Annual Actuarial Report on the Public Pension Plans of Japan
Fiscal Year 2012 (Summary)

1. Revenues and Expenditures

The following summarizes the financial statuses of Japan's public pension plans based on the statutory financial statements.[1]

❑ Financial status of the public pension plans as a whole

In FY2012, the revenue of the public pension plans, as a whole, was composed of ¥30.2 trillion of contribution income and ¥11.3 trillion of national government subsidies etc., and so on. The expenditure was mainly composed of ¥49.8 trillion of benefit disbursements. The total amount of reserves was ¥178.2 trillion on a market value basis (¥162.4 trillion on a book value basis) as of the FY2012 end. (See Figure 1 in the right hand side and Figure 2-1-1 in the full text of the annual report.)

Figure1 Aggregate Profit and Loss Statement (FY2012)

Item		Public pension plans as a whole
		100 million yen
Total revenue	(in book value)	490,290
Contribution income		301,519
National government subsidies etc.		113,276
Subsidies for the "bestowals" payments accrued in the past		12,138
Investment income	(in book value)	12,617
(Transfer from the GPIF, part of the investement income)		(6,291)
Payment of the costs of the occupational portion by relevant institutions		1,770
Payment of the minimum technical provisions by dissolved EPFs, etc.		1,264
Payment by the Welfare and Medical Service Agency		3,020
Withdrawal from the reserves		43,991
Others		※ 694
Total expenditure		501,698
Benefit disbursements		497,941
Others		3,757
Balance of revenues and expenditures	(in book value)	△ 11,408
Reserves at the fiscal year end	(in book value)	1,624,376
Change in year-end reserves from the previous year	(in book value)	△35,874
(For reference)		
Investment income	(in market value)	150,610
Reserves at the fiscal year end	(in market value)	1,781,849
Change in reserves from the previous year end	(in market value)	103,132

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: 1) the contributions of individual public pension plans to the Basic Pension, 2) 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, 3) the contribution representing the financial adjustments between the NPSP and the LPSP and 4) the insurer 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 (¥3,016.3 billion) to the Basic Pension Account is excluded from "Others" (*) in the revenue items.

❑ Contributions

The contribution income in FY2012 was ¥24.2 trillion for the Employees' Pension Insurance (EPI), ¥1.0 trillion for the National Public Service Personnel Mutual Aid Association (NPSP), ¥3.0 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 FY2012, the contribution income decreased by 1.4% for the NPSP, but increased for all other plans, resulting in a 2.6% increase in total.

❑ Benefit Expenditure

The amount of benefit disbursements[2] in FY2012 was ¥23.9 trillion for the EPI, ¥1.7 trillion for the NPSP, ¥4.6 trillion for the LPSP, ¥0.3 trillion for the PSP, ¥1.1 trillion for the National Pension Account[3] of the NP, and ¥18.3 trillion for the Basic Pension Account of the NP. (See Figure 2-1-12 in the full text of the annual report.) In FY2012, the amount of benefit disbursements decreased by 0.2% for the NPSP and by 10.9% for

[1] Statutory financial statements are presented on a book value basis. Here, however, market value amounts are also given.

[2] 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.

[3] 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 5.0% for the Basic Pension Account of the NP. As a result, the benefit expenditure increased by 1.9% in total.

❑ Reserves

The amount of reserves[4] was ¥117.9 trillion <¥105.0 trillion> for the EPI, ¥7.7 trillion <¥7.6 trillion> for the NPSP, ¥38.5 trillion <¥36.8 trillion> for the LPSP, ¥3.6 trillion <¥3.4 trillion> for the PSP, ¥8.1 trillion <¥7.3 trillion> for the National Pension Account, and ¥2.3 trillion for the Basic Pension Account. As a whole, the amount of reserves increased by 6.1% <decreased by 2.2%>. (See Figure 2-1-14 in the full text of the annual report.)

❑ 'Adjusted financial status' in FY2012

We are going to compare the financial status of individual plans transversely across the plans from the actuarial viewpoint. For that purpose, we express 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 expressed in this way the 'adjusted financial status.'

In Figure 2, the investment income and the withdrawal from the reserves of the EPI and the NP (National Pension Account) included in Figure 1 are excluded on the revenue side, and the losses on sale of marketable securities, etc. of the NPSP, the LPSP, and the PSP are excluded from "Others" on the expenditure side.

Figure 2 Adjusted Aggregate Profit and Loss Statement (FY2012)

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

Item		Public pension plans as a whole
		100 million yen
Revenues (adjusted financial status base)	**Total amount**	433,682
	Contribution income	301,519
	National government subsidies etc.	113,276
	Subsidies for "bestowals" payments accrued in the past	12,138
	Payment of the costs of the occupational portion by relevant institutions	1,770
	Payment of the minimum technical provisions by dissolved EPFs, etc.	1,264
	Payment by the Welfare and Medical Service Agency	3,020
	Others	694
Expenditures (adjusted financial status base)	**Total amount**	500,685
	Benefit disbursements	497,941
	Others	2,744
	Annual balance of revenues and expenditures excluding investment income	△67,003
	Investment income (in market value)	150,610
	Change in year-end reserves from the previous year (in market value)	103,132
	Reserves at the fiscal year end (in market value)	1,781,849

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 the investment income, the withdrawal 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.

In FY2012, the total amount of revenues excluding investment income was ¥43.4 trillion and the total amount of expenditures was ¥50.1 trillion, giving a balance of negative ¥6.7 trillion. On the other hand, the investment income was ¥15.1 trillion on a market value basis. As a result, the amount of the reserves at the end of FY2012 increased by ¥10.3 trillion to ¥178.2 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.)

A breakdown of revenues and expenditures by plan shows negative balance in FY2012 when investment income is excluded 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 amount of reserves at the end of the FY2012

4 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.

decreased by 1.9% for the NPSP, but increased by the rate between 3.1% and 6.9% for the EPI, the LPSP, 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.)

Figure 3 Adjusted Profit and Loss Statements by Pension Plan (FY2012)

	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	△41,030	△5,312	△11,593	△699	△5,043
Investment income (in market value)	104,707	3,844	31,611	3,050	7,293
Reserves at the fiscal year end (in market value)	1,178,823	77,427	384,525	36,406	81,446

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

The total number of insured persons covered by some of the employees' plans was 39.12 million as of the end of FY2012, which consists of 34.72 million for the EPI, 1.06 million for the NPSP, 2.84 million for the LPSP and 0.50 million for the PSP. In addition, the number of insured persons belonging to the NP Category-1 (namely, self-employed persons, etc.) was 18.64 million and the number of those belonging to the NP Category-3 (namely, spouses of the insured persons in the employees' plans) was 9.60 million. These brought the total number of insured persons covered by some of the public pension plans to 67.36 million. (See Figure 2-2-1 in the full text of the annual report.) In FY2012, the number of insured persons increased for the EPI and the PSP, while declined for the NPSP, 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 0.6% in FY2012.

❑ Average amounts of pensionable remuneration

The average amount of monthly pensionable remuneration in FY2012, including bonuses, was ¥359,000 for the EPI, ¥513,000 for the NPSP, ¥549,000 for the LPSP, and ¥470,000 for the PSP. (See Figure 2-2-6 in the full text of the annual report.) In FY2012, the amount remained unchanged from the previous fiscal year 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.)

Meanwhile, the average amount of pensionable remuneration excluding bonuses was ¥306,000 for the EPI, ¥397,000 for the NPSP, ¥427,000 for the LPSP, and ¥365,000 for the PSP. (See Figure 2-2-5 in the full text of the annual report.) In FY2012, the amount increased for the EPI, while declined for the NPSP, the LPSP and the PSP.

3. Beneficiaries

❑ The numbers of beneficiaries

The number of beneficiaries (more precisely, persons with pensions benefit eligibilities) at the end of FY2012 was 34.05 million for the EPI, 1.24 million for the NPSP, 2.91 million for the LPSP, 0.41 million for the PSP and 30.85 million for the NP. (See Figure 2-3-1 in the full text of the annual report.) The total number of beneficiaries of some of the public pension plans was 39.42 million, taking account of the persons with multiple eligibilities. The number of beneficiaries showed continuous increase for all plans in FY2012.

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

The average monthly amount[5] of old-age pensions for beneficiaries with long contribution periods[6] (including the amount of the old-age Basic Pensions) at the end of FY2012 was ¥148,000 for the EPI[7], ¥194,000 for the NPSP, ¥201,000 for the LPSP, ¥190,000 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) In FY2012, the amount declined 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**

All plans saw declines in their pension support ratios[8] at the end of FY2012, with the EPI falling to 2.28, the NPSP to 1.50, the LPSP to 1.43, the PSP to 4.00, and the NP[9] to 2.23. (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 rate[10] was 20.1% for the EPI[11], 24.0% for the NPSP, 22.0% for the LPSP, and 15.7% for the PSP, which are 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 FY2012, the rate stayed unchanged from the previous fiscal year 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 amount of reserves at the end of FY2012 surpassed the projected amounts for the EPI and the PSP,[12] but fell short of the projected amount for the NPSP and the LPSP[13]. (See Figure 4 and Figure 3-1-18

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5 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.

6 "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 of 25 years for the old-age basic pensions. (Here, we take account of the effects of the temporary measures which shorten the eligibility condition of 25 years for specified cohorts and the special measures requiring only 15 years for middle and elder persons).

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

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

9 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.

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

11 The comprehensive cost rate for the EPI includes in the numerator the amount paid by Employees' Pension Funds on behalf of the EPI. If we do not include the amount in the numerator, the comprehensive cost rate becomes 19.0%.

12 Here, the amounts of actual reserves are compared to the projected amounts on a market value basis.

13 For an analysis of the deviations between actual and projected reserves, see Chapter 3, Section 3 of the full report.

in the full text of the annual report.)

An attribution analysis of the deviations between the actual and the projected amounts of reserves shows a major influence to have been the substantive rate of return on investment (namely, the portion of the rate of return on investment surpassing the nominal salary growth rate), which has exceeded the corresponding rate assumed for the actuarial valuations throughout the period from FY2010 to FY2012. (See Figure 3-3-2 in the full text of the annual report.)

Figure 4 Differences between the actual reserves in FY2012 and the projections made by the 2009 actuarial valuation

		EPI	NPSP & LPSP	NPSP	LPSP	PSP
		trillion yen	100 million yen	100 million yen	100 million yen	100 million yen
Reserves (at the FY2012 end)	Actual amounts	144.1	<443,786> 461,952	<75,627> 77,427	<368,159> 384,525	<34,224> 36,406
	Projected amounts	140.9	466,821	79,745	387,075	35,672
Difference (= actual amounts - projected amounts)		3.2	<△23,035> △4,869	<△4,118> △2,319	<△18,917> △2,550	<△1,448> 734
Proportion of the difference (actual amounts / projected amounts - 1) (%)		2.3	<△4.9> △1.0	<△5.2> △2.9	<△4.9> △0.7	<△4.1> 2.1

Notes: 1. The amounts in parentheses “< >” 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 the “NPSP & LPSP” are estimates by the Actuarial Subcommittee.

❑ Evaluation of the actuarial statuses

In the public pension plans in Japan, both the amounts 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 extend 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 would not have major influence on the long-term actuarial status of the plan. By this reason, we adjusted the projected amount of reserves made by the 2009 actuarial valuation reflecting the actual developments of nominal salary growth rates, etc.,[14] 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 amounts (See Figure 5 and Figure 3-4-2 in the full text of the annual report).

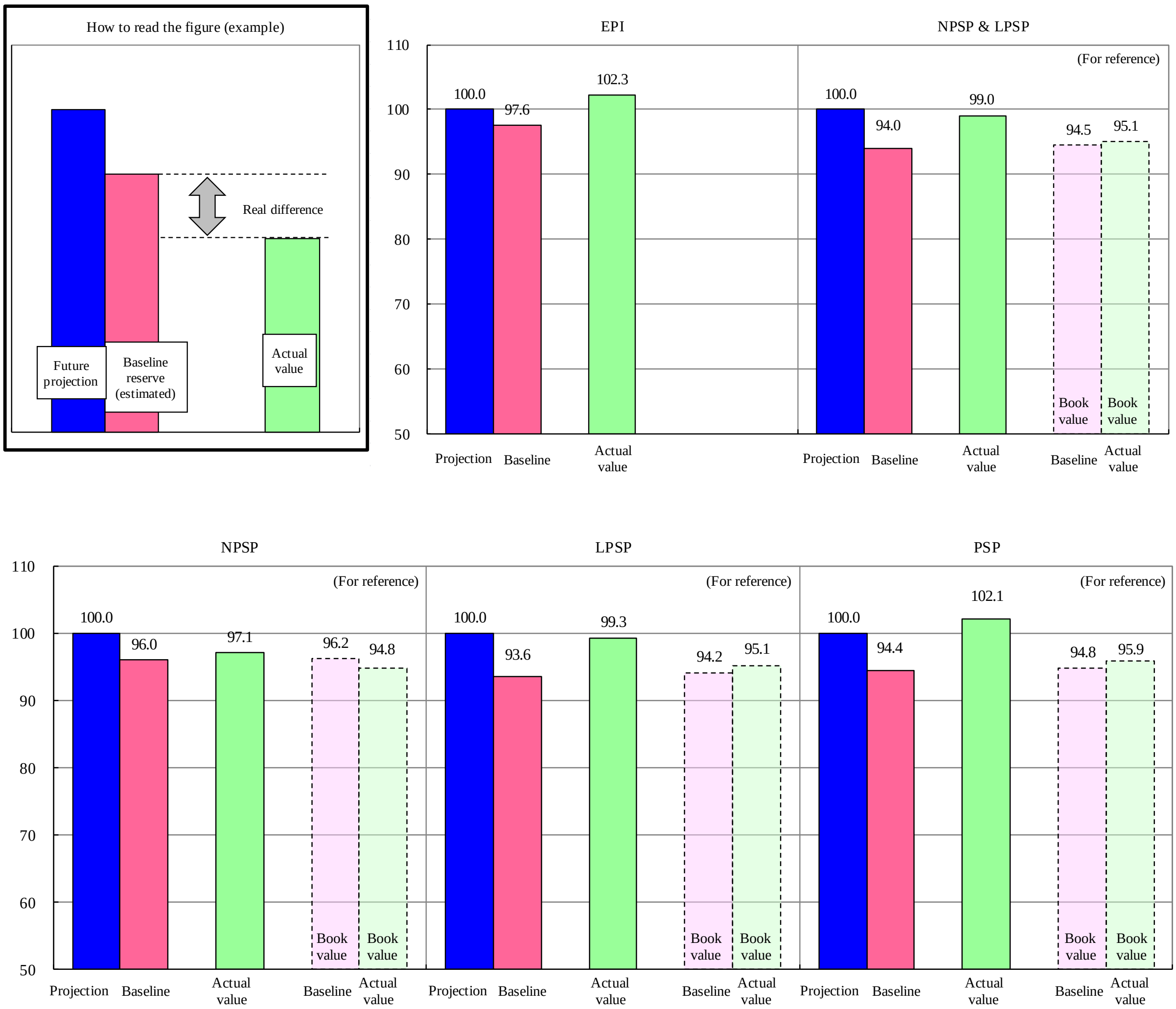
From this analysis, we found that the actual amount of reserves at the end of FY2012 exceeded the baseline estimate for all the employees’ plans. Thus we can conclude that the actuarial status of each employees’ plan exceeded the projected actuarial status estimated by the 2009 actuarial valuation (in the ‘intermediate

14 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 a) the amount attributable to the deviation of nominal salary growth rates. Secondly, we estimated b) the present value of the annual effects of the future benefits that will move theoretically in tandem with the consumer price inflation. Then, we estimated the amount of the baseline reserves by adding these two amounts a) and b) to the projected amount for the intermediate case made in the 2009 actuarial valuation.

case').[15] However, it should be reminded that the actual amounts of reserves do not exceed the baseline amounts explained above by such a wide margin that can sufficiently accommodate a possible sharp downturn in the rate of return on investments on a single fiscal year basis.

Here, we should also note that this evaluation presumes methodologically that all of the actuarial assumptions adopted in the 2009 actuarial valuations are, as a set, still applicable at the date of the evaluation.[16]

Figure 5 Evaluation of the actuarial statuses at the end of FY2012 (values are expressed by standardising the projected amount = 100)



[15] Assessed based on a market value basis.

[16] These findings may vary if the assumptions are changed.