

Annual Actuarial Report on the Public Pension System in Japan Fiscal Year 2017 (Summary)

1. Adjusted Financial Status

The adjusted financial status of the public pension system as a whole in FY2017 is as follows:

The Actuarial Subcommittee compares the financial status of individual schemes transversely across the schemes from the actuarial point of view. For that purpose, the Subcommittee expressed the financial status of a scheme slight differently from the original income statement by dividing it into the following two parts: “Annual balance of revenues and expenditures excluding investment income”¹ and “Investment income.” Hereafter we call the financial status expressed in this way the ‘Adjusted financial status.’

□ Adjusted financial status of the public pension system as a whole

The revenue of the public pension system as a whole was composed of JPY37.3 trillion of the contribution income, JPY12.5 trillion of the national and local

government subsidies, etc., and so on. The total amount of revenues excluding investment income was JPY52.7 trillion. The expenditure was mainly composed of JPY52.0 trillion of benefit disbursements, and the total amount of expenditures was JPY52.4 trillion. As a result of these, the annual balance of revenues and expenditures excluding investment income was a positive JPY0.3 trillion. Note, however, that it turns around to be a negative JPY1.3 trillion if temporary factors are excluded, such as “Payment of the minimum technical provisions by dissolved Employees’ Pension Funds (EPFs), etc.”

On the other hand, the investment income was JPY11.9 trillion on a market value basis.

The amount of reserves of the public pension system as a whole at the end of FY2017 was JPY198.1 trillion on a market value basis (See Figure 1 above and Figure 2-3-2 in the fulltext of the annual report.).

Figure 1 Adjusted financial status (FY2017)

Item		Public pension system as a whole
		JPY 100 million
Reserves at the previous fiscal year end (a) (on a market value basis)		1,858,241
Revenues (adjusted financial status base)	Total amount	527,027 ^{Note 1}
	Contribution income	372,687
	National and local government subsidies etc.	125,332
	Subsides for the “bestowals” payments accrued in the past	6,496
	Payment of the costs of the occupational portion by relevant institutions	968
	Payment of the minimum technical provisions by dissolved EPFs, etc.	16,153
	Payment by the Welfare and Medical Service Agency	1,992
	Others	3,389
Expenditures (adjusted financial status base)	Total amount	523,914 ^{Note 1}
	Benefit disbursements	520,403
	Others	3,289
Annual balance of revenues and expenditures excluding investment income (b)		3,113
		<Δ13,041 > ^{Note 2}
Investment income (c) (on a market value basis)		119,084
Others (d) (on a market value basis)		157 ^{Note 3}
Reserves at the fiscal year end (a + b + c + d) (on a market value basis)		1,980,595
Change in reserves from the previous fiscal year end (on a market value basis)		122,353

Note 1: From the FY2017 settlement of accounts of each scheme, it was found that the sum of contributions to the Basic Pension (BP) and revenues of contributions to BP as well as the sum of benefits equivalent to BP and revenues of contributions to the equivalents to the benefits provided by BP did not cancel each other out between revenues and expenditures under the public pension system as a whole. Because of this, the portion of difference (contributions to BP: JPY22.2 billion, contributions to the equivalents to the benefits provided by BP: JPY0.9 billion) is included in the total revenues and total expenditures of the public pension system as a whole, respectively.

Note 2: The figure in < > indicates the amount excluding the “Payment of the minimum technical provisions by dissolved EPFs, etc.”

Note 3: The amount recorded as “Others (d)” is “Transfer to reserves from the Business Account” in EPI Account and the National Pension Account of NP.

¹ It is calculated by excluding “Investment income” and “Withdrawal from reserves” of the National Pension Account of the National Pension (NP) and the Basic Pension Account of NP on the revenue side, and by excluding “Losses on the sale of marketable securities, etc.” of the National Public Officers Mutual Aid Associations (NPO-MAAs) and the Local Public Officers Mutual Aid Associations (LPO-MAAs) from “Others” on the expenditure side.

❑ Contributions

The contribution income was JPY35.9 trillion for the Employees' Pension Insurance (EPI) (by implementation organization, JPY30.9 trillion for EPI Account, JPY1.2 trillion for NPO-MAAs, JPY3.3 trillion for LPO-MAAs and JPY0.4 trillion for the Private School Teachers/Employees Mutual Aid Association (PSTE-MAA)), and JPY1.4 trillion for the National Pension Account of NP. Accordingly, the contribution income for the public pension system as a whole was JPY37.3 trillion (See Figure 2-3-5 in the full text of annual report.).

❑ Benefit Expenditures

The benefit disbursements² were JPY29.1 trillion for EPI (by implementation organization, JPY23.7 trillion for EPI Account, JPY1.3 trillion for NPO-MAAs, JPY3.8 trillion for LPO-MAAs and JPY0.3 trillion for PSTE-MAA), JPY0.6 trillion for the National Pension Account of NP³, and JPY22.4 trillion for the Basic Pension Account of NP. Thus, the sum of benefit disbursements for the public pension system as a whole was JPY52.0 trillion (See Figure 2-3-21 in the full text of annual report.).

❑ Reserves

The amount of reserves at the end of FY2017 was JPY185.8 trillion for EPI⁴ (by implementation organization, JPY154.9 trillion for EPI Account, JPY7.3 trillion for NPO-MAAs, JPY21.4 trillion for LPO-MAAs and JPY2.2 trillion for PSTE-MAA), JPY9.2 trillion for the National Pension Account of NP, and JPY3.1 trillion for the Basic Pension Account of NP on a market value basis. The amount of reserves for public pension system as a whole was JPY198.1 trillion (See Figure 2-3-25 in the full text of annual report.).

❑ Adjusted Financial Status

A breakdown of the adjusted financial status by each scheme and implementation organization of EPI shows that the annual balance of revenues and expenditures excluding the investment income was negative except for EPI Account and PSTE-MAA. Note, however, that the balance for EPI Account also turns out to be negative if temporary factors are excluded, such as the "Payment of the minimum technical provisions by dissolved EPFs, etc."

On the other hand, the investment income (on a market value basis) was positive for each scheme (See Figure 2, Figure 2-3-2, Figure 2-3-17 and Figure 2-3-23 in the full text of annual report.).

² The benefit disbursements for each scheme include those provided by the Old Law but regarded as benefits equivalent to Basic Pensions under the New Law.

³ The benefits disbursed through the National Pension Account of NP are mainly those provided by the old National Pension Law. The benefits disbursed through the Basic Pension Account of NP are those of Basic Pensions provided under the new National Pension Law.

⁴ The amount of reserves for EPI does not include the reserves of the substitution portions kept by EPFs.

Figure 2 Adjusted financial status by scheme and implementation organization of EPI (FY2017)

	EPI					NP	
	EPI Account	NPO-MAAs	LPO-MAAs	PSTE-MAA	Total amount	National Pension Account	Basic Pension Account
	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million
Reserves at the previous fiscal year end (a) (on a market value basis)	1,444,462	71,145	200,478	20,562	1,736,648	89,668	31,926
Annual balance of revenues and expenditures excluding investment income (b)	10,078 <Δ6,075> Note 1	Δ2,084	Δ644	251	7,600 <Δ8,553> Note 1	Δ3,414	Δ1,074
Investment income (c) (on a market value basis)	94,401	3,626	13,744	1,405	113,176	5,892	15
Others (d) Note 2 (on a market value basis)	94	-	-	-	94	64	-
Reserves at the fiscal year end (a + b + c + d) (on a market value basis)	1,549,035	72,687	213,577	22,219	1,857,518	92,210	30,867
Change in reserves from the previous fiscal year end (on a market value basis)	104,573	1,542	13,099	1,656	120,870	2,542	Δ 1,059

Note 1 The figures in <> indicate the amount excluding "Payment of the minimum technical provisions by dissolved EPFs, etc."

Note 2 The amount recorded as "Others (d)" is "Transfer to reserves from the Business Account" in EPI Account and the National Pension Account of NP.

2. Insured Persons

□ The numbers of insured persons

The number of insured persons was 43.58 million for EPI (by category of EPI insured persons, 39.11 million for Category-1 (private employees), 1.07 million for Category-2 (national public officers), 2.85 million for Category-3 (local public officers), and 0.55 million for Category-4 (private school teachers/employees)). In addition, the number of insured persons belonging to NP Category-1 (namely, self-employed persons, etc.) was 15.05 million and the number of those belonging to NP Category-3 (namely, dependent spouses of EPI insured persons) was 8.70 million. These brought the total number of insured persons for the public pension system as a whole to 67.33 million. While the number of insured persons of both NP Category-1 and Category-3 decreased, that of EPI insured persons increased, resulting in an increase of 0.04% for the public pension system as a whole (See Figure 2-1-1 in the full text of annual report.).

□ Average amounts of pensionable remuneration for EPI

The average amount of monthly pensionable remuneration, including bonuses, was JPY383 thousand for EPI. The amount by category of EPI insured persons was JPY366 thousand for Category-1 (private employees), JPY547 thousand for Category-2 (national public officers), JPY546 thousand for Category-3 (local public workers) and JPY462 thousand for Category-4 (private school teachers/employees). In FY2017, the average amount increased in any category except for Category-4 (private school teachers/employees). As far as Category-1 (private employees) is concerned, the average amount per capita for part-time workers increased greatly by 7.2%, but the increase is reduced to only 0.6% if part-time workers are excluded⁵. The average amount for all categories increased by 0.3%⁶ (See Figure 2-1-7 in the full text of annual report.).

⁵ This is perhaps a result caused by the increased number of part-time workers from 290 thousand (FY2016-end) to 380 thousand (FY 2017-end), rather than a result merely brought about by a 7.2% increase of the average per-capita amount for the same insured persons as in the previous fiscal year.

⁶ The ratio of part-time workers (whose average amount is relatively low) to all insured persons also affects the change in the average per-capita amount of all.

3. Beneficiaries

□ The numbers of beneficiaries

The numbers of beneficiaries (more precisely, persons with pensions benefit eligibilities) were 37.18 million for former EPI, 1.29 million for NPO-MAAs, 3.12 million for LPO-MAAs, 0.51 million for PSTE-MAA and 35.47 million for NP (Basic Pensions provided by the New Law and National Pensions provided by the Old Law). The total number of beneficiaries of the public pension schemes was 40.77 million, excluding the duplication of beneficiaries due to multiple eligibilities. The number of beneficiaries in any scheme increased compared with the previous fiscal year (See Figure 2-2-2 in the full text of annual report.).

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

The average monthly amount of old-age pensions for beneficiaries with long contribution periods⁷ (including the amount of the old-age Basic Pensions and not including the amount of the occupational pension portions of NPO-MAAs, LPO-MAAs and PSTE-MAA) was JPY149 thousand for EPI (including the portion paid by EPFs on behalf of EPI), and JPY56 thousand for NP (Basic Pensions under the New Law and National Pensions under the Old Law). By implementation organization of EPI⁸, the amount was JPY145 thousand for former EPI (including the portion paid by EPFs), JPY172 thousand for NPO-MAAs, JPY175 thousand for LPO-MAAs, and JPY174 thousand for PSTE-MAA (See Figure 2-2-12 and Figure 2-2-13 in the full text of annual report.).

4. Actuarial Indices

□ Pension support ratios

The pension support ratio⁹ increased 0.02 points to 2.32 for EPI, while decreasing 0.06 points to 1.93 for the Basic Pension¹⁰, as compared with the previous fiscal year end, respectively (See Figure 2-4-2 in the full text of annual report.).

□ Reserve ratios

The reserve ratio¹¹ was 5.0 for EPI¹² and 7.1 for the National Pension Account of NP¹³, each up from the previous fiscal year (See Figure 2-4-7 in the text of annual report.).

⁷ 'Beneficiaries with long contribution periods' means those of the old-age EPI pensions or the retirement pensions provided by the Mutual Aid Associations like NPO-MAAs, with their contribution periods to individual schemes fulfilling the eligibility conditions of 25 years for the old-age basic pensions (Here, we take account of the effects of the temporary measures relaxing the eligibility condition of 25 years for specified cohorts and the special measures requiring only 15 years).

⁸ When comparing the amounts of pensions, it should be reminded that there are considerable differences in the male-female ratios and the average contribution periods among the implementation organizations.

⁹ Pension support ratio is the ratio of the number of insured persons to the number of beneficiaries of old-age and retirement pensions.

¹⁰ With respect to the Basic Pension, pension support ratio is the ratio of the number of NP Category 1 to 3 insured persons to the number of beneficiaries of old-age Basic Pension.

¹¹ The reserve ratio is the ratio of reserve at the previous fiscal year end to the comprehensive cost (the amount of the 'essential' expenditures in the year which the scheme has to finance by itself).

¹² For the reserve for EPI, an estimate is used that includes the portion paid by EPFs on behalf of EPI and the deferred amount of national government subsidies.

¹³ For the reserve for the National Pension Account of NP, an estimate is used that includes the deferred amount of national government subsidies.

5. Comparative Analysis of Actual Results to the Projections made by the 2014 Financial Verification

□ Attribution analysis of the deviation in reserves

The amount of actual reserves for EPI and the National Pension Account of NP (on a market value basis) at the end of FY2017 surpassed the projected amount in any of cases C, E and G in the 2014 Financial Verification¹⁴ (See Figure 3, and Figure 3-2-35 in the full text of annual report.). This is because, in addition to a large contribution arising from the substantially greater deviation of actual reserves at the end of FY2014¹⁵ than projected, the sum of contributions caused by generating factors pertaining to FY2016 and FY2017 turned out to be positive.

From the breakdown by generating factors pertaining to FY2017, it is found that the higher ‘essential’ rate of return on investment¹⁶ than assumed in the Financial Verification greatly contributed to the deviation in any case for EPI and the National Pension Account of NP. With regard to the deviation of nominal rate of return on investment, the contribution arising from the deviation of salary growth rate was negative in any case. And the demographic factors contributed positively in any case for EPI and the National Pension Account of NP (See Figure 3, Figure 3-4-2 in the full text of annual report.).

Figure 3 Contribution of generating factors to deviation of actual reserves at FY2017-end from the projections made by the 2014 Financial Verification

Factors causing deviation from the projections		Case C		Case E		Case G	
		EPI	NP National Pension Account	EPI	NP National Pension Account	EPI	NP National Pension Account
		Trillion yen	Trillion yen	Trillion yen	Trillion yen	Trillion yen	Trillion yen
Deviation of actual amount of reserves at FY2017-end from the projections		31.62	1.04	31.62	1.04	36.49	1.20
Deviation of actual amount of reserves at FY2014-end from the projections ^A		23.70	0.87	23.70	0.87	24.23	0.88
Contribution of generating factors in FY2015, total		Δ8.28	Δ0.38	Δ8.28	Δ0.38	Δ6.98	Δ0.33
Contribution of generating factors in FY2016, total		7.06	0.29	7.06	0.29	8.47	0.33
Contribution of generating factors in FY2017, total		9.14	0.26	9.14	0.26	10.76	0.32
FY2017	Nominal rate of return on investment ^{B₂₀₁₇}	6.35	0.28	6.35	0.28	6.96	0.32
	‘Essential’ rate of return on investment ^{B₂₀₁₇-1}	11.81	0.62	11.81	0.62	11.19	0.59
	Salary growth rate ^{B₂₀₁₇-2}	Δ5.45	Δ0.34	Δ5.45	Δ0.34	Δ4.23	Δ0.27
	Annual balance of revenues and expenditures excluding investment income ^{C₂₀₁₇}	2.79	Δ0.02	2.79	Δ0.02	3.80	Δ0.01
	Change in contribution income caused by deviation of salary growth rate ^{C₂₀₁₇-1}	Δ1.02	Δ0.03	Δ1.02	Δ0.03	Δ0.84	Δ0.02
	Change in benefit costs caused by deviation of salary growth rate and inflation rate ^{C₂₀₁₇-2}	0.73	0.03	0.73	0.03	0.38	0.02
	Demographic factors ^{C₂₀₁₇-3}	2.69	0.09	2.69	0.09	3.65	0.09
	Number of insured persons ^{C₂₀₁₇-3-1}	2.81	0.08	2.81	0.08	3.75	0.09
	Number of beneficiaries ^{C₂₀₁₇-3-1}	Δ0.13	0.00	Δ0.13	0.00	Δ0.10	0.00
	Modified indexation rate ^{C₂₀₁₇-4}	Δ0.42	Δ0.02	Δ0.42	Δ0.02	Δ0.34	Δ0.02
Others ^{C₂₀₁₇-5}	0.81	Δ0.09	0.81	Δ0.09	0.95	Δ0.08	

¹⁴ Although only cases C, E and G are shown as examples here, this is not intended to indicate that the Actuarial Subcommittee positions these cases as basic or standard cases of the 2014 Financial Verification.

¹⁵ The reserves at the end of FY2014 were calculated by using estimates of EPI equivalent portion for the reserves for Mutual Aid Associations.

¹⁶ The ‘essential’ rate of return on investment means the rate of return on investment minus the salary growth rate.

□ Evaluation of the actuarial status for EPI

In addition to the attribution analysis of the deviation in reserves as above, the Actuarial Subcommittee also calculated the “baseline reserves for evaluation (estimate) that would serve as a baseline of evaluating the actual status of reserves¹⁷” for EPI by adjusting the salary growth rate and inflation rate deviated from the assumptions in the Financial Verification, and then compared the actual amount of reserves with the adjusted amount thus obtained (See Figure 4, Figure 3-5-1 and Figure 3-5-3 in the full text of annual report.).

An analysis of the financial situation of EPI at the end of FY2017 in Case C, Case E and Case G reveals that the difference between the actual amount of reserves and the “baseline reserves for evaluation (estimate)” remains positive in the range of 2.8% to 3.0% against the financial resources (contribution income and reserves).

Even if there is a surplus in resources at present, however, there is a possibility of benefit levels not improving if actual results of inflation rate, salary growth rate and rate of return on investment deviate from the assumptions in the Financial Verification, or if various assumptions are changed in future Financial Verification. Thus, we need to continuously monitor such effects on financial balance of pension schemes.

Figure 4 Evaluation of the actuarial status for EPI at the end of FY2017

		Case C	Case E	Case G
		Trillion yen	Trillion yen	Trillion yen
Actual amount of reserves	①	199.1	199.1	199.1
Baseline reserves for evaluation (estimate)	②	157.4	157.4	155.9
Difference between actual amount of reserves and baseline reserves for evaluation (estimate)	③= ①-②	41.7	41.7	43.2
Financial resources (excluding national and local government subsidies, etc.)	④	1,515.0	1,417.8	1,443.6
“Ratio of the difference between actual amount of reserves and baseline reserves for evaluation (estimate) to financial resources (excluding national and local government subsidies, etc.)”	③/④	% 2.8	% 2.9	% 3.0

In addition, with having made pension premium fixed since the 2004 revision, it is expected that the public’s interest about the impact of future operation result extends to level of pension benefit. We would like to closely watch the development of the operation result each year, with due consideration to whether the macroeconomic indexation will work in an intended manner and how the tendency will affect future benefit levels that National Pension Category-1 insured persons will increasingly decrease in number to become EPI insured persons.

In any case, from the perspective of fiscal management of public pensions, we should pay attention to the long-term trend of actuarial status, regardless of the short-term trend including those of demographic and economic factors.

¹⁷ For details of the technical aspects of the adjustment, see Chapter 3, Section 5 of the full text of annual report.