Annual Actuarial Report on the Public Pension Plans of Japan
Fiscal Year 2011 (Summary)

1. Revenues and Expenditures

❑ Financial status of the public pension plans as a whole

In FY2011, the revenue of the public pension plans, as a whole, was composed of ¥29.4 trillion of contribution income and ¥11.5 trillion of national government subsidies etc., and so on. The expenditure was mainly composed of ¥48.9 trillion of benefit disbursements. The total amount of reserves was ¥167.9 trillion on a market value basis (¥166.0 trillion on a book value basis) as of the FY2011 end. (See Figure 1 in the right hand side and Figure 2-1-1 in the full text of the annual report.)

Figure1　Financial Status (FY2011)

Classification	Public pension plans as a whole
	100 million yen
Total revenue (book value)	495,279
Contribution income	294,019
National government subsidies etc.	114,963
Subsidies for "bestowals" payments of prior period	15,143
Investment income (book value)	7,434
(Remittances from the Government Pension Investment Fund)	(1,398)
Payment of the cost for the occupational portion exceed EPI	2,186
Payment of the cost for contracting back in to EPI of EPFs	919
Welfare and Medical Service Agency payment	3,805
Transfer from the reserve	56,272
Others	※ 539
Total expenditure	492,274
Benefit disbursements	488,675
Others	3,599
Balance of revenues and expenditures (book value)	3,005
Reserves at the end of fiscal year (book value)	1,660,250
Change in year-end reserves on previous year (book value)	△58,497
(For reference)	
Investment income (market value)	36,315
Reserves at the end of fiscal year (market value)	1,678,694
Change in year-end reserves on previous year (market value)	△28,509

Note: To calculate revenues and expenditures on a consolidated basis, following contributions and corresponding revenues or expenses are excluded from the calculation of the total amounts because these are mere transfer of financial resources between two or more public pension plans: the contributions of individual public pension plans to the Basic Pension, the contributions to the equivalents to the benefits provided by the Basic Pension, which are prescribed by the Old Law that is still effective after the pensions reform in FY1986, the contribution representing the financial adjustments between the NPSP and the LPSP and the contributions to support the JT MAA and the JR MAA that were merged with the EPI, etc. Additionally, the amount of transfer from the surplus of the previous year (2,465.7 billion yen) to the Basic Pension Account is excluded from “Others” (*) in the revenue items.

❑ Contributions – Increased for the employees’ plans, decreased for the National Pension

The contribution income in FY2011 was ¥23.5 trillion for the Employees’ Pension Insurance (EPI), ¥1.1 trillion for the National Public Service Personnel Mutual Aid Association (NPSP), ¥2.9 trillion for the Local Public Service Personnel Mutual Aid Association (LPSP), ¥0.4 trillion for the Mutual Aid Corporation for Private School Personnel (PSP) and ¥1.6 trillion for the National Pension (NP). (See Figure 2-1-4 in the full text of the annual report.) In FY2011, the contribution income increased by 2.5% in total, due to 3.0% increase for the employees’ plans and 5.4% decrease for the NP.

❑ Benefit Expenditure – Growth slowed down as a whole

The benefit disbursements[1] in FY2011 were ¥23.7 trillion for the EPI, ¥1.7 trillion for the NPSP, ¥4.6 trillion for the LPSP, ¥0.3 trillion for the PSP, ¥1.2 trillion for the National Pension Account[2] of the NP, and ¥17.4 trillion for the Basic Pension Account of the NP. (See Figure 2-1-12 in the full text of the annual report.) In FY2011, the benefit disbursements declined by 0.8% for the employees’ plans and by 11.2% for

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[1] The benefit disbursements for each plan include those provided by the Old Law and regarded as benefits equivalent to the Basic Pensions under the New Law.

[2] The benefits disbursed through the National Pension Account are mainly those provided by the old National Pension Law. The benefits disbursed through the Basic Pension Account are those of Basic Pensions provided under the New National Pension Law.

the National Pension Account of the NP, while increased by 2.7% for the Basic Pension Account of the NP. As a result, the increment rate of the benefit disbursements, as a whole, slowed down in FY2011 to 0.1%.

❑ Reserves

The amounts of reserves[3] were ¥111.5 trillion <¥108.5 trillion> for the EPI, ¥7.9 trillion <¥7.9 trillion> for the NPSP, ¥36.4 trillion <¥37.7 trillion> for the LPSP, ¥3.4 trillion <¥3.4 trillion> for the PSP, ¥7.9 trillion <¥7.7 trillion> for the National Pension Account and ¥0.7 trillion for the Basic Pension Account. (See Figure 2-1-14 in the full text of the annual report.)

❑ 'Adjusted financial status' in FY2011

We are going to compare the financial status of individual plans transversely across the plans from the actuarial viewpoint. For that purpose, we present the financial status of a plan slight differently from the original income statement by dividing it into two parts: 'annual balance of revenues and expenditures excluding investment income' and 'investment income.' Hereafter we call the financial status presented in this way 'adjusted financial status.'

In FY2011, the total amount of revenues excluding investment income was ¥43.2 trillion and the total amount of expenditures was ¥49.1 trillion, giving a balance of negative ¥6.0 trillion. On the other hand, investment income was ¥3.6 trillion on a market value basis. As a result, the amount of reserves at the end of FY2011 declined by ¥2.9 trillion to ¥167.9 trillion on a market value basis. (See Figure 2 in the right hand side and Figure 2-1-3 in the full text of the annual report.)

Figure 2 Adjusted Financial Status in FY2011

"This table is devised by the Actuarial Subcommittee" to analyse the financial status transversely across the plans from the actuarial viewpoint.

Classification		Public pension plans as a whole
		100 million yen
Revenues (adjusted financial status base)	**Total amount**	431,573
	Contribution income	294,019
	National government subsidies etc.	114,963
	Subsidies for "bestowals" payments of prior period	15,143
	Payment of the cost for the occupational portion exceed EPI	2,186
	Payment of the cost for contracting back in to EPI of EPFs	919
	Welfare and Medical Service Agency payment	3,805
	Others	539
Expenditures (adjusted financial status base)	**Total amount**	491,168
	Benefit disbursements	488,675
	Others	2,492
	Annual balance of revenues and expenditures excluding investment income	△59,594
	Investment income (market value)	36,315
	Change in year-end resorves on previous year (market value)	△28,509
	Reserves at the end of fiscal year (market value)	1,678,694

The purpose of the adjusted financial status presented in this table is to allow comparison and analysis across the plans of the financial status from the actuarial perspective. It is calculated by excluding investment income, transfers from the reserves of the EPI and the NP (National Pension Account), and the amount of transfer from the previous year's surplus in the Basic Pension Account on the revenue side, and the losses on sale of marketable securities of the NPSP, the LPSP, and the PSP from "Others" on the expenditure side. The difference between the total revenue and the total expenditure thus obtained shows the annual balance excluding investment income.

A breakdown by plan shows negative balances of revenues and expenditures in FY2011 excluding investment income and positive investment income on a market value basis for all of the employees' plans and the National Pension Account of the NP. As a result, the amounts of reserves at the end of FY2011 decreased for the EPI, the NPSP and the LPSP, while increased for the PSP and the National Pension Account of the NP. (See Figure 3 and Figure 2-1-3 in the full text of the annual report.)

[3] Amounts are on a market value basis. The amounts in parentheses "< >" are on a book value basis. The amount of reserves for the EPI does not include the reserves of the substitution portion kept by Employees' Pension Funds.

Figure 3 Adjusted Financial Status by plans in FY2011

	EPI	NPSP	LPSP	PSP	NP (National Pension Account)
	100 million yen	100 million yen	100 million yen	100 million yen	100 million yen
Annual balance of revenues and expenditures excluding investment income	∆50,867	∆3,665	∆9,992	∆285	∆183
Investment income (market value)	24,201	1,617	8,120	606	1,662
Reserves at the end of fiscal year (market value)	1,114,990	78,895	364,483	34,055	79,025

Note: There is also the Basic Pension Account of the NP which is not included in the table above.

2. Insured Persons

❑ The numbers of insured persons – Decreased for the LPSP and the NP

The total number of insured persons covered by some of the employees' plans was 38.92 million as of the end of FY2011, which consists of 34.51 million for the EPI, 1.06 million for the NPSP, 2.86 million for the LPSP and 0.49 million for the PSP. In addition, the number of insured persons belonging to the NP Category-1 (namely, self-employed persons, etc.) was 19.04 million and the number of those belonging to the NP Category-3 (namely, spouses of the insured persons in the employees' plans) was 9.78 million. These brought the total number of insured persons covered by some of the public pension plans to 67.75 million. (See Figure 2-2-1 in the full text of the annual report.) In FY 2011, the number of insured persons increased for the EPI, the NPSP and the PSP, while declined for the LPSP, the NP Category-1 and the Category-3. The total number of insured persons covered by some of the public plans showed a decline of 0.7% in FY2011.

❑ Average amounts of pensionable remuneration

The average amounts of monthly pensionable remuneration in FY2011, including bonuses, were ¥359,000 for the EPI, ¥527,000 for the NPSP, ¥554,000 for the LPSP, and ¥472,000 for the PSP. (See Figure 2-2-6 in the full text of the annual report.) In FY2011, the amount grew by 0.2% for the EPI, while declined for the NPSP, the LPSP and the PSP. (See Figure 2-2-7 in the full text of the annual report.) The differences in pensionable remuneration between males and females were smaller for the NPSP and the LPSP than those for the EPI and the PSP.

Meanwhile, the average amounts of pensionable remuneration excluding bonuses were ¥305,000 for the EPI, ¥411,000 for the NPSP, ¥429,000 for the LPSP, and ¥366,000 for the PSP. (See Figure 2-2-5 in the full text of the annual report.)

3. Beneficiaries

❑ The numbers of beneficiaries – Showed consecutive increase for all plans

The numbers of beneficiaries (more precisely, persons with pensions benefit eligibilities) at the end of FY2011 were 33.03 million for the EPI, 1.21 million for the NPSP, 2.83 million for the LPSP, 0.39 million for the PSP and 29.65 million for the NP. (See Figure 2-3-1 in the full text of the annual report.) These numbers include beneficiaries of both the Basic Pension provided by the New Law and the National Pension provided by the Old Law. The total number of beneficiaries of some of the public pension plans was 38.67 million, taking account of the persons with plural eligibilities. The number of beneficiaries showed continuous increase for all plans in FY2011.

- **Average monthly amounts of old-age pensions (for those with long contribution periods)**

  The average monthly amounts[4] of old-age pensions for beneficiaries with long contribution periods[5] (including the amount of the old-age Basic Pensions) at the end of FY2011 were ¥150,000 for the EPI[6], ¥195,000 for the NPSP, ¥203,000 for the LPSP, ¥191,000 for the PSP and ¥55,000 for the NP. These amounts take into account both the old-age Basic Pensions provided by the New Law and the old-age pensions provided by the Old Law. (See Figure 2-3-8 in the full text of the annual report) The amounts declined from FY2010 for all of the employees' plans.) On the other hand, the amount for the NP showed continuous increase. (See Figure 2-3-11 in the full text of the annual report.)

4. Actuarial Indices

- **Pension support ratios – Higher for the PSP and lower for the NPSP and the LPSP**

  All plans saw declines in their pension support ratios[7] at the end of FY2011, with the EPI falling to 2.33, the NPSP to 1.52, the LPSP to 1.47, the PSP to 4.09, and the NP[8] to 2.33. (See Figure 2-4-1 and Figure 2-4-2 in the full text of the annual report.) The pension support ratio of the PSP is higher than other employees' plans like the EPI and thus we can say that the PSP is less mature. Conversely, the NPSP and the LPSP have lower pension support ratios and thus we can say that they are more mature.

- **Comprehensive cost rates**

  The comprehensive cost rates[9] were 19.3% for the EPI[10], 21.2% for the NPSP, 20.7% for the LPSP, and 13.9% for the PSP, which were all higher than the corresponding contribution rates. (See Figure 2-4-6 and Figure 2-4-7 in the full text of the annual report.) In FY2011, the comprehensive cost rates fell for the EPI, while rose for the NPSP, the LPSP and the PSP.

5. Comparative Analysis of Actual Results to the Projections made by the 2009 Actuarial Valuation

- **Attribution analysis of the deviations of the actual amounts of reserves from the projected amounts**

  The actual amounts of reserves at the end of FY 2011 fell short of the projected amounts for all employees' plans. (See Figure 4 and Figure 3-1-15 in the full text of the annual report)

  An attribution analysis of the deviations shows that the major influence comes from the low nominal rates of return on investment in FY2010, which were substantially lower than the rates assumed in the 2009

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4 When comparing the amounts of pensions, it should be reminded that the amounts for the NPSP, the LPSP and the PSP are inclusive of the "occupational portions" and there are also substantial differences in the male-female ratios and the average contribution periods among the plans.

5 "Beneficiaries with long contribution periods" means those of the old-age EPI pensions or the retirement pensions provided by the mutual aid associations like the NPSP, with their contribution periods to individual plans fulfilling the eligibility conditions for the old-age basic pensions. (Here, we take account of the effects of the temporary measures which shorten the eligibility period of 25 years for specified cohorts and the special measures requiring only 15 years for middle and elder persons).

6 This amount includes the portion paid by Employees' Pension Funds on behalf of the EPI.

7 That is the ratio of the number of insured persons to that of beneficiaries of old-age pensions with long contribution periods.

8 For the NP, it is the ratio of the number of beneficiaries of old-age basic pensions to the number of insured persons belonging to the Category 1-3 insured population.

9 The comprehensive cost rate is the ratio of the amount of the 'essential' benefit expenditures in the year, which the plan have to finance by itself, to the total amount of the pensionable remunerations of the plan in the year.

10 The comprehensive cost rate for the EPI does not include in the numerator the amount paid by Employees' Pension Funds on behalf of the EPI. If we include the amount in the numerator, the comprehensive cost rate becomes 20.1%.

actuarial valuations. In addition, the actual nominal salary growth rates have been consecutively lower than the rates assumed in the 2009 valuations, which pushed down the actual amounts of reserves below the projected amounts. (See Figure 3-3-2 in the full text of the annual report.)

Figure 4 Differences between the Actual Amounts of Reserves as of FY2011 End and the Projected Amounts Made by the 2009 Actuarial Valuations

Category		EPI	NPSP & LPSP	NPSP	LPSP	PSP
		trillion yen	100 million yen	100 million yen	100 million yen	100 million yen
Reserves (End FY2011)	Actual amounts	138.7	<456,266> 443,378	<79,451> 78,895	<376,816> 364,483	<34,156> 34,055
	Projected amounts	141.6	469,821	81,471	388,350	35,325
Difference (= actual amounts - projected amounts)		△2.9	<△13,555> △26,443	<△2,020> △2,576	<△11,535> △23,867	<△1,169> △1,271
Proportional difference (actual amounts / projected amounts - 1) (%)		△2.0	<△2.9> △5.6	<△2.5> △3.2	<△3.0> △6.1	<△3.3> △3.6

Notes: 1. Values in square brackets are on a book value basis.
2. The actual amount of reserves for the EPI includes the estimated amount of reserves corresponding to the substitution portion kept by Employees' Pension Funds.
3. The actual amounts of reserves for "NPSP & LPSP" are estimates by the Actuarial Subcommittee.

❑ Evaluation of the actuarial statuses

In the public pension plans in Japan, both the amount of contributions and the amounts of benefit disbursements are expected to follow broadly the trends of nominal salary growth rates in the long term. Therefore, even if the actual amount of reserves deviated from the projected amount by the amount corresponding to the difference between the actual and assumed nominal salary growth rates, the deviation would simply enlarge or reduce the overall financial scale without changing the relative sizes of individual composites, namely the income, the expenditure, and the reserves. Thus, we can say that when the argument above holds good the deviation of the actual amount of reserves from the projected amount corresponding to the deviation of the nominal salary growth rate would not have major influence on the long-term actuarial status of the plan. Therefore, we adjusted the projected amount of reserves reflecting the actual developments of nominal salary growth rates, etc.,[11] and then compared the actual amount of reserves to the adjusted amount thus obtained, which would serve as a measure (baseline) of evaluating the actuarial status of the plan. In this way, we can highlight the essential part of the deviation of the actual amounts of reserves from the projected amount. (See Figure 5 and Figure 3-4-2 in the full text of the annual report)

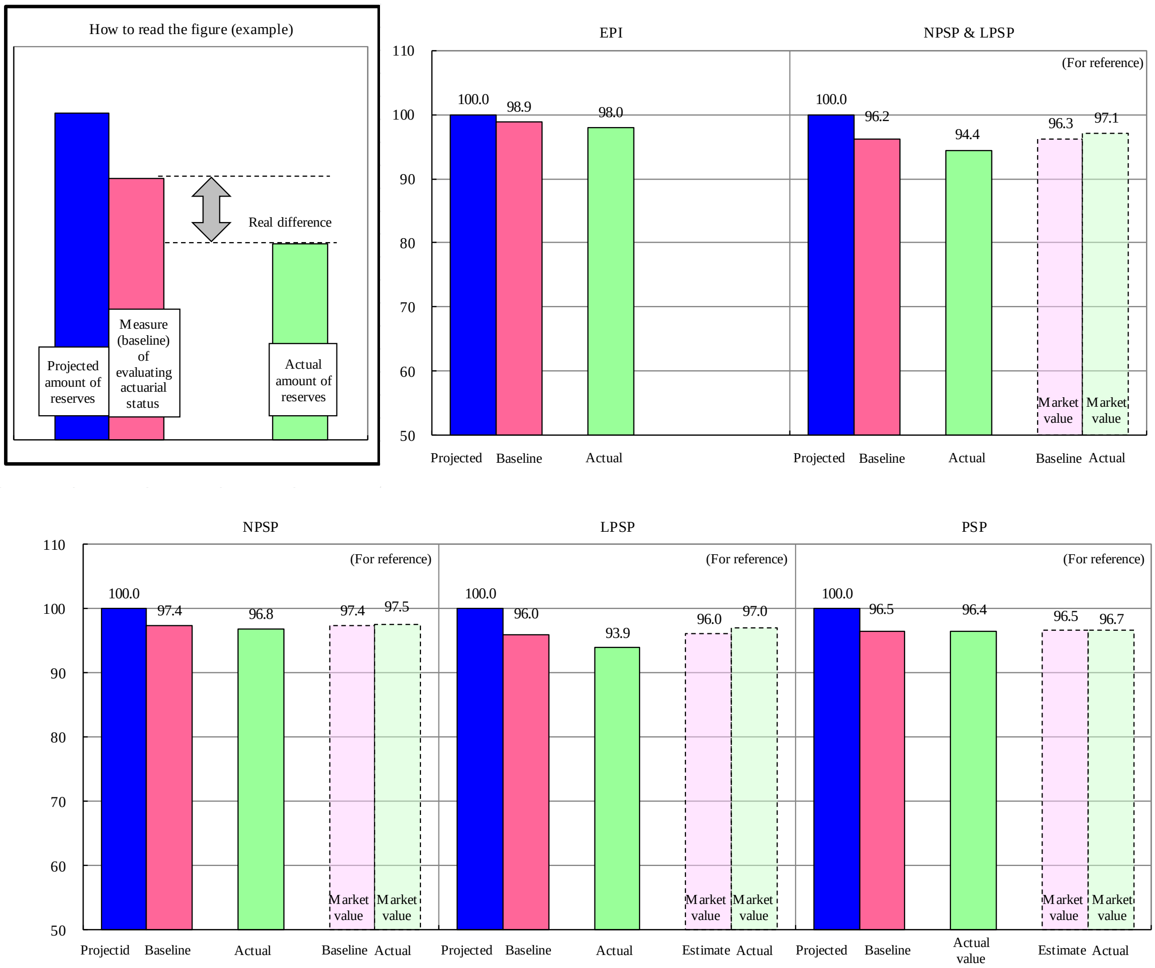
From this analysis, we can say that the actual amounts of reserves have been largely in the same level of those of the baseline reserves[12] until the FY2011. Apparently, the difference is relatively large in the case of the NPSP&LPSP. However, we should remind that the 2009 actuarial valuations of these plans were conducted on a book value basis and the differences are largely attributable to the initial deviation of the

[11] We calculated the amount of the baseline reserves that will serve as the measure of the evaluation in the following way. Firstly, we extracted from the deviation of the reserves the amount attributable to the deviation of nominal salary growth rates. Secondly, we estimated the amount of benefits that will move theoretically in tandem with the inflation rates. Then, we can estimate the amount of the baseline reserves by adding these two amounts to the projected amount made in the 2009 actuarial valuation.

[12] The deviations of the actual amounts from the baseline amounts at the end of FY 2011 shrank when we compare them to the situations at the end of FY2010.

book values of the reserves from the market values at the beginning of the projections. Here, we should also note that this evaluation presumes methodologically that all of the actuarial assumptions[13] adopted in the 2009 actuarial valuations are, as a set, still applicable at the date of evaluation (FY2011 end). Thus, it is indispensable to watch the future developments of these factors closely.

Figure 5 Evaluation of the actuarial status at the end of FY2011 (values are expressed by standardising the projected amount = 100)



13 The actuarial assumptions include assumptions on economic factors such as salary growth rates, inflation rates and the rates of return on investment, demographic factors like mortality rates and withdrawal rates, and other factors like the ratio of actual contributors to the persons required to pay contributions to the NP. Here, we should remind that the last factor also affects the financial statuses of the employees' plans via the financial mechanism of contribution to the Basic Pension.