

Annual Actuarial Report on the Public Pension System in Japan Fiscal Year 2018 (Summary)

1. Adjusted Financial Status

The adjusted financial status of the public pension system as a whole in FY2018 is as follows:

The Actuarial Subcommittee compares the financial status of individual schemes transversely across the schemes. In light of the fiscal management performed based on the pay-as-you-go system as a rule, 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.’

Figure 1 Adjusted financial status (FY2018)

Item	Whole Employees' Pension Insurance JPY 100 million	National Pension		Public pension system as a whole JPY 100 million
		National Pension Account JPY 100 million	Basic Pension Account JPY 100 million	
Reserves at the previous fiscal year end (a) (on a market value basis)	1,857,518	92,210	30,867	1,980,595
Revenues (adjusted financial status basis)				
Total amount	501,301	36,002	241,117	527,796
(of which) Contribution income	369,892	13,904	•	383,795
(of which) National and local government subsidies etc.	109,178	18,207	•	127,385
(of which) Subsidies from Basic Pension	5,772	3,822	•	•
(of which) Revenue of the contribution to Basic Pension	•	•	241,031	•
Expenditures (adjusted financial status basis)				
Total amount	503,604	38,103	238,644	529,727
(of which) Benefit disbursements	292,108	4,770	229,047	525,925
(of which) Contribution to Basic Pension	208,928	32,103	•	•
(of which) Benefits equivalent to Basic Pension (Subsidies from Basic Pension)	•	•	9,594	•
Annual balance of revenues and expenditures excluding investment income (b)	Δ2,303	Δ2,100	2,473	Δ1,931
Investment income (c) (on a market value basis)	26,309	1,329	15	27,653
Others (d) (on a market value basis)	172	105	-	277
Reserves at the fiscal year end (a + b + c + d) (on a market value basis)	1,881,696	91,543	33,355	2,006,594

Note 1: To observe whole EPI and the fiscal revenue and expenditure situation for EPI as a whole, “give-and-take” exchanges between EPI implementation organizations are excluded from both revenues and expenditures. In the same way, “give-and-take” transactions within the public pension system are excluded from both revenues and expenditures for the public pension system as a whole.

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.

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

The revenue of the public pension system as a whole was composed of JPY38.4 trillion of the contribution income, JPY12.7 trillion of the national and local government subsidies, etc., and so on. The total amount of revenues excluding investment income was JPY52.8 trillion. The expenditure was mainly composed of JPY52.6 trillion of benefit disbursements, and the total amount of expenditures was JPY53.0 trillion. As a result of these, the annual balance of revenues and expenditures excluding investment income was a negative JPY0.2 trillion.

Then, the investment income was JPY2.8 trillion on a market value basis. The amount of reserves of the public pension system as a whole at the end of FY2018 was JPY200.7 trillion on a market value basis which increased by JPY2.6 trillion compared with the previous fiscal year (See Figure 1 above and Figure 2-3-2 in the fulltext of the annual report.).

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 JPY37.0 trillion which increased by 3.1% compared with the previous fiscal year for the Employees' Pension Insurance (EPI) (by implementation organization, JPY31.9 trillion which increased by 3.2% for EPI Account, JPY1.3 trillion which increased by 3.3% for NPO-MAAs, JPY3.3 trillion which increased by 2.3% for LPO-MAAs and JPY0.4 trillion which increased by 4.2% for the Private School Teachers/Employees Mutual Aid Association (PSTE-MAA)), and JPY1.4 trillion which decreased by 0.4% for the National Pension Account of NP. Accordingly, the contribution income for the public pension system as a whole was JPY38.4 trillion which increased by 3.0% (See Figure 2-3-5 in the full text of annual report.).

According to an analysis of the contributors to change in income from contributions of EPI, the increased number of insured persons was a greatest contributing factor and the increased average amounts of pensionable remuneration was a second greatest factor for EPI Account. For NPO-MAAs, LPO-MAAs and PSTE-MAA, contribution rates raised during FY2018 contributed to the growth in contribution income (See Figure 2 below and Figure 2-3-6 in the full text of annual report.).

Figure 2 Factor analysis of change in contribution income for EPI

The increased number of insured persons greatly contributed to the growth in contribution income.

		EPI Account	NPO-MAAs	LPO-MAAs	PSTE-MAA
		%	%	%	%
Change in contributions from previous fiscal year		3.2	3.3	2.3	4.2
Contributions by factor	Number of insured persons	1.9	0.2	△0.0	1.6
	Average amounts of standard remuneration	0.9	0.7	0.0	△0.0
	Contribution rate	0.3	1.9	1.9	2.5
	Others	0.1	0.6	0.4	0.1

Note 1: The contributions of each factor are estimates, being expressed in terms of the rate against contribution income in the previous fiscal year.
 Note 2: The fiscal year average is used for the number of insured persons.

Contribution rates raised during FY2018 accounted for the growth in contribution income.

According to an analysis of the contributors to change in income from current fiscal year's contributions of NP, the decreased number of NP Category-1 insured persons and the decrease of NP contribution charge contributed to the decrease in contribution income. On the other hand, the increased payment rate for current fiscal year's NP contributions contributed to the growth in contribution income (See Figure 3 below and Figure 2-3-10 in the full text of annual report.).

Figure 3 Analysis of factors of increase/decrease in contribution income for the current fiscal year's for National Pension Account of NP

		FY2016	FY2017	FY2018
		%	%	%
Change in contributions from previous fiscal year		1.7	△7.3	△0.6
Contributions by factor	Number of insured persons	△4.9	△5.5	△3.0
	Proportion of number of contribution-exempted insured persons	△1.8	△2.6	△0.4
	Amount of contributions	4.1	1.6	△0.7
	Payment rate	2.6	2.0	2.7
	Others	1.7	△2.9	0.8

The decreased number of NP Category-1 insured persons contributed to the decrease in contribution income.

The decrease of NP contribution charge contributed to the decrease in contribution income.

The increased payment rate for current fiscal year's NP contributions contributed to the growth in contribution income.

Note 1: Contributions by factor are estimates, being expressed as a ratio to contributions for the current year's portion in the previous fiscal year.
 Note 2: We used the average number of insured persons during the fiscal year concerned.
 Note 3: The amount of contributions is the weighted average in consideration of the number of months received.

❑ Benefit Expenditures

The benefit disbursements² were JPY29.2 trillion for EPI (by implementation organization, JPY23.8 trillion for EPI Account, JPY1.3 trillion for NPO-MAAs, JPY3.8 trillion for LPO-MAAs and JPY0.3 trillion for PSTE-MAA), JPY0.5 trillion for the National Pension Account of NP³, and JPY22.9 trillion for the Basic Pension Account of NP. Thus, the sum of benefit disbursements for the public pension system as a whole was JPY52.6 trillion which increased by 1.1% compared with the previous fiscal year (See Figure 1 above and Figure 2-3-22 in the full text of annual report.).

❑ Reserves

The amount of reserves at the end of FY2018 was JPY188.2 trillion for EPI⁴ (by implementation organization, JPY157.3 trillion for EPI Account, JPY7.3 trillion for NPO-MAAs, JPY21.3 trillion for LPO-MAAs and JPY2.3 trillion for PSTE-MAA), JPY9.2 trillion for the National Pension Account of NP, and JPY3.3 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 JPY200.7 trillion (See Figure 1 above, Figure 4 below and Figure 2-3-26 in the full text of annual report.).

❑ Adjusted Financial Status by implementation organization

A breakdown of the adjusted financial status by each implementation organization of EPI shows that the annual balance of revenues and expenditures excluding the investment income was positive for EPI Account and PSTE-MAA and negative for NPO-MAAs and LPO-MAAs. And then, the investment income (on a market value basis) was positive for each scheme (See Figure 4 below, Figure 2-3-2, Figure 2-3-18 and Figure 2-3-24 in the full text of annual report.).

Figure 4 Adjusted financial status by implementation organization of EPI (FY2018)

	EPI				
	EPI Account	NPO-MAAs	LPO-MAAs	PSTE-MAA	Total amount
Reserves at the previous fiscal year end (a)	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million
(on a market value basis)	1,549,035	72,687	213,577	22,219	1,857,518
Annual balance of revenues and expenditures excluding investment income (b)	1,961	Δ1,160	Δ3,466	362	Δ2,303
Investment income (c)	22,133	1,182	2,696	298	26,309
Others (d) ^{Note}	172	-	-	-	172
(on a market value basis)					
Reserves at the fiscal year end (a + b + c + d)	1,573,302	72,709	212,807	22,878	1,881,696
(on a market value basis)					
Change in reserves from the previous fiscal year end	24,267	22	Δ 770	660	24,178
(on a market value basis)					

Note: The amount recorded as "Others (d)" is "Transfer to reserves from the Business Account".

2. Insured Persons

❑ The numbers of insured persons

The numbers of insured persons at the end of FY2018 was 44.28 million for EPI (by category of EPI insured persons, 39.81 million for Category-1 (private employees), 1.07 million for Category-2 (national public

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.

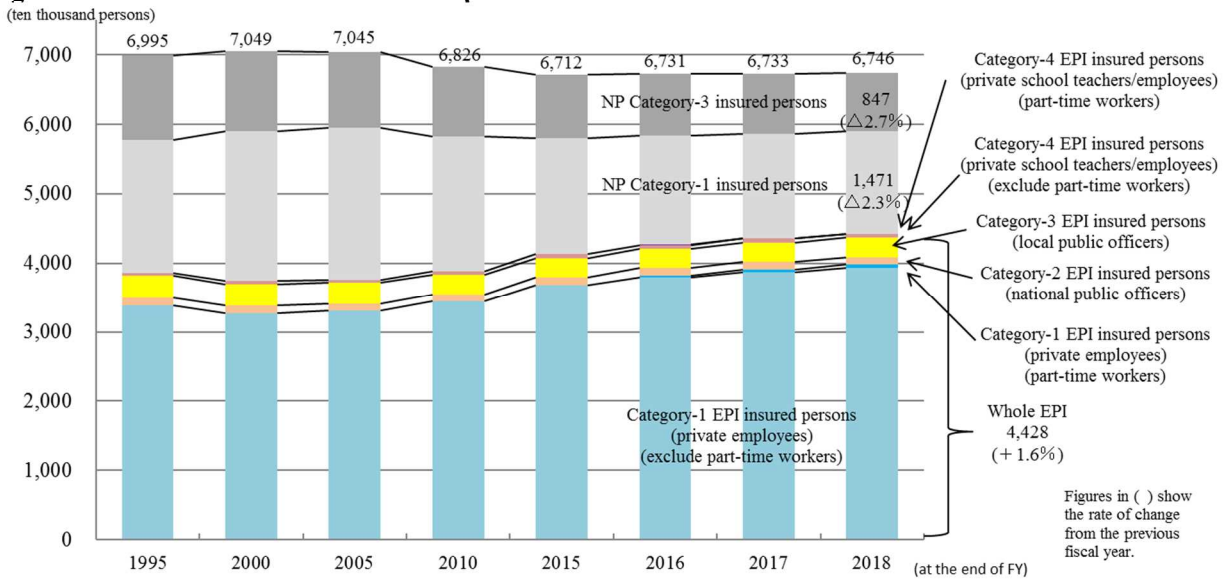
³ The benefits disbursed through the National Pension Account of NP are mainly those provided by the old National Pension Law. The benefits disbursed through the Basic Pension Account of NP are those of Basic Pensions provided under the new National Pension Law.

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

officers), 2.84 million for Category-3 (local public officers), and 0.56 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 14.71 million and the number of those belonging to NP Category-3 (namely, dependent spouses of EPI insured persons) was 8.47 million. These brought the total number of insured persons for the public pension system as a whole to 67.46 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 0.2% for the public pension system as a whole (See Figure 2-1-1 in the full text of annual report.).

The rate of increase in the number of insured persons for EPI is 1.6%, which is reduced to 1.5% if part-time workers are excluded. For part-time workers alone, the rate of increase is 13.6% (See Figure 5 below and Figure 2-1-1 in the full text of annual report.).

Figure 5 Trends in the number of insured persons



We can see a change in the age distribution of insured persons over the past 10 years. For whole EPI male insured persons, the age group accounting for the largest proportion shifted from the age group of 35-39 ten years earlier to that of 45-49 because of the baby-boomer junior generation becoming older. Furthermore, the second peak that the age group of 55-59 formed ten years earlier has disappeared along with the retirement of the baby-boomer generation. As for whole EPI female insured persons, the number of those aged 40 or over increased. The number of insured persons aged 65-69, both male and female, also increased in the past 5 years. Looking at the insured persons as percentage of the population, it increased in each age group for both males and females as compared with 5 years before. In particular, as evidenced by the increased percentage of insured aged 65-69 from 17.4% to 26.5% for males and from 6.4% to 10.3% for females, it can be found that the employment of those aged 65 or over is in progress (See Figure 6 below and Figure 2-1-6 and Figure 2-1-7 in the full text of annual report.).

Figure 6 Change in age distribution of insured persons (number and percentage of total population)

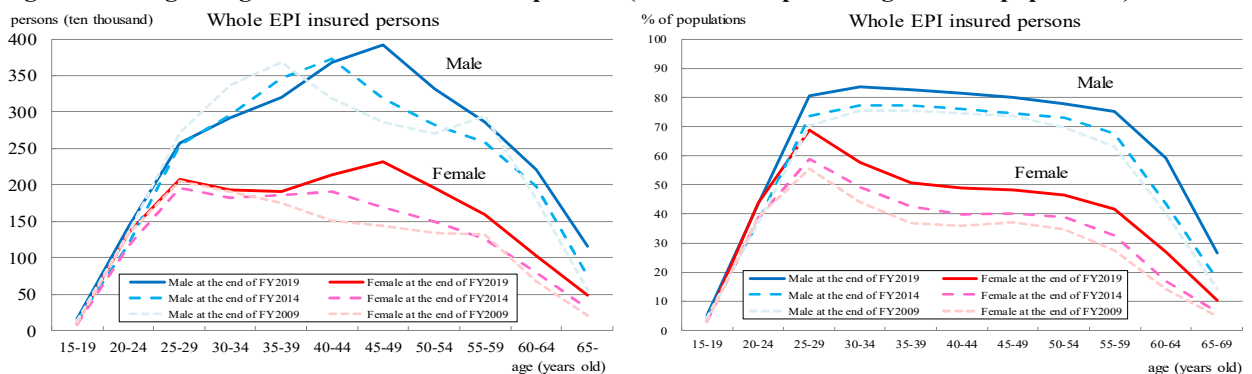
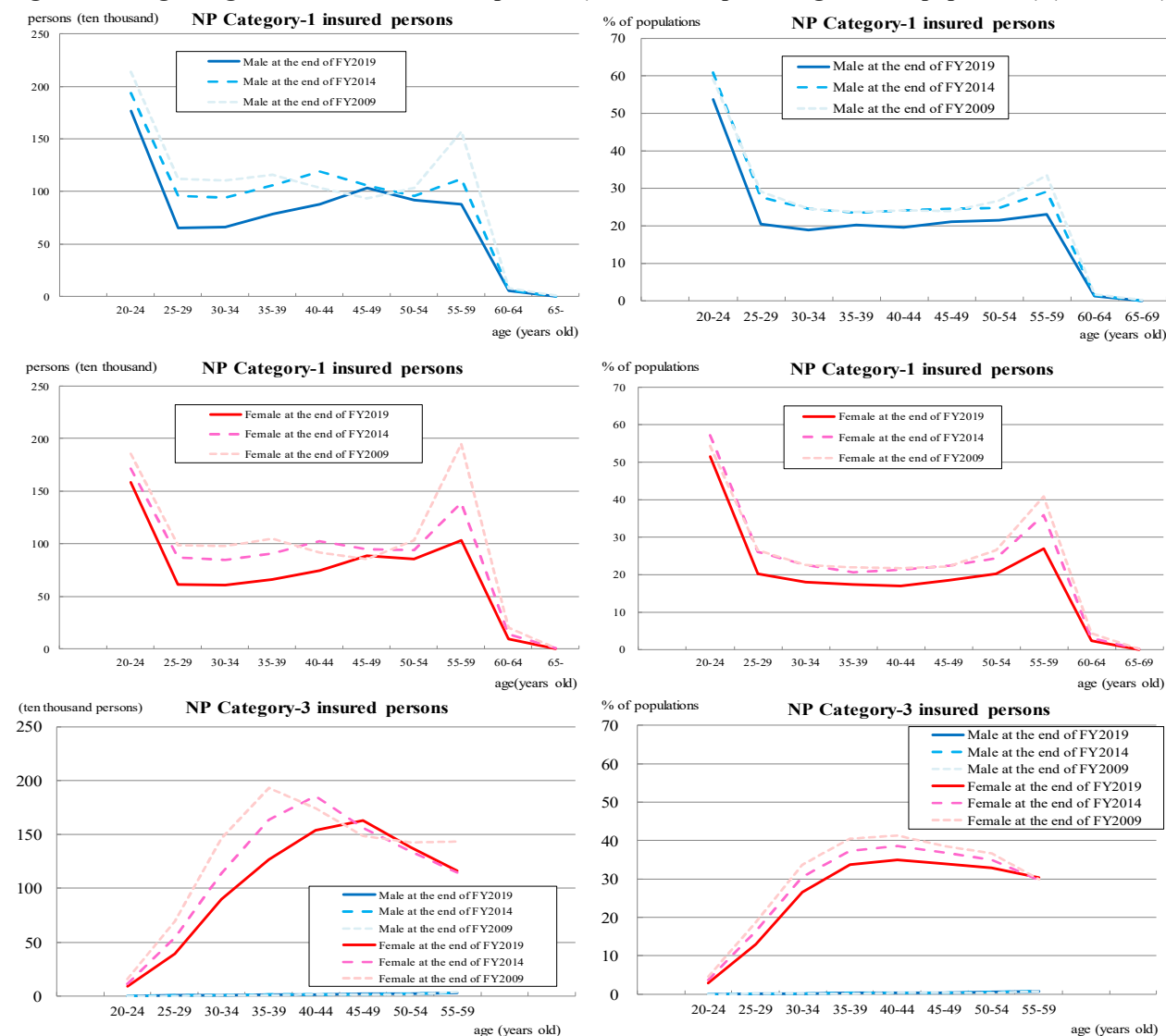


Figure 6 Change in age distribution of insured persons (number and percentage of total population) (continued)



□ Average amounts of pensionable remuneration for EPI

The average amount per capita of pensionable remuneration per month during FY2018, including bonuses, was JPY386 thousand for EPI. The amount by category of EPI insured persons was JPY369 thousand for Category-1 (private employees), JPY550 thousand for Category-2 (national public officers), JPY547 thousand for Category-3 (local public workers) and JPY461 thousand for Category-4 (private school teachers/employees). The rate of increase was 0.7% for whole EPI. As far as Category-1 (private employees) is concerned, the increase is reduced to 0.6% if part-time workers are excluded and the average amount per capita for part-time workers increased by 5.5%⁵. The average amount for all categories increased by 0.9%⁶ (See Figure 2-1-8 in the full text of annual report.).

⁵ This is perhaps a result caused by the increased number of part-time workers from 380 thousand (FY2017-end) to 430 thousand (FY 2018-end), rather than a result merely brought about by a 5.5% increase of the average per-capita amount for the same insured persons as in the previous fiscal year.

⁶ The change in the average per-capita amount of all is lower than both that of all but part-time workers are excluded and that of part-time workers, because the ratio of part-time workers (whose average amount is relatively low) to all insured persons is increasing.

3. Beneficiaries

□ The numbers of beneficiaries

The numbers of beneficiaries (more precisely, persons with pensions benefit eligibilities) at the end of FY2018 were 37.35 million for former EPI, 1.31 million for NPO-MAAs, 3.19 million for LPO-MAAs, 0.54 million for PSTE-MAA and 35.93 million for NP (Basic Pensions provided by the New Law and National Pensions provided by the Old Law). 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.). The total number of beneficiaries of the public pension schemes was 40.67 million, excluding the duplication of beneficiaries due to multiple eligibilities.

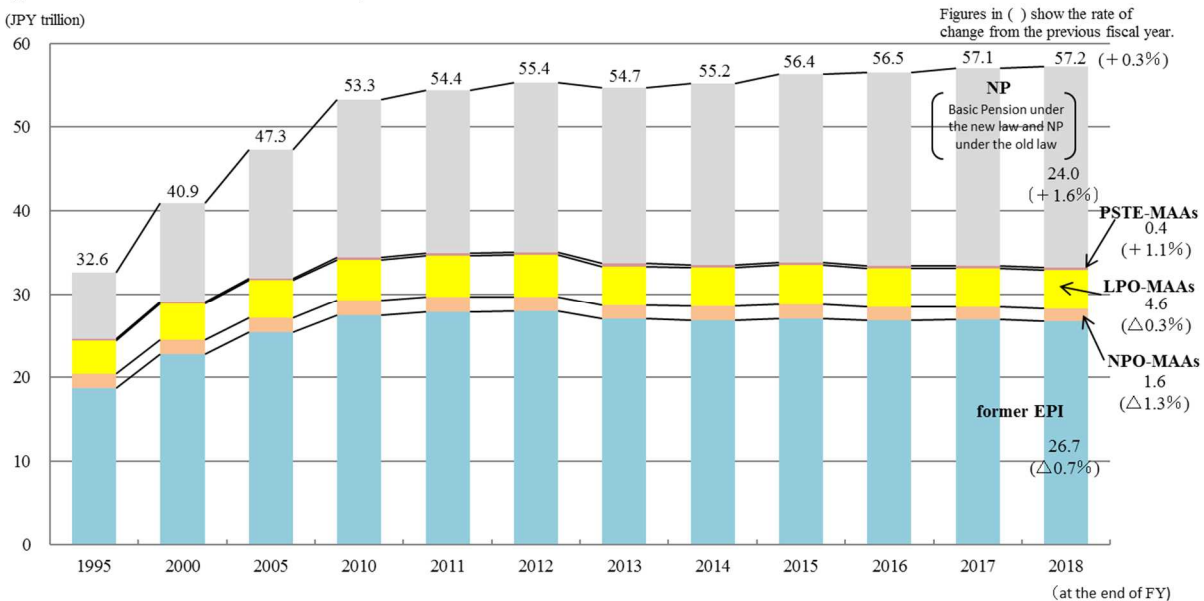
□ Total amount of pensions for beneficiaries

The total pension amounts were JPY26.7 trillion for the former EPI, JPY1.6 trillion for NPO-MAAs, JPY4.6 trillion for LPO-MAAs, JPY0.4 trillion for PSTE-MAA, and JPY24.0 trillion for NP⁷. The total amount for the public pension system as a whole was JPY57.2 trillion. The total amount at the end of FY2018 decreased from the end of FY2017 for former EPI, NPO-MAAs and LPO-MAAs, while it increased for PSTE-MAA and NP (See Figure 7 below and Figure 2-2-6 in the full text of annual report.).

Note that the total pension amount at the end of FY2018 decreased as compared with the end of FY2017 for former EPI, caused by the raised pensionable age for the earnings-related portion to 61 for former EPI female, and by the fixed portion of special payment that ended.

As similar as above, note that the total pension amount at FY2013-end and FY2016-end decreased from previous fiscal year end for the employees' pension system. There are attributed to the payment starting age raised with respect to earnings-related portion for males, and for female members of MAAs, etc.

Figure 7 Trend in total amount of pensions for beneficiaries



□ Average and distribution of monthly amounts of old-age pensions (for long-term contributors)

The average monthly amount of old-age pensions for beneficiaries with long contribution periods⁸ (including

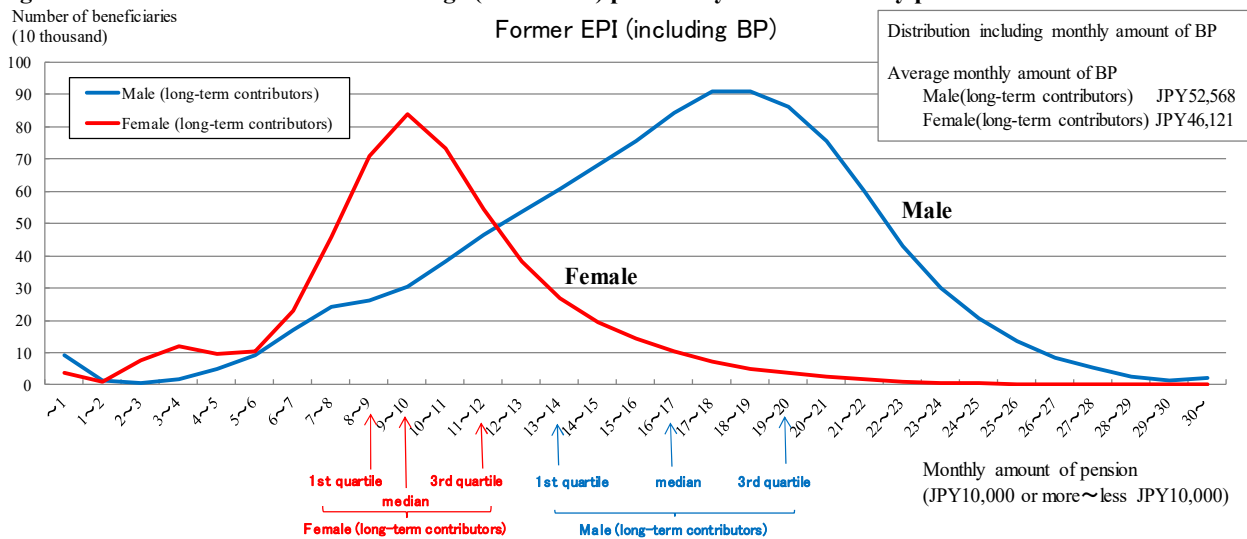
⁷ The figure for NP shows the sum of the Basic Pension under the new law and NP under the old law. This amount does not include the amount equivalent to the Basic Pension for employees' pension schemes under the old law (i.e., "tier 1" of pensions under the old law).

⁸ '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).

the amount of the old-age Basic Pensions and not including the amount of the occupational pension portions⁹ of NPO-MAAs, LPO-MAAs and PSTE-MAA) was JPY148 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 EPI¹⁰, the amount was JPY144 thousand for former EPI (including the portion paid by EPFs), JPY171 thousand for NPO-MAAs, JPY174 thousand for LPO-MAAs, and JPY174 thousand for PSTE-MAA (See Figure 2-2-13 and Figure 2-2-14 in the full text of annual report.).

Looking at former EPI, monthly pension amount for long-term contributors including BP peaks at JPY160,000-200,000 for males and JPY80,000-110,000 for females (See Figure 8 below and Figure 2-2-25 in the full text of annual report.).

Figure 8 Number of beneficiaries of old-age (retirement) pension by class of monthly pension amount



4. Actuarial Indices

□ Pension support ratios

The pension support ratio¹¹ increased 0.01 points to 2.33 for EPI, while decreasing 0.02 points to 1.91 for the Basic Pension¹², 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 ratio¹³ was 5.1 for EPI¹⁴ and 7.8 for the National Pension Account of NP¹⁵, each up from the previous fiscal year (See Figure 2-4-7 in the text of annual report.).

⁹ EPI equivalent pension amounts excluding occupational addition are estimated by Actuarial Subcommittee.

¹⁰ 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.

¹¹ Pension support ratio is the ratio of the number of insured persons to the number of beneficiaries of old-age and retirement pensions.

¹² 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.

¹³ 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).

¹⁴ 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.

¹⁵ 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

We make a comparison of each item of fiscal revenue and expenditure, reserves and fiscal indices with projections under the 2014 Financial Verification to clarify whether or not the pension finance goes ahead as expected.

□ Total fertility rate

The actual fertility rate in 2018 exceeds the assumed intermediate fertility rate in the 2012 population projections¹⁶ which served as the basis of the 2014 Financial Verification (See Figure 9 and Figure 3-2-1 in the text of annual report).

□ Average life expectancy

Comparison the actual average life expectancies of Japanese nationals at the age of 65 with the corresponding assumptions for the 2012 population projections, the actual life expectancy for males is proceeding at the same level as the assumed intermediate level, while that of females is proceeding at a lower level than the assumed intermediate level (See Figure 10 and Figure 3-2-3 in the text of annual report).

□ Inflation rate

The actual inflation rate in 2018 was lower than the assumed one for either Economic recovery case or Reference case in the 2014 Financial Verification (See Figure 11 and Figure 3-2-6 in the text of annual report).

□ Real salary growth rates

The actual performance with respect to real salary growth rate for Whole EPI in FY2018 is lower than the assumed one for either Economic recovery case or Reference case in the 2014 Financial Verification (See Figure 12 and Figure 3-2-9 in the text of annual report.).

□ Effective rates of return on investment

The actual effective rate of return on investment in FY2018 exceeds the assumed one for either Economic recovery case or Reference case in the 2014 Financial Verification (See Figure 13 and Figure 3-2-12 in the text of annual report).

Figure 9 Comparison of actual TFRs and TFR assumptions for the population projections

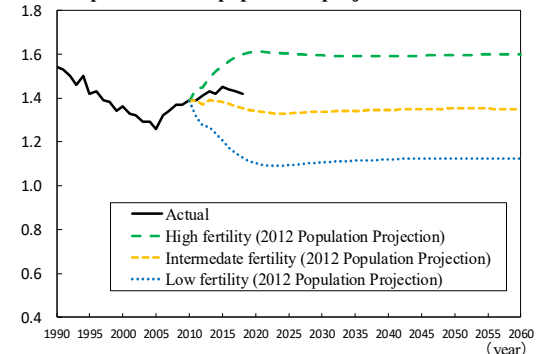


Figure 10 Comparison of actual average life expectancies at 65 and assumptions for population projections

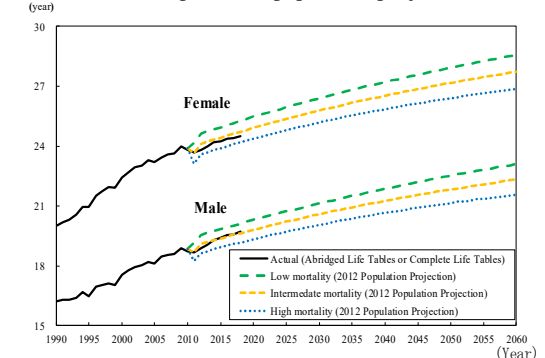


Figure 11 Comparison of actual inflation rates and assumed rates in the 2014 Financial Verification

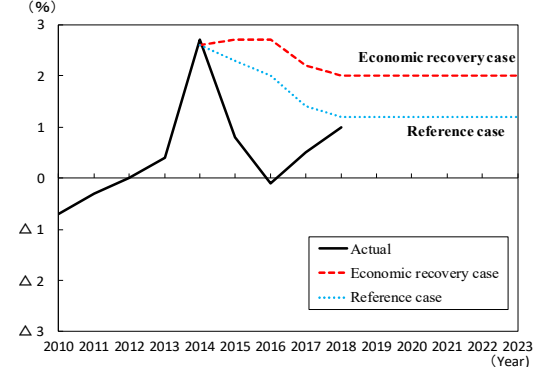


Figure 12 Comparison of actual real salary growth rates and assumed rates in the 2014 Financial Verification

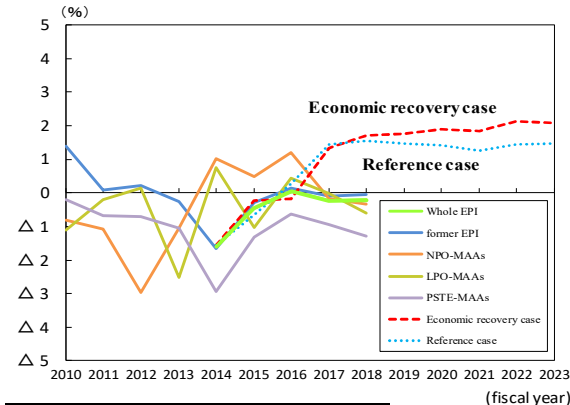
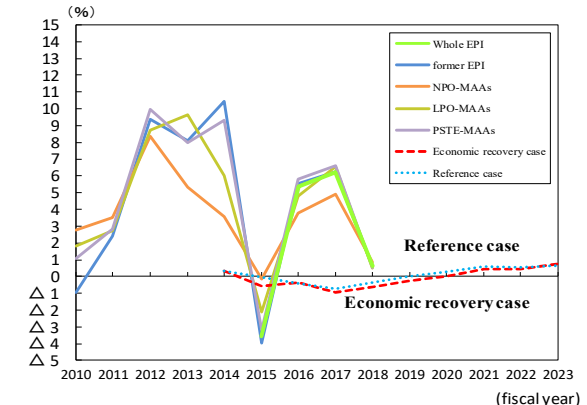


Figure 13 Comparison of actual effective rates of return on investment and assumed rates in the 2014 Financial Verification

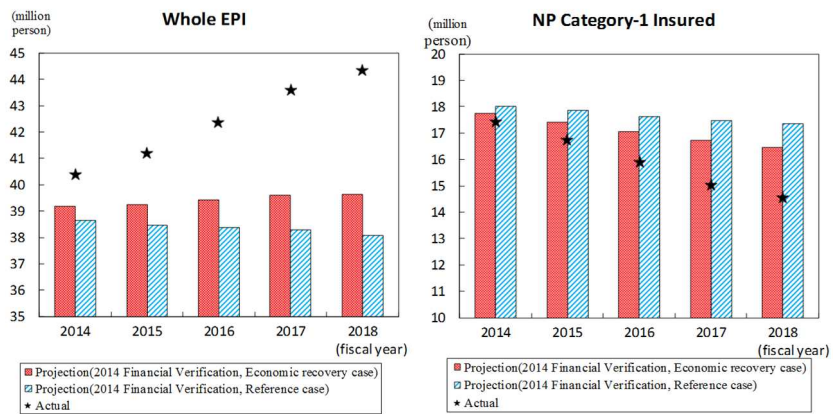


¹⁶ Population Projections for Japan (January 2012)

❑ **Number of insured persons**

Comparison the actual number of insured persons in FY2018 with the projected one in the 2014 Financial Verification, the actual performance for Whole EPI greatly exceeds the projected one, while falling far below the projection for NP Category-1 insured persons (See Figure 14 and Figure 3-2-19 in the text of annual report).

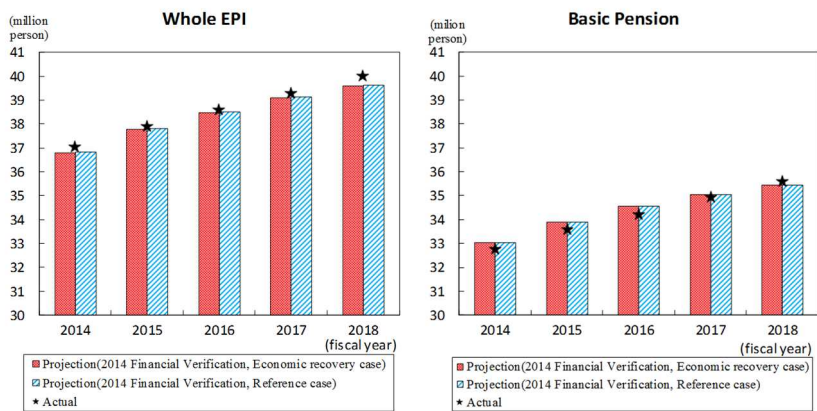
Figure 14 Comparison of actual number of insured persons and future projections in the 2014 Financial Verification



❑ **Number of recipients**

Comparison the actual number of recipients in FY2018 with the projected one in the 2014 Financial Verification, the actual performance slightly exceeds the projected one for both Whole EPI and Basic Pension (See Figure 15 and Figure 3-2-22 in the text of annual report).

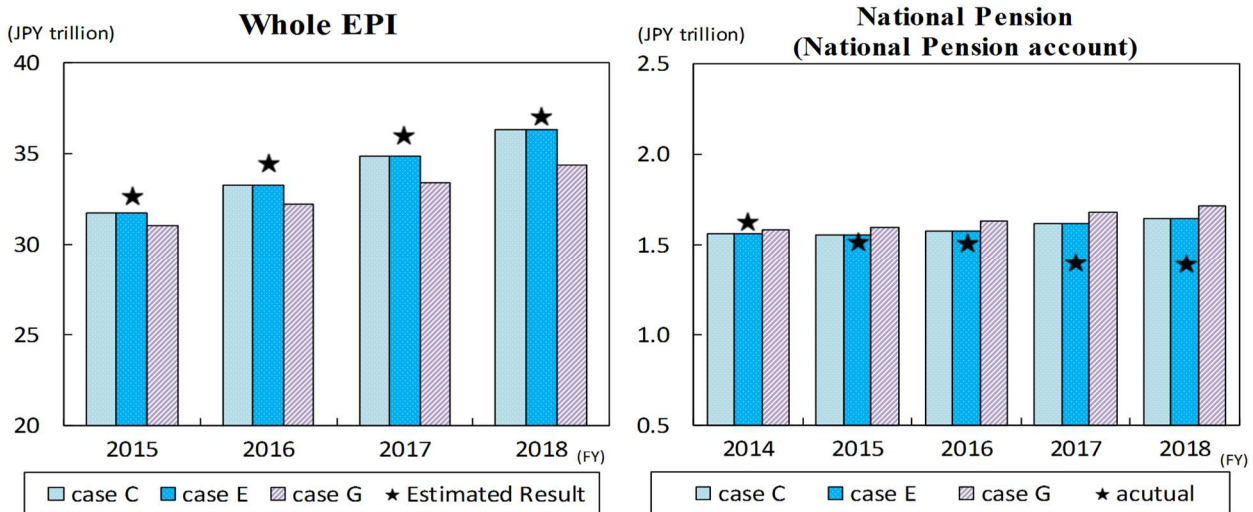
Figure 15 Comparison of actual number of recipients and future projections in the 2014 Financial Verification



❑ **Contribution income**

Comparison the actual contribution income in FY2018 with the projected one in the 2014 Financial Verification¹⁷, the actual performance exceeds the projected one for Whole EPI, while the actual falls below the projected one for National Pension Account of NP. This is because the actual number of insured persons for EPI greatly exceeds the projected one and that of the National Pension Account of NP is by far less than the projected one (See Figure 16 below and Figure 3-2-24 in the text of annual report).

Figure 16 Comparison of actual contribution income and future projections in the 2014 Financial Verification

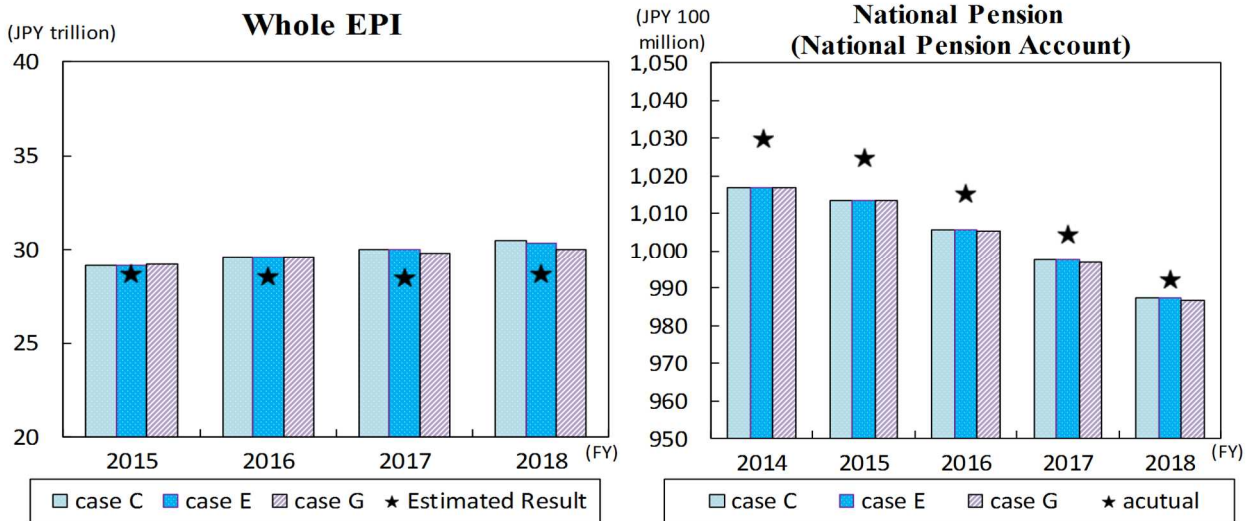


¹⁷ Although only cases C, E and G are shown as examples of case A to H here, this is not intended to indicate that the Actuarial Subcommittee positions these cases as basic or standard cases of the 2014 Financial Verification.

❑ **Benefit cost**

Comparison the actual benefit cost in FY2018 with the projected one in the 2014 Financial Verification, the actual cost for the Whole EPI is still below the projected one as it was in the previous fiscal year, which is attributed to the actual pension revision rate lower than projected, and this difference between actual and projected in case C and case E is expanding. For National Pension (National Pension Account), the actual cost in FY2018 exceeds the projected one to the same extent as the previous fiscal year (See Figure 17 below and Figure 3-2-29 in the text of annual report).

Figure 17 Comparison of actual benefit cost and future projections in the 2014 Financial Verification

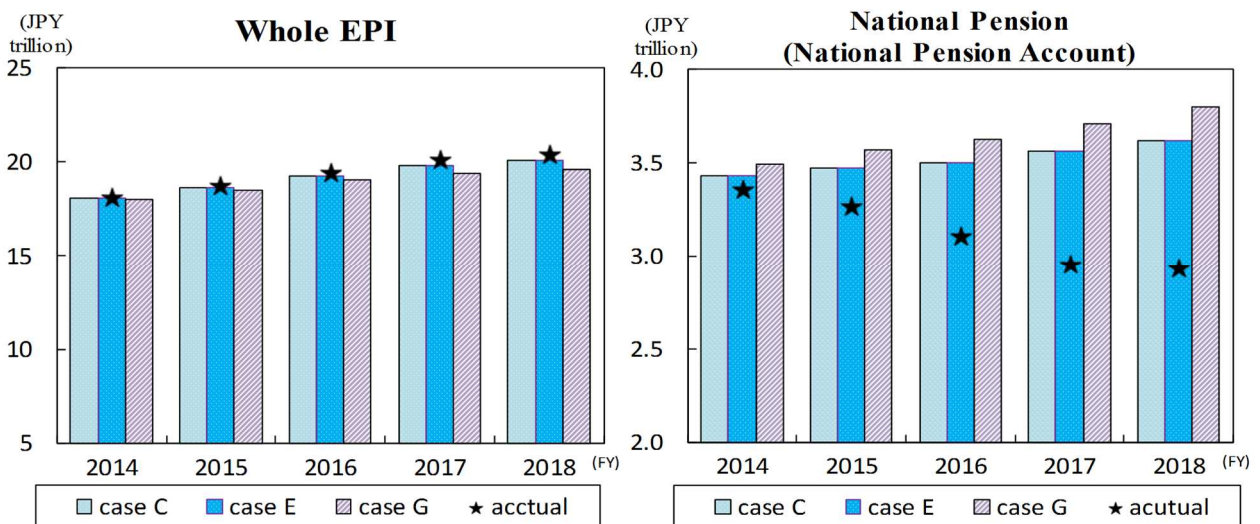


Note: This figure shows benefit cost of additional pension for NP category-1 insured persons and voluntary insured persons, etc, which does not include benefit cost of Basic Pensions provided by the New Law and National Pensions equivalent to BP provided by the Old Law.

❑ **Contributions to Basic Pension**

Comparison the actual contributions to Basic Pension in FY2018 with the projected one in the 2014 Financial Verification, the actual performance exceeds the projected one for Whole EPI and falling far below the projected one for the National Pension Account of NP. This is because the unit contribution to the Basic Pension common with every scheme actually fall below the projected one, while the actual number of persons for calculating contributions to Basic Pension exceeds the projected one for Whole EPI and it is lower than the projected one for the National Pension Account of NP (See Figure 18 below and Figure 3-2-33 in the text of annual report).

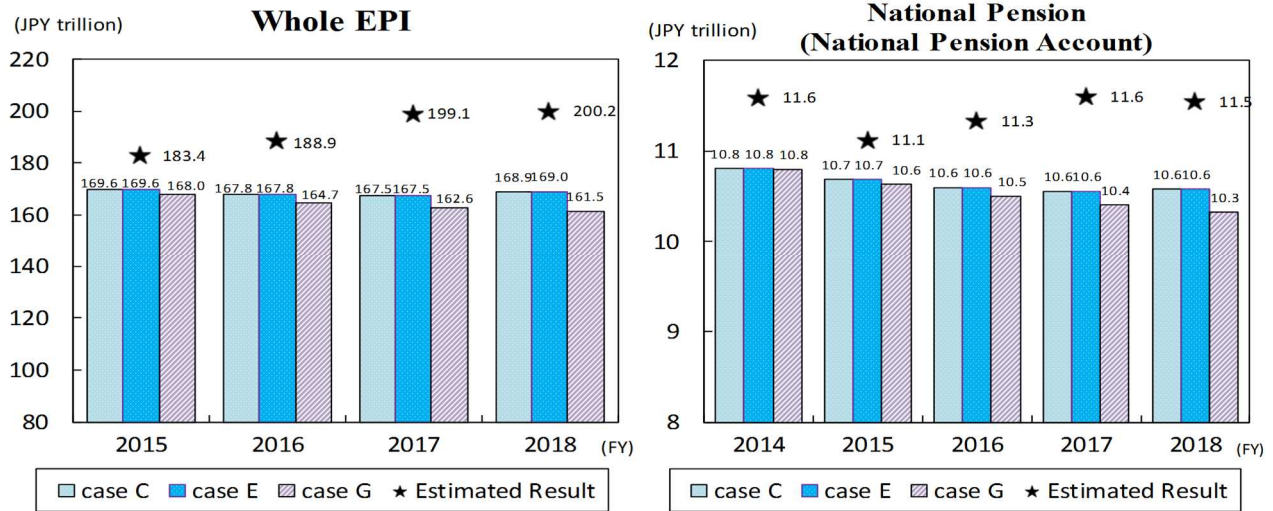
Figure 18 Comparison of actual contributions to Basic Pension and the future projections in the 2014 Financial Verification



❑ Reserves

Comparison the actual reserve on a market value basis at the end of FY2018 with the projected one in the 2014 Financial Verification, the actual performance exceeds the projected one for both Whole EPI and the National Pension Account of NP (See Figure 19 below and Figure 3-2-38 in the text of annual report).

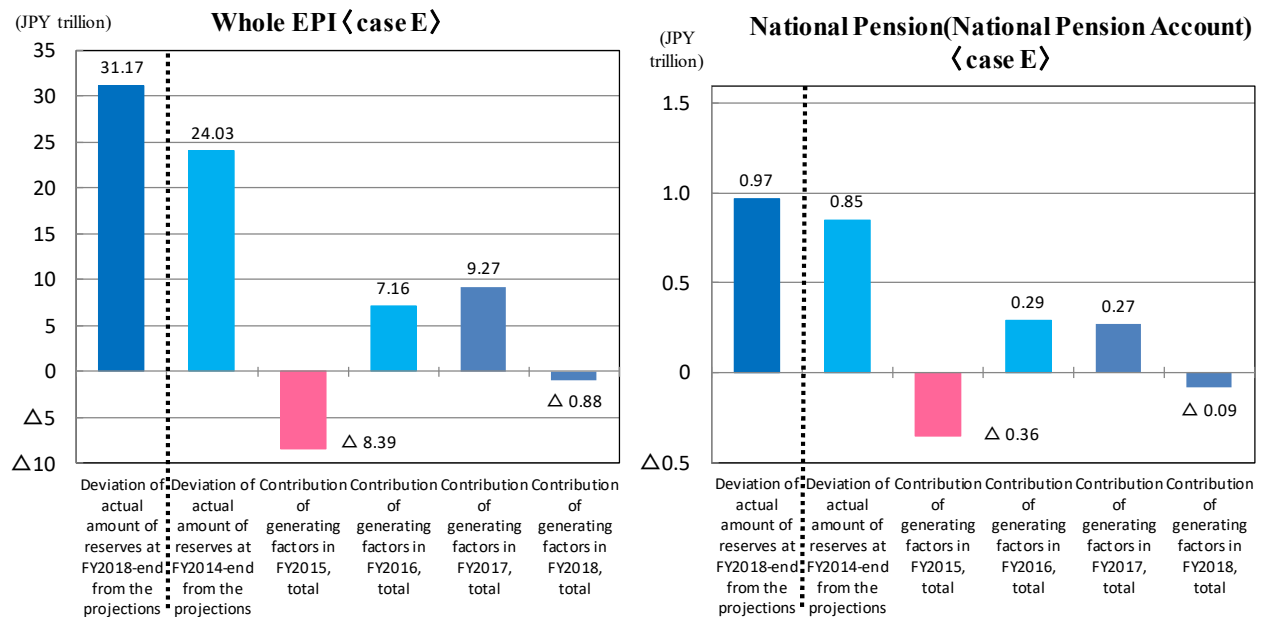
Figure 19 Comparison of actual reserves and future projections in the 2014 Financial Verification



❑ 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 FY2018 surpassed the projected amount in the 2014 Financial Verification. This is because, in addition to a large contribution arising from the substantially greater deviation of actual reserves at the end of FY2014¹⁸ than projected, the sum of contributions caused by generating factors pertaining to FY2016 and FY2017 turned out to be positive (See Figure 20 below and Figure 3-4-2 in the text of annual report).

Figure 20 Deviation of actual reserves and future projections in the 2014 Financial Verification by generated year



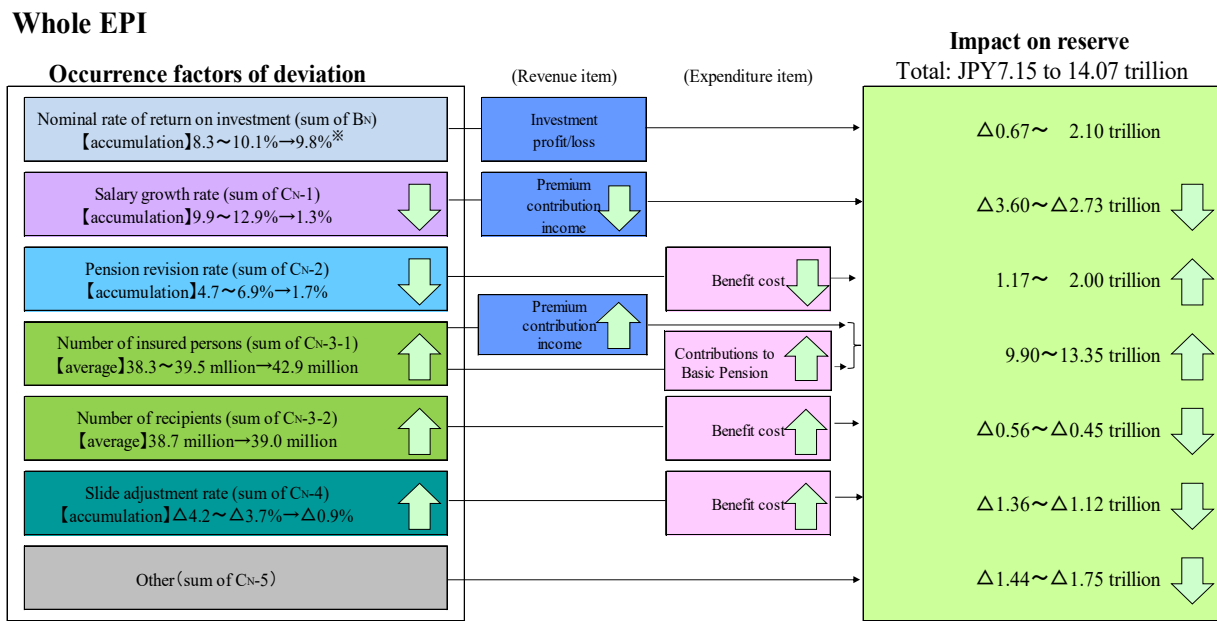
¹⁸ The reserves at the end of FY2014 were calculated by using estimates of EPI equivalent portion for the reserves for Mutual Aid Associations.

Looking at deviation generated during FY2015 and FY2018 by occurrence factor, the deviation of reserves for Whole EPI (JPY7.15 to 14.07 trillion) comes mainly from the deviations of contribution income which is generated by deviation of salary growth rate(negative JPY3.60 to 2.73 trillion) and the deviations of number of insured persons(JPY9.90 to 13.35 trillion), and that of National Pension Account of NP (JPY0.12 to 0.36 trillion) comes mainly from the deviations of nominal rate of return on investment (negative JPY0.24 to 0.06 trillion) and number of insured persons (JPY0.17 to 0.18 trillion) (See Figure 21 below and Figure 3-4-5 in the text of annual report.).

Then, it is considered that deviation of actual reserves at the end of FY2014 (Whole EPI: JPY24.03 to 24.57 trillion, National Pension Account of NP: JPY0.85 to 0.87 trillion) comes mainly from the deviations of nominal rate of return on investment (former EPI: JPY16.26 to 16.28 trillion, National Pension Account of NP: JPY0.93 trillion).

Thus the conclusion is that deviation during FY2014 and FY2018 of actual and the projected one in the 2014 Financial Verification comes mainly from the deviations of nominal rate of return on investment and the deviations of number of insured persons.

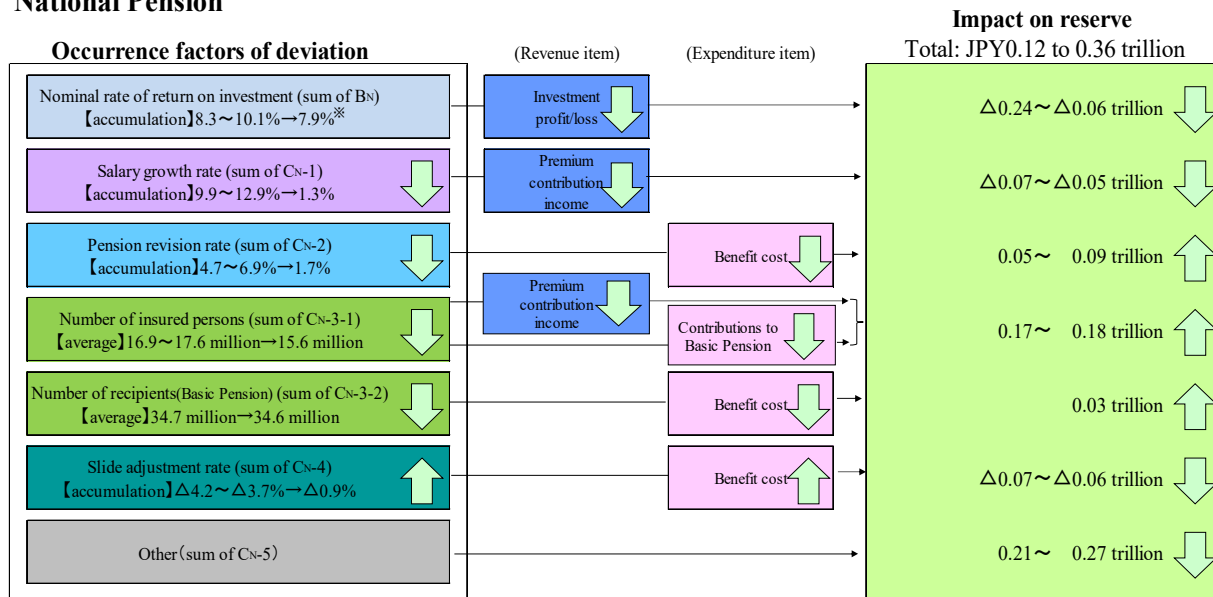
Figure 21 Results of deviation analysis in reserve (deviation that occurred during FY2015 and FY2018)¹⁹



¹⁹ Deviation occurred during FY2015 and FY2018 is extracted by factors to summarize, and the maximum and minimum values are indicated with regard to Case C, Case E and Case G combined.

Figure 21 Results of deviation analysis in reserve (deviation that occurred during FY2015 and FY2018) (continued)

National Pension



□ Evaluation of the actuarial status for EPI

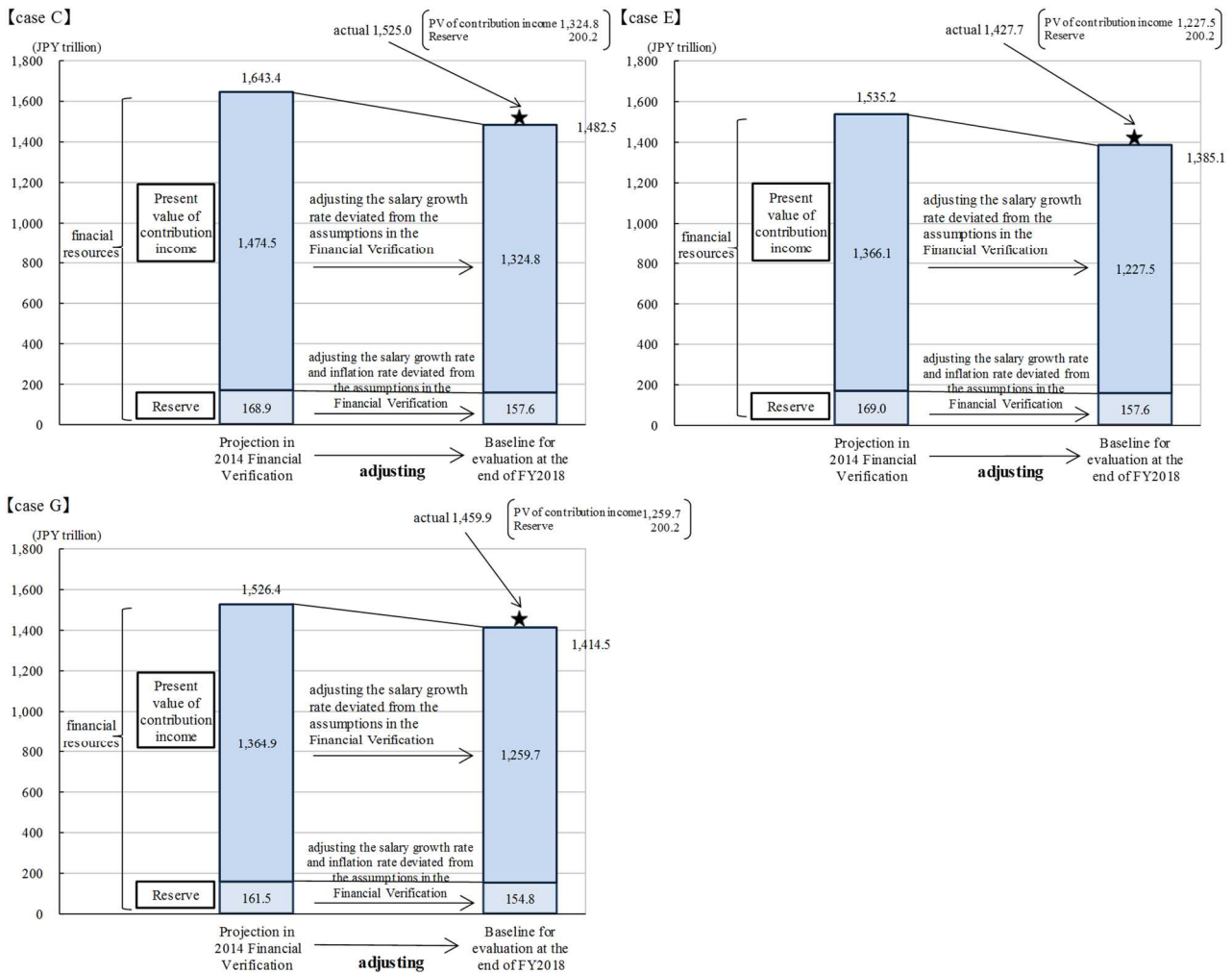
In addition to the attribution analysis of the deviation in reserves as above, the Actuarial Subcommittee also calculated the “baseline reserves for evaluation (estimate) that would serve as a baseline of evaluating the actual status of reserves” for EPI by adjusting²⁰ the salary growth rate and inflation rate deviated from the assumptions in the Financial Verification, and then compared the actual amount of reserves with the adjusted amount thus obtained. When comparing the actual amount to the adjusted amount, the difference of these was also compared with whole financial resources (premium contribution income and reserve) (See Figure 22 and Figure 23 below, and Figure 3-5-1 in the full text of annual report.).

Figure 22 Evaluation of the actuarial status for EPI at the end of FY2018

		Case C	Case E	Case G
		Trillion yen	Trillion yen	Trillion yen
Actual amount of reserves	①	200.2	200.2	200.2
Baseline reserves for evaluation (estimate)	②	157.6	157.6	154.8
Difference between actual amount of reserves and baseline reserves for evaluation (estimate)	③ = ① - ②	42.5	42.5	45.4
Financial resources (excluding national and local government subsidies, etc.)	④	1,482.5	1,385.1	1,414.5
“Ratio of the difference between actual amount of reserves and baseline reserves for evaluation (estimate) of to financial resources (excluding national and local government subsidies, etc.)”	③ / ④	2.9	3.1	3.2

²⁰ For details of the technical aspects of the adjustment, see Chapter 3, Section 5 of the full text of annual report.

Figure 23 Evaluation of the actuarial status for EPI at the end of FY2018



An analysis of the financial situation of EPI at the end of FY2018 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 2.9% to 3.2% against the financial resources (contribution income and reserves).

The financial resources at the end of FY2018 were found out to be affluent by the comparison with the projection in Financial Verification in 2014. This situation was reflected when the projection was made in 2019 Financial Verification.

Although the result of Financial Verification in 2019 is in public now, it is still necessary to compare the actual with the result of Financial Verification in 2014. Because public pension is long-term system, it is required that we implement the comparison, the analysis and the assessment between the actual and the projection every year until next Financial Verification which basically takes place every five years.

Next step, we will implement a detailed analysis accommodating fully the facts which were confirmed in this report.

By the way, when comparison between the projection in 2019 Financial Verification and the actual in each year is implemented, it is expected to keep an eye on the situation of the pension system every year considering that NP category-1 insured persons may become EPI insured persons, which improve the sustainability of NP and it may lead to prevent declining of future benefit level of Basic Pension.

Anyway, from the perspective of finance of public pensions, we should pay attention to the long-term trend of actuarial status, regardless of the short-term change, including those of demographic and economic factors.