregate earnings of employed pension scheme participants, the government initially considered indexing benefits to aggregate disposable income's growth rate instead of growth in disposable income per worker, which was the existing indexation basis. Aggregate disposable income being a macroeconomic variable, this proposed indexation scheme was called "macroeconomic indexation," a term that subsequently stuck even after the indexation formula was altered.

Aggregate disposable income is calculable as average

disposable income per worker multiplied by the number of covered active participants. Its growth rate can accordingly be calculated as a function of the rate of growth in average disposable income per worker and the percentage change in the number of active participants.

In other words, given that the number of covered active participants will decrease in tandem with demographic aging, aggregate disposable income's growth rate is equivalent to the rate of growth in average disposable income per worker, reduced by the active participant attrition rate.

This attrition rate was named the indexation "modifier." The government studied whether pension finances could be rebalanced by temporarily applying the modifier to the existing indexation basis to reduce benefit adjustment rates. The idea was to use this modified indexation method until financial balance was restored.

This study led to the conclusion that capacity to fund pension benefits is a function of not only employed pension participants' aggregate earnings but also life expectancy. That is, benefit funding capacity diminishes in relative terms when benefit payments increase due to growth in pension beneficiaries' average life expectancy. It was consequently decided that growth in beneficiaries' average life expectancy also should be factored into the modifier. The modifier that was ultimately adopted combines public pension schemes' participant attrition rate and the rate of growth in 65 year-olds' average life expectancy (total for males and females combined).

One proposal for determining 65 year-olds' average life expectancy was to use historical data from Abridged Life Tables that are published every year, but because the historical data exhibit considerable volatility due to random factors (e.g., influenza outbreaks), it was decided to set the life expectancy growth rate at a constant 0.3% based on official population projections.

Although the 2004 reform's modified indexation method ended up largely unrelated to the initially proposed macroeconomic variable, it is still called macroeconomic indexation even today, reflecting its origins as described above.



In summary, Japan resorted to modified indexation as a transitional measure intended to rebalance pension finances by decrementally reducing benefits' indexation rate every year. Once financial balance is achieved, indexation will revert back to the conventional (i.e., unmodified) method. (see Q14 and Q15)

#### Benefit floor

Given that modified indexation is designed to gradually reduce benefit levels in real terms by decrementally reducing benefits' indexation adjustment to rebalance pension finances, it gave rise to a need to monitor benefit levels to prevent them from falling too low, lest public pension schemes cease to serve their intended purpose.

In response to this need, an income replacement rate was adopted as a measure of benefit level. While this replacement rate was an existing concept already in use, it was statutorily incorporated into the 2004 pension reform in light of the importance of monitoring benefit levels.

This replacement rate is defined as follows. Assume that a male average-wage-earner contributed to the EPI scheme for 40 years, from age 20 through 59. His wife, who happens to be of identical age, was covered by National Pension scheme as Category 3 enrollee from age 20 to 59. The replacement rate is defined as the ratio of total annual public pension benefits such a couple would receive upon reaching age 65 to employed EPI-scheme participants' average disposable income in the year that the couple begins receiving pension benefits at age 65. In other words, the replacement rate measures the level of the initial public pension benefits as a percentage of currently employed workers' average income for households that earned average income for 40 years.

Based on 2004 actuarial valuation results, the replacement rate is projected to be gradually reduced by modified indexation from 59.3% at present to 50.2% by around 2023 (Exhibit 4). At that time, public pension finances should be restored to balance, whereupon indexation of benefits would revert to unmodified

indexation. The ultimate replacement rate of 50.2% is therefore projected to be sustainable from 2023 onward.

It remains to be seen whether these projections based on the 2004 actuarial valuation hold true in reality. If demographic aging were to hypothetically accelerate further, modified indexation would have to remain in effect beyond 2023 to rebalance pension finances, assuming that non-demographic assumptions remain unchanged. In such an event, the replacement rate would ultimately be reduced below 50.2%.

In fact, updated population projections published in December 2006 forecast a further acceleration in demographic aging relative to the January 2002 population projections upon which the 2004 actuarial valuation was projected. In response to these updated projections, the Ministry of Health, Labour and Welfare published provisional actuarial projections in February 2007. Assuming no change in the 2004 actuarial valuation's underlying economic assumptions, these provisional estimates project that the replacement rate will fall below 50% in FY27 and modified indexation will remain in effect until FY35, at which point the replacement rate would be down to 46.9%.

As a safeguard against such a scenario, the 2004 reform legislation prescribes a benefit floor to ensure that benefits are not reduced too much. As noted above, one of the aims of the 2004 pension reform was to dispel anxiety about the magnitude of future benefit reductions. The benefit floor was established to fulfill this aim.

The benefit floor provisions state that if the replacement rate is projected to fall below 50% before the next scheduled actuarial valuation, modified indexation is to be suspended and the pension system drastically reformed.

Drastic revision of the system could involve raising the pensionable age, raising the EPI scheme's current contribution rate ceiling of 18.3%, and/or lowering the benefit floor if the new benefit floor still guarantees benefit adequacy.

If average life expectancy increases to the point where publicly supporting pensioners from 65 onward is deemed to be fiscally unfeasible, raising the pensionable age would be an option.

8 28



If real wages rise by virtue of growth in labor productivity, the employed labor force's capacity to pay into the pension system would increase commensurately. Under such a scenario, raising the contribution rate ceiling may be feasible. Additionally, if the national real income level rises, it may be possible to modestly lower the benefit floor without rendering benefits inadequate.

If the replacement rate is on track to fall below 50% in the near future, the benefit floor provision mandates drastic systemic revision that takes into account the factors discussed above and is coordinated with employment policies. This provision is intended to maintain benefit adequacy, dispel anxieties, and ensure that the public pension system does not cease to fulfill its intended mission.

58.1

(47.2)

Exhibit 4. Projections for Benefit Levels as Determined by Modified Indexation (Results of the Actuarial Valuation in 2004)

Ultimate contribution rate of the Employees' Pension Insurance Scheme: 18.3% (9.15% paid by employees and 9.15% paid by employees) National subsidy: To be raised to 1/2 in fiscal 2009 During the period between fiscal 2005 and 2008, "1/3 + 11/1000" is to be subsidized. (For FY 2004, "1/3 + JPY 27.2 billion" was subsidized.) Nominal value (JPY 10,000) • The pension benefit amount when a couple started to receive pension benefits in the respective years is indicated. (61.9) • The wage amount and the benefit amount indicated in parentheses refer to the amounts converted to the current value based on the Consumer Price Index (CPI). Couple's pension benefit amount (nominal amount)

The actual provisional

benefit is not raised even

55.8

(46.2)

End of the period during which

modified indexation is applied FY 2023

28.0

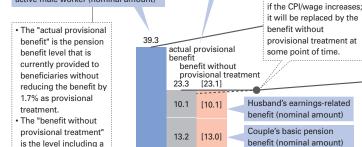
(23.2)

12.1

(10.1)

15.8

(13.1)



Present

FY 2004

Replacement rate



Monthly average disposable income of

active male worker (nominal amount)

(modified indexation is applied): Replacement rate: 59.3% 50.2% Pension benefit amount indexed to the rate calculated by deducting the sum of the decrease rate in the number of active workers and the increase

Pension benefit amount indexed to the rate of disposable income increase

29.2

(23.7)

12.7

(10.3)

16.5

(13.4)

FY 2025

Replacement rate:

50.2%

rate of life expectancy at 65 from the rate of disposable income increase (Period when modified indexation is applied)

	FY 2	2004			
	actual provisional benefit	benefit without provisional treatment	FY 2023	FY 2025	FY 2050
Earnings-related part	10.1	[10.1] —	12.1 (10.1)	12.7 (10.3)	21.3 (13.5)
Couple's basic pension benefit	13.2	[13.0] —	15.8 (13.1)	16.5 (13.4)	27.8 (17.6)

<sup>•</sup> The amounts indicated in parentheses refer to values converted to the current values based on the CPI.

(JPY 10,000)

49 1

(31.1)

21.3

(13.5)

27.8

(17.6)

FY 2050

Replacement rate:

50.2%

Source: The Ministry of Health, Labour and Welfare



Lastly, on the topic of benefit adequacy, which is difficult to define in specific terms, it is crucial to monitor the public's standard of living through such means as the Ministry of Internal Affairs and Communications' quinquennial National Survey of Family Income and Expenditure to ensure that public pension benefits are sufficient to cover basic living expenses. Average public pension benefits must be sufficient to fund the majority of elderly households' average consumption expenditures per said survey.

The benefit floor (i.e., replacement rate of 50%) itself also must be continually reevaluated in light of actual consumption expenditures to ascertain whether it is high enough to prevent impoverishment of those who have encountered economic risks in their lives.

#### Conclusion

As described above, Japan's public pension system has undergone a series of reforms in response to long-term demographic aging. As a result of these repeated austerity measures, the pension system became embroiled in political gamesmanship, posing a risk that further pension reforms would be stymied even as the socioeconomic environment continued to change. In response, the government adopted an automatic balancing mechanism in the form of modified indexation to maintain the pension system's viability for a while even if demographic aging continues to accelerate.

This self-balancing regime was basically modeled after Sweden's 1990s pension reform, but it ended up closely

resembling Germany's sustainability-factor framework.

However, because of modified indexation is designed to gradually lower benefit levels in real terms, the government set a benefit floor to prevent excessive reduction of benefits. Additionally, the 2004 pension reform legislation mandates that if the replacement rate is projected to fall below 50% before the next scheduled pension finance review, modified indexation is to be discontinued and the pension system drastically reformed.

Hopefully, before such drastic measures are necessary, the declining birthrate will level off or turn upward to put the pension system on stabler footing.

#### Note

- 1) As used herein, demographic aging means aging of the population caused by a declining birthrate coupled with longevity growth.
- 2) For the EPI scheme, pensionable remuneration was previously revalued based on the rate of growth in average gross wages per worker, but the 1994 reform changed the revaluation basis to the rate of growth in average disposable income per worker. As used herein, disposable income means gross income less taxes and social security contributions (take-home pay in common parlance). As the population progressively ages, taxes and social security contributions tend to grow faster than gross wages. Gross wages' growth rate consequently tends to exceed disposable income's growth rate. Using gross wages' growth rate to revalue pensionable remuneration would favor pensioners over employed persons because the former generally pay less taxes and social security contributions than the
- latter. The pensionable remuneration indexation method was consequently changed to be more equitable to active workers.
- 3) The formula for reducing employed pensioners' pension benefits was revised to ensure that their combined pension benefits and employment income increase as their employment income increases.
- 4) In Sweden's case, this automatic balancing mechanism was projected to ordinarily be dormant.
- 5) The contribution rate was previously reset following every actuarial valuation until the next valuation.
- 6) The increase was funded by reduction of public pension benefits' excludability from income taxes and repeal of flat-rate tax cuts.





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Part II

## Japanese Social Security Pension Schemes

# Q1: How is Japan's social security pension system set up?

- 3 types of pension schemes
  - National Pension (NP) Scheme

Covers everyone aged 20-59 (and employed persons under the age of 65).

Beneficiaries receive a flat-rate basic pension.

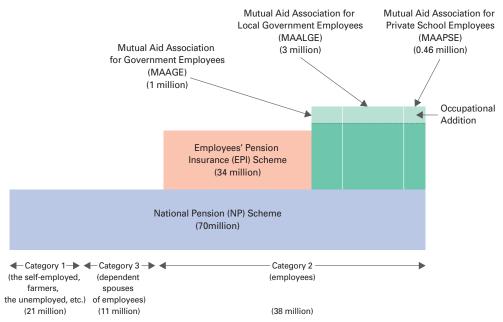
- Employees' Pension Insurance (EPI) Scheme
- Covers private-sector employees.

Beneficiaries receive benefits proportional to pre-retirement income.

- Mutual Aid Associations (MAA)
- Covers national and local government employees, private school employees, etc.
- Beneficiaries receive benefits proportional to pre-retirement income.
- Participation in social security pension schemes is mandatory.

The NP and EPI schemes are described in more detail below.

Exhibit 1. Social Security Pension Schemes in Japan (as of the end of March 2007)



Source: "Fact sheet of social security pension schemes", Actuarial Subcommittee of Social Security Council, Ministry of Health, Labour and Welfare, 2008



#### Exhibit 2. Basic Data on Pension Schemes (as of the end of March 2007)

	(A) Enrollees (in millions)	(B) Old-age pensioners (in millions)	Ratio of contributors to pensioners (A/B)	Reserve fund (in ¥trn)	Contribution (rate)
National Pension					
Category-1 enrollees	21.23			9.4	¥14,410
Category-2 enrollees	37.74	25.20	2.77		
Category-3 enrollees	10.79			_	_
Pension for private-sector employees (remunera	tion-linked be	nefits)			
EPI	33.79	11.98	2.82	139.8	14.996%
Pensions for public-sector employees et al. (remuneration-linked benefits)					
Mutual Aid Association for Government Employees	1.08	0.64	1.68	9.2	14.896%
Mutual Aid Association for Local Government Employees	3.04	1.61	1.89	42.0	14.446%
Mutual Aid Association for Private School Employees	0.46	0.09	4.88	3.6	11.876%

Source: "Fact sheet of social security pension schemes", Actuarial Subcommittee of Social Security Council, Ministry of Health, Labour and Welfare, 2008

# **COVERAGE**

#### **National Pension Scheme**

Q2: How are NP scheme enrollees categorized?

NP scheme enrollees are classified into 3 categories as follows.

- Category 1: aged 20-59;
   Self-employed persons, farmers, practicing doctors, practicing lawyers, unemployed persons, students, spouses of category-1 enrollees, etc.
- Category 2: aged 65 and below;
   Employees in both the private and public sectors
- Category 3: aged 20-59;
   Dependent spouses of category-2 enrollees

# Q3: What is the difference between category-1 (self-employed) and category-2 (employee) enrollees?

- Category-1 enrollees are individually covered, while category-2 enrollees are covered through their employers.
- Category-1 enrollees pay flat-rate contributions and are entitled to flat-rate (basic pension) benefits only.

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- Contributions are set at a flat-rate because income transparency tends to be lacking in the
  case of category-1 enrollees (e.g., self-employed, farmers). Additionally, inequities could result
  if category-1 enrollees entitled to flat-rate benefits were required to pay contributions as a
  percentage of income.
- Category-2 enrollees (employees) are covered by the EPI or the MAA scheme also (see Q1). They are entitled to earnings-related EPI or MAA benefits in addition to the flat-rate basic pension. They only pay contributions to the EPI or the MAA scheme from their pay at a prescribed rate.
  - The EPI or the MAA scheme transfers designated amount of money to the NP scheme to finance the basic pension benefits (see Q21). By this, employees accrue their benefit right to the basic pension benefits.
  - In relation to this, Category-3 enrollees (dependent spouses of category-2 enrollees) are entitled to flat-rate benefits only. Their basic pension benefits accrue as their category-2 enrollee spouses pay contributions to the EPI scheme or to the MAA scheme (see Q21).

#### Q4: Are students also covered?

- Students become category-1 enrollees upon turning 20, but if their previous year's income was below a prescribed threshold, they are temporarily exempted from making contributions (student deferment).
  - Income threshold: ¥1,180,000 + (¥380,000 × number of dependants) + (amount of social insurance contributions)
  - Students may defer their obligation to make contributions for up to 10 years. If they do so and do not make contribution later, the deferment period is included in the qualifying enrollment period but not counted for calculation of benefits.
  - Students that become disabled are entitled to receive disability basic pension benefits even if they have not paid contributions, provided that they were granted a student deferment.
- Similarly, persons aged 20-29 whose income is below a prescribed threshold may also defer payment of contributions (young enrollee deferment).
  - Prescribed income threshold: {\pmu350,000 \times (number of dependents +1)} + \pmu222,000

#### Q5: How does the low-income exemption work?

Low-income enrollees can apply for an exemption from the obligation to make contributions. Four levels of exemptions are granted based on income as follows.

(1) Full exemption

Household members' respective incomes in the previous year may not exceed:  $\{4350,000 \times (number of dependants + 1)\} + 4220,000$ 

\*Pension benefits accruing from the exemption period are reduced by half<sup>1)</sup>.



(2) Three-quarters exemption

The applicant's income in the previous year may not exceed:

¥780,000 + (tax deduction for dependents) + (social insurance contributions)

\*Pension benefits accruing from the exemption period are reduced by three-eighths<sup>1)</sup>.

(3) Half exemption

The applicant's income in the previous year may not exceed:

¥1,180,000 + (tax deduction for dependents) + (social insurance contributions)

\*Pension benefits accruing from the exemption period are reduced by one-quarter<sup>1)</sup>.

(4) Quarter exemption

The applicant's income in the previous year may not exceed:

¥1,580,000 + (tax deduction for dependants) + (social insurance contributions)

\*Pension benefits accruing from the exemption period are reduced by one-eighth<sup>1)</sup>.

Note 1) The above benefit reductions are scheduled to take effect from FY09, when basic pension benefits' national subsidy rate is to be raised to one-half. As of FY08, pension benefits for the exemption period are respectively reduced by (1) two-thirds, (2) one-half, (3) one-third, and (4) one-sixth.

#### **Employees' Pension Insurance Scheme**

Q6: Whom does the EPI scheme cover?

- It covers employees of private companies through their employers.
  - Compulsory coverage is difficult to enforce in the case of small companies with a short operating history.
- EPI covers some part-time employees also.
  - Criteria for EPI coverage of part-time employees:

    Working hours must be at least 3/4 of permanent full-time employees' working hours.
  - A bill to slightly extend this coverage is pending before the Diet (parliament).

#### **BENEFITS**

#### **Basic Pension Benefits**

Flat-rate basic pension benefits are paid to all qualified NP-scheme enrollees. The NP scheme pays the following 3 types of benefits.

- Old-age basic pension benefits
- Disability basic pension benefits
- Survivors' basic pension benefits





## Q7: What are the specifics of old-age basic pension benefits?

- Qualifying period: the following must add up to at least 300 months (25 years)
  - Months in which NP contributions were made
  - Months of enrollment in EPI scheme or Mutual Aid Association schemes
  - Months of enrollment in the NP scheme as Category 3 enrollees
  - Months during which the enrollee was exempted from paying contributions
  - Months during which the enrollee was granted a deferment as a student, expatriate, etc.
  - Months during which the enrollee was living outside Japan.
- Pensionable age: 65
  - Early retirement from age 60 with reduced benefits (Reduction = 0.5% per month)
  - Delayed retirement until age 70 with increased benefits (Increase = 0.7% per month)
- Benefit formula for FY09<sup>2)</sup>

$$\frac{\text{JPY 792,100} \times }{\text{(# of con's)} + \frac{7}{8} \text{ (# of quarter ex)} + \frac{3}{4} \text{ (# of half ex)} + \frac{5}{8} \text{ (# of three -quarter ex)} + \frac{1}{2} \text{ (# of total ex)}}{480}$$

(#: number of months, con's: contributions, ex: exemption)

Note 2) The above fractions for reducing benefits for contribution-exemption periods are scheduled to take effect from FY09, when basic pension benefits' national subsidy rate is to be raised to one-half. As of FY08, the fractions are 5/6 instead of 7/8, 2/3 instead of 3/4, 1/2 instead of 5/8, and 1/3 instead of 1/2.

- Annual benefits: ¥792,100 as of FY09 for beneficiaries entitled to full benefits (i.e., who paid contributions for 40 years).
- It should be noted that benefits were held constant by the government when the CPI registered a negative rate of change in FY99-01. Absent this intervention, annual benefits would currently be ¥778,600 instead of ¥792,100. ¥792,100 in the above formula will remain in effect until the indexed amount of ¥778,600 exceeds ¥792,100.
- Every year, annual benefits will be revised by the following formulas.
  - <Benefits for beneficiaries younger than 65>

Annual benefits = previous year's annual benefits  $\times$  (1+a)  $\times$  (1+b)  $\times$  (1+c) / (1+d)

- a. CPI inflation rate (year-earlier)
- b. Real wage growth rate (average over previous 2-4 fiscal years)
- c. Rate of change in ratio of disposable income to gross income (3 fiscal years earlier)
- d. Modifier (see Q14)





<Benefits for beneficiaries aged 65 and older>

Annual benefits = previous year's annual benefits  $\times$  (1+a) / (1+b)

- a. CPI inflation rate (year-earlier)
- b. Modifier

#### Q8: What are the specifics of disability basic pension benefits?

- To qualify for benefits, beneficiaries must be certified as disabled. Disabilities are classified by degree as follows.
  - 1st degree: e.g., both arms and hands disabled, total eyesight worse than 0.04 with glasses, etc.
  - 2nd degree: e.g., one arm and hand disabled, total eyesight worse than 0.08 with glasses, etc.
- Qualifying condition:

Months of nonfulfillment of contribution obligations may not exceed one third of the enrollment period.

- Benefit amounts (for FY09):
  - 1st degree: ¥792,100 × 1.25 + (increment based on the number of children)
  - 2nd degree: ¥792,100 + (increment based on the number of children)
- Benefits are suspended for 6 years if the beneficiary receives disability benefits from the Employment Injury Scheme.
- Persons certified as disabled before age 20 (i.e., before enrolling in the National Pension scheme) are eligible to receive disability basic pension benefits from age 20.

#### Q9: What are the specifics of survivor's basic pension benefits?

- Payable only to widows with children, or to surviving children, under age 18.
- Qualifying condition:

Months of nonfulfillment of contribution obligations may not exceed one third of the enrollment period.

- Benefit amount: ¥792,100 + (increment based on number of children)
- Benefits are suspended for 6 years if the beneficiary receives disability benefits from the Employment Injury Scheme.

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#### **EPI Benefits**

EPI benefits are paid in proportion to income to all EPI enrollees who have satisfied the qualifying conditions.

- Old-age EPI benefits
- Disability EPI benefits
- Survivor's EPI benefits

## Q10: What are the specifics of old-age EPI benefits?

- Qualifying period: Enrollees that are qualified for NP old-age basic pension benefits may be entitled to old-age EPI benefits even if they were enrolled in the EPI scheme for as little as one month.
- Pensionable age: 65
  - In the process of being raised from 60 to 65
  - Transition to 65 to be completed in FY26 for men and FY31 for women

#### ■ Benefit formula:

 Annual benefits are set at a prescribed percentage of average pensionable remuneration during the beneficiary's EPI enrollment period. (There are upper limits for the pensionable remunerations (see Q20))

Annual benefits = avg pensionable remuneration × 5.481 / 1000 × months enrolled

- Similar to German point system or Swedish NDC system
- Formula for calculating average pensionable remuneration
  - Average pensionable remuneration is calculated by revaluing nominal pay (including bonuses) based on CPI increase, real disposable income growth and modifier (see Q14), tallying these revalued earnings, and dividing their sum by the number of months of EPI enrollment.

Avg pensionable remuneration = (Total revalued monthly pay + total revalued bonuses) / months enrolled

- Pensionable remuneration revaluation method
- Nominal monthly pay and bonuses are revalued by multiplying them by a revaluation rate derived by cumulating annual revaluation rates (see formula below) from the year of their payment through the revaluation date. These revalued amounts are then totaled.
- Cumulative revaluation rates for revaluing past remuneration to present value are published annually as Revaluation Rate Tables. These tables can be used to calculate total revalued remuneration (see Exhibit 3).
- Annual revaluation rate =  $(1+a) \times (1+b) \times (1+c) / (1+d)$ 
  - a. CPI inflation rate (year-earlier)
  - b. Real wage growth rate (average over previous 2-4 fiscal years)

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#### Exhibit 3. Example of Revaluation of Pensionable Remuneration

Period	Cumulative revaluation rate	Nominal monthly pay	(A) Revalued monthly pay	(A) × 12	Nominal bonuses	Revalued bonuses
97/4 - 98/3	1.291	200,000	258,200	3,098,400	500,000	645,500
98/4 - 99/3	1.259	200,000	251,800	3,021,600	500,000	629,500
99/4 - 00/3	1.228	200,000	245,600	2,947,200	500,000	614,000
00/4 - 01/3	1.153	200,000	230,600	2,767,200	500,000	576,500
01/4 - 02/3	1.101	200,000	220,200	2,642,400	500,000	550,500
02/4 - 03/3	1.069	200,000	213,800	2,565,600	500,000	534,500
03/4 - 04/3	1.048	200,000	209,600	2,515,200	500,000	524,000
04/4 - 05/3	1.028	200,000	205,600	2,467,200	500,000	514,000
05/4 - 06/3	1.006	200,000	201,200	2,414,400	500,000	503,000
06/4 - 07/3	0.994	200,000	198,800	2,385,600	500,000	497,000
07/4 - 08/3	0.968	200,000	193,600	2,323,200	500,000	484,000

**Enrollment-period totals** 

29,148,000 (B)

6,072,500 (C)

Total remuneration during enrollment period (B) + (C) = 35,220,500 Average monthly remuneration

35,220,500/132 months =

266,822

Source: Hypothetically constructed based on material published by the Ministry of Health, Labour and Welfare

- c. Rate of change in ratio of disposable income to gross income (3 fiscal years earlier)
- d. Modifier (see Q14)
- Adjustment of benefits after payment of benefits has commenced at age 65 Annual benefits = previous year's benefits  $\times$  (1+a) / (1+b)
  - a. CPI inflation rate (year-earlier)
  - b. Modifier
- Pensioners that remain employed by private companies may have their benefits reduced based on their income and age.

# Q11: What are the specifics of disability EPI pension benefits?

- In addition to NP disability basic pension benefits, EPI enrollees are entitled to receive disability EPI pension benefits.
- To receive benefits, beneficiaries must be certified as disabled. Disabilities are classified by degree into the following 3 categories. Third-degree disabled persons are entitled to receive EPI benefits only, not disability basic pension benefits.
  - 1st and 2nd degrees: same as for NP basic disability pension benefits
  - 3rd degree: e.g., total eyesight worse than 0.6 with glasses, two fingers missing from one hand, etc.

Note: 1. The above remuneration data are strictly hypothetical.

<sup>2.</sup> The above example illustrates the hypothetical case of someone who was enrolled in the EPI scheme from April 1997 through March 2008 and began to collect pension benefits in FY08.





#### ■ Benefit amounts

- 1st degree: (same formula as for old-age EPI benefits) × 1.25
- 2nd and 3rd degrees: same formula as for old-age EPI benefits
- If the EPI enrollment period is shorter than 300 months, it is deemed to be 300 months.
- · Beneficiaries with 3rd-degree disabilities are not entitled to NP disability basic pension benefits
- Disability EPI pension beneficiaries with 3rd-degree disabilities are entitled to minimum benefits equivalent to three quarters of the level of NP disability basic pension benefits payable to persons with second-degree disabilities.
- Benefits are suspended for 6 years if the beneficiary receives disability benefits from the Employment Injury Scheme.

## Q12: What are the specifics of survivor's EPI pension benefits?

- Unlike survivor's basic pension benefits, survivor's EPI pension benefits are payable even to surviving widows without children. The amount of benefits payable differs according to the widow's age at the time of her husband's death.
  - Age 20-29: "Annual pension benefits corresponding to husband's EPI enrollment period" x 3/4 (albeit payable for 5 years only for those without surviving children)
  - Age 30-39: "Annual pension benefits corresponding to husband's EPI enrollment period" × 3/4
  - Age 40 or older: "Annual pension benefits corresponding to husband's EPI enrollment period" × 3/4 + "increment"
  - \*The increment is equivalent to three-quarters of the NP survivor's basic pension benefit.
  - If the EPI enrollment period is shorter than 300 months, it is deemed to be 300 months.
- If entitled to receive her own old-age EPI benefits, a widow is entitled to whichever amount of the following benefits is greater upon reaching pensionable age (generally 65).
  - 1. Her own old-age EPI benefits
  - 2. Survivor's EPI benefits
  - 3. (Pension benefits corresponding to duration of husband's EPI enrollment + her own old-age EPI benefits) / 2
  - \*In the case of options 2 and 3, widows are first paid their own old-age EPI benefits in full, with the remainder of their entitlement paid as survivor's benefits.

# Q13: How are pension benefits divided in the event of divorce?

■ Major post-divorce disparities in pension benefits between ex-husbands and ex-wives emerged as a problem due to a rising divorce rate among the middle-aged and elderly. In response, the 2004 pension reform prescribed rules for dividing pension benefits in the event of divorce (effective from April 2007 on a divorce-date basis).



■ EPI pension benefits accruing from the marriage period are divided by apportioning recorded pension contributions (more specifically, by apportioning pensionable remuneration, the basis for calculating pension benefits). Benefits are not divided by having the recipient spouse pay the other spouse his/her share. Instead, the benefit entitlement itself is divided between the spouses. Consequently, even after one spouse dies, the other spouse continues to receive pension benefits for life.

<Periods during which both spouses were employed EPI enrollees>

- The spouse who is apportioned a larger share of recorded pension contributions than he/she personally contributed may not be apportioned more than half of both spouses' combined contributions during their marriage.
- Whether to divide benefits and how to do so are decided by agreement between both parties. If an agreement cannot be reached, one party may petition a court to divide the benefits. The statute of limitations for doing so is 2 years from the divorce date.
- <Periods of category-3 NP enrollment (as dependent spouse of category-2 enrollee)>
  - For periods from April 2008 onward during which one spouse was a category-3 dependent spouse, the dependent spouse is automatically entitled to one-half of pension benefits upon request (the other spouse's consent is not required).

#### Adjustment of benefits in response to demographic aging

Q14: What type of "modifier" is used to adjust benefits?

- The conventional (i.e., unmodified) indexation method for both basic pension and EPI benefits is as follows (see Q7, Q10).
  - Through age 64: indexed to growth in disposable income per worker
  - From age 65: indexed to CPI inflation rate
- However, the following modified indexation formula is being used on a temporary basis to reduce the risk of overburdening the working-age generation until the financial equilibrium is attained under the fixed contribution program. The indexation method is modified to take into account changes in the number of active participants in social security pension schemes and growth in average life expectancy.
  - Modified indexation
  - = (1 + normal index) / (1 + modifier)
  - = (1 + normal index) (modifier)
  - \*If the modified index becomes negative, it is replaced by 0.
  - Modifier
  - = (rate of decrease in social security pension schemes' enrollees) + (rate of increase in life expectancy at age 65 (fixed at 0.3%))

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# Q15: Why was modified indexation adopted?

- In Japan, social security pension contribution rates were repeatedly raised and benefits repeatedly reduced in response to progressive demographic aging, resulting in widespread public concern that contribution rates would continue rising indefinitely.
- To dispel such concerns, the government adopted a schedule to incrementally raise the contribution rate to a thereafter-fixed ceiling. To retain the flexibility to keep pension finances in balance with a fixed contribution rate, the government adopted modified indexation to adjust benefit levels.
- If the quinquennial actuarial review of pension finances (see below) reveals a financial imbalance, benefit levels continue to be adjusted by modified indexation. Once financial balance is restored, indexation reverts to the unmodified formula.
- Modified indexation was also intended to avoid political conflict by adjusting benefits in accord with predetermined rules under the fixed contribution program.

# Q16: Are there any safeguards against excessive reduction of benefits?

- Imposing a ceiling on contribution rates gave rise to concerns that benefit levels would be adjusted relentlessly downward by modified indexation. In response, the government established a minimum benefit level and a reform procedure to be deployed if benefits are projected to fall below the minimum level. These measures are innovations not found in the Swedish or German models (Germany has apparently started to look into adopting similar measures).
- Minimum benefit level
  - If the benefit level threatens to fall below the prescribed minimum before the next actuarial review, modified indexation is to be discontinued and funding and/or benefit regimes drastically reformed.
  - Drastic reform may include revision of pensionable age, contribution schedules, etc.
- An income replacement rate was adopted as a benchmark of benefit adequacy. If the replacement rate falls below 50%, the pension financing/benefit regime is to be reformed.
- This replacement rate measures the percentage of pension benefits for a hypothetical household with the following attributes to the average disposable income of active male workers.
  - The household comprises a working husband and a non-working dependent wife of identical age.



- The husband was enrolled in the EPI scheme from age 20 through 59, throughout which time he earned an average salary.
- The wife was a category-3 enrollee in the NP scheme from age 20 through 59.
- Specifically:

Replacement rate = said household's annual social security pension benefits at age 65 / average disposable income of current employed enrollees (males)

## **FINANCING**

#### Q17: How much are category-1 enrollees' contributions?

- Flat-rate contributions:
  - Monthly contribution is ¥14,660 in FY09.
  - Contributions are collected by the National Pension Special Account's National Pension Subaccount (a in Exhibit 4).
- Future contribution rates are all prescribed by law.
  - Raised by ¥280 (in FY04 yen) annually.
  - Fixed at ¥16,900 (in FY04 yen) from April 2017 onward.

# Q18: Under what circumstances are category-1 enrollees exempted from making contributions?

- Unconditional exemption
  - · Recipients of disability benefits
  - · Recipients of social assistance
- Exemption upon application (see Q5)
  - For enrollees with low or no income
  - 4 grades of exemption
- Deferment payment of contributions
  - Those exempted from paying contributions can pay the contributions up to 10 years later.





#### Q19: How much do category-2 EPI enrollees' pay in contributions?

- Contributions are paid in proportion to monthly pensionable remunerations and pensionable
  - Contributions are split equally between employer and employee.
  - The total contribution rate is 15.35% as of January 2009.
  - Contributions are collected by Social Insurance Special Account's Pension Subaccount (b in Exhibit 4).
- Contribution rate's future path is prescribed by law
  - Rate to be raised 35.4 basis points every September until 2017
  - Fixed at 18.3% from September 2017

#### Q20: At what level is the EPI scheme's maximum pensionable remuneration set?

Contributions are collected at a flat percentage of monthly pay and bonuses, subject to the minimum and maximum specified below.

- Monthly pensionable remuneration
  - Set based on the average of April-June salary
  - Effective from September
  - Subject to interim revision if salary changes substantially
  - Minimum level: ¥98,000, reflecting the minimum wage
  - Maximum level: ¥620,000, set at roughly double the average salary to avoid excessive benefits
- Pensionable bonuses
  - Bonuses are compensation paid less frequently than quarterly
  - Maximum pensionable bonuses: ¥1,500,000···to avoid excessive benefits

#### Q21: How are basic pension benefits financed?

- Category-1 enrollees' contributions are collected by the National Pension Special Account's National Pension Subaccount. EPI scheme enrollees' contributions are collected by the Social Insurance Special Account's Pension Subaccount. (Public employees' contributions are collected by Mutual Aid Associations.)
- Funds earmarked for basic pension benefits are transferred to the National Pension Special Account's Basic Pension Subaccount from the National Pension Special Account's National Pension Subaccount, the Social Insurance Special Account's Pension Subaccount and Mutual Aid Associations. Basic pension benefits are paid out from the Basic Pension Subaccount.

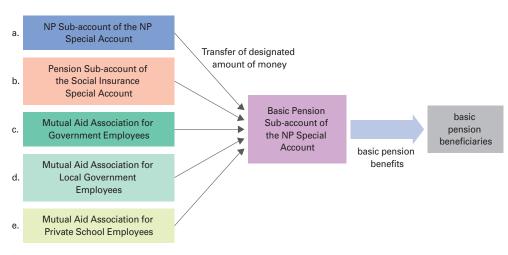


Exhibit 4. Financing of Basic Pension Benefits

Source: NRI

- Funds are annually transferred from the National Pension Special Account's National Pension Subaccount, the Social Insurance Special Account's Pension Subaccount and Mutual Aid Associations to the Basic Pension Subaccount in proportion to the sum of the number of active enrollees and their dependent spouses aged 20-59 of each scheme.
- Additionally, a portion of basic pension benefits are subsidized by the national government from general revenues.

### Q22: How does the national government subsidize basic pension benefits?

The government subsidizes basic pension benefits for the following reasons.

- Income redistribution
- Financial relief for category-1 enrollees
- · Active support of social security pension schemes by the government
- There are several types of national subsidies.
  - Principal national subsidy: equivalent to a fixed percentage of funds transferred to the Basic Pension Subaccount from individual pension schemes
  - Transitional national subsidy: fixed percentage of pension schemes' benefits accruing from contributions before April 1961, etc.
  - Special national subsidy: for disability benefits paid to beneficiaries disabled before age 20, benefits for exemption periods, etc.



■ Of these subsidies, the principal national subsidy rate is planned to be raised from one-third to one-half in FY09 pursuant to the 2004 pension reform legislation.

#### **ACTUARIAL REVIEW**

#### Q23: How are actuarial reviews conducted?

- Actuarial reviews are conducted at least once every 5 years to monitor the impact of changes in the socioeconomic environment on social security pension schemes' finances (e.g., the replacement rate's trend).
- Actuarial reviews update underlying assumptions (e.g., about demographics, the economic environment, employment trends) and check whether the replacement rate is on track to fall below its prescribed minimum level in the future (and, if so, when).
- The latest review has just been completed in February 2009. Assumptions used in the actuarial review have been updated as follows.
  - Updated population projections have already been published.
  - Economic assumptions were proposed by the Social Security Council's Expert Committee on Economic Assumptions.
  - Other actuarial assumptions have been reviewed based on the actual experiences for the last three years.

#### INVESTMENT OF RESERVE FUND

# Q24: How is the EPI scheme financed? How large is its reserve fund?

- "Financing method" means the concept of how a pension scheme collects contributions as time passes to fund the benefit expenditures.
- The financing method of the EPI scheme has changed since the scheme's inception in 1942.
  - Initially, the EPI scheme adopted the level-contribution method and accumulated surplus contributions in a reserve fund for future benefits.





- · However, during the early postwar era of economic hardship, the contribution rate was provisionally lowered and subsequently kept below the level-contribution rate. The financing method consequently became more like PAYGO, but not completely. Even today, the EPI scheme has a huge reserve fund (equivalent to roughly 5 years of benefits as of FY08).
- At end-March 2007, the EPI reserve fund stood at ¥140 trillion (excluding ¥25.8 trillion in assets held in Employees' Pension Funds)3).

Note 3) The NP Subaccount also has a reserve fund of ¥10 trillion.

■ Reserve fund assets are managed by the Government Pension Investment Fund (GPIF).

#### Q25: How does the GPIF operate?

- The GPIF is a government agency and manages the EPI and National Pension schemes' reserve fund assets. Its mission is to contribute to the pension system's stability by distributing its investment returns to the government (specifically to the pension schemes' respective Special Accounts).
- Pension reserve fund assets are required by law to be "safely and efficiently invested from a long-term perspective." From the standpoint of pension finance, reserve fund assets need to generate a positive real return (i.e., a return in excess of the wage growth rate) over the long term. To meet such demands, the GPIF has adopted the following two policies as its fundamental approach to managing reserve fund assets.
  - (1) It invests in a diversified portfolio comprising multiple asset classes with different attributes
  - (2) It formulates and maintains the principal portfolio with prescribed asset allocations set from a long-term perspective.
- The Minister of health, Labour and Welfare shows medium term target of invetment performance to the GPIF and also evaluates its actual performance.
- The GPIF also formulates asset management policies and entrusts investment of reserve fund assets to trust banks, insurance companies and investment advisory companies. Assets managed in-house are limited to government bonds.



#### Author's Profile

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Mr. Junichi Sakamoto is the Chief Adviser to the Pension Management Research Group of the Nomura Research Institute. Previously, he was the Director of the Actuarial Affairs Division, Pension Bureau of the Ministry of Health, Labour and Welfare, in the Japanese Government. In that capacity, he was responsible for the actuarial affairs of the 2004 reform of social security pension schemes in Japan. He is also a part-time lecturer at the University of Tokyo, the Nihon University and the Sophia University. He is a board member of the Institute of Actuaries of Japan and a committee member of the Pension Benefit and Social Security Section of the International Actuarial Association. He received the Bachelor of Science and the Master of Science in Mathematics from the University of Tokyo.

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