# Financial Report on the Public Pension System Fiscal Year 2008 (Summary)

# 1. Fiscal Revenue and Expenditure

# ☐ The Financial Status of Public Pension Plans as a whole

The financial status of public pension plans as a whole for FY2008 reveals that 28.8 trillion yen of revenue was income from contributions and 8.0 trillion yen was from subsidies by state etc., while 46.0 trillion yen of the expenditure was for pension benefits. The reserve at the end of FY2008 was 184.0 trillion yen at book value and 172.1 trillion yen at market value (Figure 1, Figure2-1-1 in the report).

# ☐ Contributions – Decreased for LPSP and NP

Contributions of Employees' Pension Insurance (EPI) were 22.7 trillion yen, those of National Public Service Personnel Mutual Aid Association (NPSP) were 1.0 trillion yen, Local Public Service Personnel Mutual Aid Association (LPSP) were 3.0 trillion yen, Mutual Aid Corporation for Private School Personnel (PSP) were 0.3 trillion yen and National Pension (NP) were 1.7 trillion yen (Figure 2-1-4 in the report). In FY2008, contributions of EPI, NPSP, and PSP increased, while those of LPSP and NP decreased.

Figure 1 Financial Status (FY2008)

Classification		Public pension plans as a whole
		100 million yen
Total revenue	(book value)	456,070
Contributions		288,186
Subsidies by state etc.		79,895
Subsidies for "bestowals" payments of prior period		12,982
Investment income	(book value)	26,414
(Remittances from the Government Pension	Investment Fund)	(17,936)
Payment of the cost for the occupational portion ex	ceed EPI	2,218
Payment of the cost for contracting back in to EPI of	ofEPFs	3,486
Welfare and Medical Service Agency payment		6,754
Transfer from the reserve		35,342
Others		<b>※</b> 794
Total expenditure		465,952
Benefits		460,269
Others		△ 5,683
Balance of revenues and expenditures	(book value)	9,882
Reserve at the end of fiscal year	(book value)	1 <u>8</u> 39,631
Change in year-end reserve on previous year	(book value)	45,221
(For reference)		Δ
Investment income	(market value)	125,731
Reserve at the end of fiscal year	(market value)	₫,721,362
Change in year-end reserve on previous year	(market value)	194,233

Note: To calculate revenue and expenditure in consolidated base, the following contributions and corresponding revenue are excluded from both revenue and expenditure summation because those contributions and income are paid from one public pension plan to other public pension plan: contribution to Basic Pension, contribution to the equivalent to benefits of Basic Pension (old law (pension law effective before FY1986)), contribution representing inter-plan fiscal adjustments between NPSP and LPSP and contribution to support JT MAA, JR MAA and NTT MAA that consolidated to EPI. Additionally the amout of transfer from the surplus of previous year (1,567.5 billion yen) in Basic Pension Account is excluded from "Others" (\*) in revenue.

### ☐ Pension Benefits – Increased for EPI, LPSP, PSP, and Basic Pension

Benefits<sup>1</sup> of EPI were 22.7 trillion yen, those of NPSP were 1.7 trillion yen, LPSP were 4.4 trillion yen, PSP were 0.3 trillion yen, NP's National Pension Account were 1.6 trillion yen, and NP's Basic Pension Account were 15.4 trillion yen (Figure 2-1-12 in the report). Pension benefits are increasing under EPI, LPSP, PSP, and Basic Pension.

Note 1: Benefits for each pension plan include the equivalent to benefits of Basic Pension (the partial amount of benefits under the old law regarded equivalent to Basic Pension). The benefits paid by the National Pension Account are mainly those under the old National Pension Law. The benefits paid by the Basic Pension Account are those of Basic Pension.

#### □ Reserve

Reserve<sup>1</sup> of EPI was 124.0 trillion yen (116.6 trillion yen), that of NPSP was 8.6 trillion yen (8.2 trillion yen), LPSP was 39.5 trillion yen (36.2 trillion yen), PSP was 3.4 trillion yen (3.2 trillion yen), NP's National Pension Account was 7.7 trillion yen (7.2 trillion yen) and NP's Basic Pension Account was 0.7 trillion yen. (Figure 2-1-15 in the report). Note that the reserve of EPI does not include that of the substitutional part of the Employees' Pension Fund.

**Note 1:** The values are at book values. The values in parentheses are at market values. The method for market value assessment is as presented in Figure 2-1-17 in the report.

## ☐ Adjusted Financial Status to observe the events related to the present year

events related to the present year is compared and analyzed in a crosssectional way from the viewpoint of pension finances by Actuarial Subcommittee, and is divided into "balance of revenues and expenditures on the adjusted financial status base excluding investment income" and "investment income." The total amount of revenue on the adjusted financial status base excluding investment income for public pension plans as a whole was 39.4 trillion yen and the total amount of expenditure was 46.3 trillion yen, resulting in a negative balance of 6.9 trillion yen, while investment income came to -12.6 trillion yen at market value. Reserve at the end of fiscal year at market value for public pension plans as a whole consequently came to of 172.1 trillion yen, down 19.4 trillion yen from the previous fiscal year (Figure 2, Figure 2-1-3 in the report).

A breakdown by plan shows that employee pension plans and NP had both negative balances of revenues and

Adjusted financial status to observe the Figure 2 Adjusted Financial Status to observe the events related to the present year is present year (FY2008)

"The table compared and analyzed in a cross-sectional way from the viewpoint of pension finances by Actuarial Subcommittee"

	Classification		Public pension plans as a whole
			100 million yen
	Total amount	394,314	
	Contributions	288,186	
Revenue (adjusted	Subsidies by state etc.		79,895
financial status base)	Subsidies for "bestowals" payments of prior perior	od	12,982
Tinanciai status base)	Payment of the cost for the occupational portion	exceed EPI	2,218
	Payment of the cost for contracting back in to EP	3,486	
	Welfare and Medical Service Agency payment	6,754	
	Others	794	
	Total amount		462,818
Expenditure (adjusted	Benefits		460,269
financial status base)	Others		2,549
	Balance of revenues and expenditures on the adju-	sted financial status	Δ
	base excluding investment income		Δ 68,504
	Investments income	(market value)	Δ 125,731
	Change in year-end reserve on previous year	(market value)	194,233
	Reserve at the end of fiscal year	(market value)	1,721,362

Note: "Adjusted financial status to observe the events related to the present year" is compared and analyzed in a cross-sectional way from the viewpoint of pension finances by Actuarial Subcommittee, and is calculated by excluding "investment income," "trans & from the reserve" of EPI and NP (National Pension Account), and "the amount of trans & from the surplus of previous year" in Basic Pension Account on the revenue side, and "losses on sale of marketable securities" of NPSP, LPSP, and PSP from "Others" on the expenditure side. The difference between total revenue and total expenditure is the "balance of revenues and expenditures on the adjusted financial status base excluding investment income"

expenditures on the adjusted financial status base excluding investment income and negative investment income (Figure 3, Figure 2-1-3 in the report).

Figure 3 Adjusted financial status to observe events related to the present year of public pension plans (FY2008)

	EPI	NPSP	LPSP	PSP	NP (National Pension Account)
	100 million yen				
Balance of revenues and expenditures on an adjusted financial status basis excluding investment gains (losses)	△ 48,148	△ 3,457	△ 9,712	△ 232	△ 7,029
Gains (losses) from investments (market value)	△ 87,252	△ 3,356	△ 26,799	△ 2,572	△ 5,924
Reserve at the end of fiscal year (market value)	1,166,496	82,145	362,067	31,523	71,885

### 2. Insured Persons

#### ■ Number of Insured Persons – Increased for PSP

The total number of insured persons by employee pension plans was 38.92 million: 34.44 million by EPI, 1.05 million by NPSP, 2.95 million by LPSP and 0.47 million by PSP. In addition, the number of insured persons by NP Category-1 was 20.01 million and by NP Category-3 was 10.44 million. These brought the total number of participants in public pension plans as a whole to 69.36 million (Figure 2-2-1 in the report). In FY2008, the total number of participants in employee pension plans as a whole decreased 0.4% despite an increase in PSP. The number of NP Category 1 insured persons declined 1.7%, and the total number of participants in public pension plans as a whole decreased by 1.0%.

## ☐ Standard Remuneration per Capita – Male-female differences were smaller for NPSP and LPSP

Standard monthly remuneration per capita (not including employee bonuses) was 313,000 yen for EPI, 415,000 yen for NPSP, 441,000 yen for LPSP and 369,000 yen for PSP (Figure 2-2-5 in the report). On the other hand, standard remuneration per capita including employee bonuses (total remuneration base; amount per month) was 371,000 yen for EPI, 548,000 yen for NPSP, 587,000 yen for LPSP and 483,000 yen for PSP (Figure 2-2-6 in the report). For NPSP and LPSP, the differences of remuneration between male and female insured persons were smaller than those for EPI and PSP.

*Note*: Extension of remuneration calculations to cover bonuses began in FY2003.

## 3. Beneficiaries

#### ☐ Number of Beneficiaries – Continued to Increase for all Public Pension Plans

There were 29.07 million beneficiaries in EPI, 1.09 million beneficiaries in NPSP, 2.54 million beneficiaries in LPSP, 0.33 million beneficiaries in PSP and 27.43 million beneficiaries in NP (both Basic Pension under the new law and National Pension under the old law) (Figure 2-3-1 in the report). The total number of people having pension benefit eligibilities for some sort of public pension was 35.93 million. The number of beneficiaries is continuing to increase for all public pension plans.

### ☐ Average Monthly Amount of Old-age pension (for Long-Term Contributors)

The average amount of old-age (for long-term contributors)<sup>1</sup> per month<sup>2</sup> (including the amount of the old-

age basic pension) was 156,000 yen for EPI (including portion paid by Employees' Pension Fund on behalf of EPI), 201,000 yen for NPSP, 212,000 yen for LPSP, 197,000 yen for PSP and 54,000 yen for NP (old-age basic pension benefits under the new law and old-age pension benefits of NP under the old law) (Figure 2-3-7 in the report). The average monthly amount declined under all employee pension plans from FY2007. The growth in NP benefits, on the other hand, continues (Figure 2-3-9 in the report).

- **Note 1:** "Old-age (for long-term contributors)" is the one under the new law that requires fulfilment of the eligible period in one plan stipulated in the old-age basic pension (25 years; including 20 years of contributions in the interim measure and 15 years of contributions in the special measure for the middle and older age), as well as the one under the old law.
- **Note 2**: At the comparison, besides that the Mutual Aid Associations (MAAs) has the "occupational portion exceed EPI", it is necessary to bear in mind that there are differences on male-female ratio and average contribution period by the plan compared.

#### 4. Financial Indicators

# ☐ Pension Support Ratio – Higher for PSP, lower for NPSP and LPSP. Ratio decreased for all Public Pension Plans

The pension support ratio<sup>1</sup> continued to decline for all plans, falling to 2.60 for EPI, 1.58 for NPSP, 1.69 for LPSP, 4.49 for PSP, and 2.55 for NP (Figures 2-4-1 and 2-4-2 in the report). PSP with higher pension support ratio may be considered less mature than EPI. Conversely, NPSP and LPSP with lower pension support ratios are considered mature plans.

*Note 1*: The ratio of insured persons to beneficiaries (only old-age (for long-term contributors)).

## **☐** Comprehensive Cost Rate

The comprehensive cost rate<sup>1</sup> was 18.2% for EPI, 19.9% for NPSP, 19.2% for LPSP, and 12.7% for PSP, all up from FY2007 (Figure 2-4-7 in the report). In every case, the rate was higher than the contribution rate (Figure 2-4-8 in the report).

**Note 1:** The rate of real expenditure for which the plan must provide its own resources to the total standard remuneration. The comprehensive cost rate for EPI is calculated on the account base and does not include the portion paid by Employees' Pension Fund on behalf of EPI. If this portion is included, the rate works out at 19.0% (estimated actual values).

#### **☐** Ratio of Contributions

The ratio of contributions<sup>1</sup> was 79.8% for EPI, 75.0% for NPSP, 75.7% for LPSP, 93.1% for PSP, and 74.1% for NP. Under all plans, therefore, the rate of real expenditure for which the plan must provide its own resources is greater than contributions, which means that funding needs must be met by using investment income or reserves.

In recent years, the ratios for EPI and PSP have been increasing, and those for other plans have been on the decline

Figure 4 Changes in ratios of contributions

FY	EPI	NPSP	LPSP	PSP	NP (National Pension Account)
	%	%	%	%	%
1995	111.9	96.3	123.5	121.4	117.5
1996	107.1	96.0	126.3	118.4	144.5
1997	106.8	98.9	126.5	115.6	118.8
1998	99.1	97.0	117.1	109.5	113.0
1999	95.5	92.7	110.7	104.5	114.3
2000	90.5	89.9	105.0	99.0	109.1
2001	86.2	87.2	101.3	95.8	100.4
2002	82.8	84.7	96.4	95.8	94.0
2003	76.2	82.9	90.6	93.2	95.0
2004	74.3	84.3	85.3	90.9	92.0
2005	75.6	87.0	83.3	91.7	85.7
2006	77.3	83.5	82.5	92.7	79.1
2007	79.3	79.1	80.5	93.0	78.1
2008	79.8	75.0	75.7	93.1	74.1

(Figure 4 and Figure 2-4-12 in the report).

**Note 1:** The ratio of contributions to the rate of real expenditure for which the plan must provide its own resources. The comprehensive cost rate for EPI is calculated on the account base and does not include the portion paid by Employees' Pension Fund on behalf of EPI.

## 5. Cohort Analysis

## ☐ Cohort Changes in Estimated Total Standard Remuneration by Age Group

Trends in estimated total standard remuneration were analyzed focusing on age-specific cohorts (groups of individuals born in the same fiscal year). While total standard remuneration for all employee pension plans declined 1.2 trillion yen overall from FY2007 to FY2008, the amount decreased for 45-and-over cohorts and increased for those aged 44 and under, indicating a shift in remuneration from older to younger age groups (Figure 5 below and Figure 2-5-5 in the report). A factor analysis of cohort changes shows that, overall, the contribution of changes in annual wage increases rose, and the contributions of changes in the number of insured persons and across-the-board wage increases declined. Considered by cohort according to age group, however, we find the contributions of all three factors to have increased in younger age groups and decreased in those aged 55 and over. There has also been a marked decline in the contribution of across-the-board wage increases in the 35- to 44-year-old age group.

Figure 5 Factor analysis of cohort changes in estimated total standard remuneration by age group (FY2007 to FY2008)

O All employee pension plans

Age group (end FY2008)	Total change	Change in number of insured	Annual wage increases	Across-the-board wage increases	
	100 million yen	100 million yen	100 million yen	100 million yen	
Up to 24 years	25,323	19,184	5,290	A 849	
25-34 years	<sub>^</sub> 11,998	Δ 1,170	12,405	_	
35-44 years	4,500		Δ 10,729	Δ 3,438	
45-54 years	4,106	4,595		140	
55-64 years	40,362		10,647	1,136	
65 years and over	Δ 9,441	Δ 8,708	520	Δ 214	
All ages	12,089	26,659	17,606	3,036	

Notes: 1. Age groups are based on the ages of each cohort at end FY2008.

- 2. Analyzed using estimated total standard remuneration calculated as follows:  $(monthly\ standard\ remuneration\ per\ capita \times 12 + standard\ employee\ bonus\ per\ capita) \\ \times number\ of\ insured\ persons\ at\ end\ of\ fiscal\ year$
- 3. Increases for same-aged individuals between FY2007 and FY2008 are counted as being due to across-the-board wage increases.

#### 6. Comparison of Actual Values and 2004 Actuarial Valuation

### ■ Analysis of the Difference in Reserves

As the actual nominal rate of return on investment was significantly less than the future projection in FY2008, reserves were less than future projections in all employee pension plans (Figure 6 below and Figure 3-2-1 in the report).

Figure 6 Differences between actual reserves in FY2008 and future projections of the 2004 actuarial valuation

Category	EPI	NPSP & LPSP	NPSP	LPSP	PSP
	trillion yen	100 million yen	100 million yen	100 million yen	100 million yen
End FY2008 Reserve Actual	[149.9]	480,911	85,711	395,200	34,366
2.001.12000.1000.100	[]	[444,212]	[82,145]	[362,067]	[31,523]
Future projection	157.1	479,707	88,322	391,385	34,412
Difference	[△ 7.2]	1,204	△ 2,611	3,815	△ 46
(= actual - future projection)	[△ /.2]	[ $\triangle$ 35,495]	[△ 6,177]	[ $\triangle$ 29,318]	[ $\triangle$ 2,889]
Proportional difference (actual value / future projection - 1) (%)	[△ 4.6]	0.3 [△ 7.4]	$\triangle$ 3.0 [ $\triangle$ 7.0]	1.0 [△ 7.5]	$\triangle$ 0.1 [ $\triangle$ 8.4]

Notes: 1. Values in square brackets are at market value.

- 2. Actual reserves of employee pension funds are estimated actual reserves including minimum actuarial reserves for EPI, etc.
- Values for future projections were processed to reflect the increase in subsidies by the State, etc. for the Basic Pension resulting from revisions in 2004, and were estimated by the Actuarial Subcommittee.
- 4. Actual values for "NPSP & LPSP" were estimated by the Actuarial Subcommittee

A breakdown of the factors giving rise to the differences occurring since FY2005 shows the impact of the nominal rate of return on investment to have accounted for the bulk of the differences and that, as the nominal rate of return on investment was significantly less than the future projection in FY2008, actual reserves were less than the future projection. The nominal wage growth rate was also less than the future projection, which acted to push actual reserves below the future projection (Figure 3-2-4 in the report).

### (Financial Status "in Real Terms")

In public pension plan, both revenues (such as contributions) and expenditures (such as benefits) generally increase and decrease in response to the nominal wage growth rate over the long term. Therefore, even if the actual value and the future projection of the reserves diverge due to differences in the nominal wage growth rate as described above, the overall scale of pension finances will only similarly increase or decrease provided that the real wage growth rate, etc. remains the same, and the impact on financial status will be minor over the long-term.

Estimates<sup>1</sup> excluding differences in the nominal wage growth rate were calculated for reserves and compared with actual reserves, which were found to be higher in the case of EPI and largely as estimated in the case of NPSP & LPSP and PSP (Figure 7, Figure 3-2-7 in the report).

**Note 1:** The future projections in the 2004 actuarial valuations are estimated values calculated by replacing the nominal wage growth rates used in the original valuation with actual values.

Figure 7 Difference between Actual Reserves and Future Projections of 2004 Actuarial Valuation (at market values)

[expressed using the future projection at the end of FY2008 as the standard (= 100)]

