

**Overview of the Annual Actuarial Report on
the Public Pension Plans in Japan
Fiscal Year 2021**

March 30, 2023

Pension Actuarial Subcommittee of the Social Security Council

0. On the annual actuarial report on the public pension plans in Japan Fiscal Year 2021

- The “Annual Actuarial Report on the Public Pension Plans in Japan” is a compilation of the results of cross-plan analysis and assessment of the financial status of Japan’s public pension plans each fiscal year. This report is submitted from a professional perspective, based on the reports from each pension plan and implementing organization.
- This report clarifies trends in actual performance and compares it with actuarial valuation, and also summarizes the financial status of entire Employees' Pension Insurance (EPI) including Mutual Aid Association, etc.

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Reports and hearings for FY2021 report

- 94th Pension Actuarial Subcommittee**
(Held on December 26, 2022)
 - Employees’ Pension Insurance (Category-1)
 - National Pension/Basic Pension Plan
- 95th Pension Actuarial Subcommittee**
(Held on January 11, 2023)
 - National Public Officers Mutual Aid Associations
 - Local Public Officers Mutual Aid Associations
 - Private School Teachers/Employees Mutual Aid Association

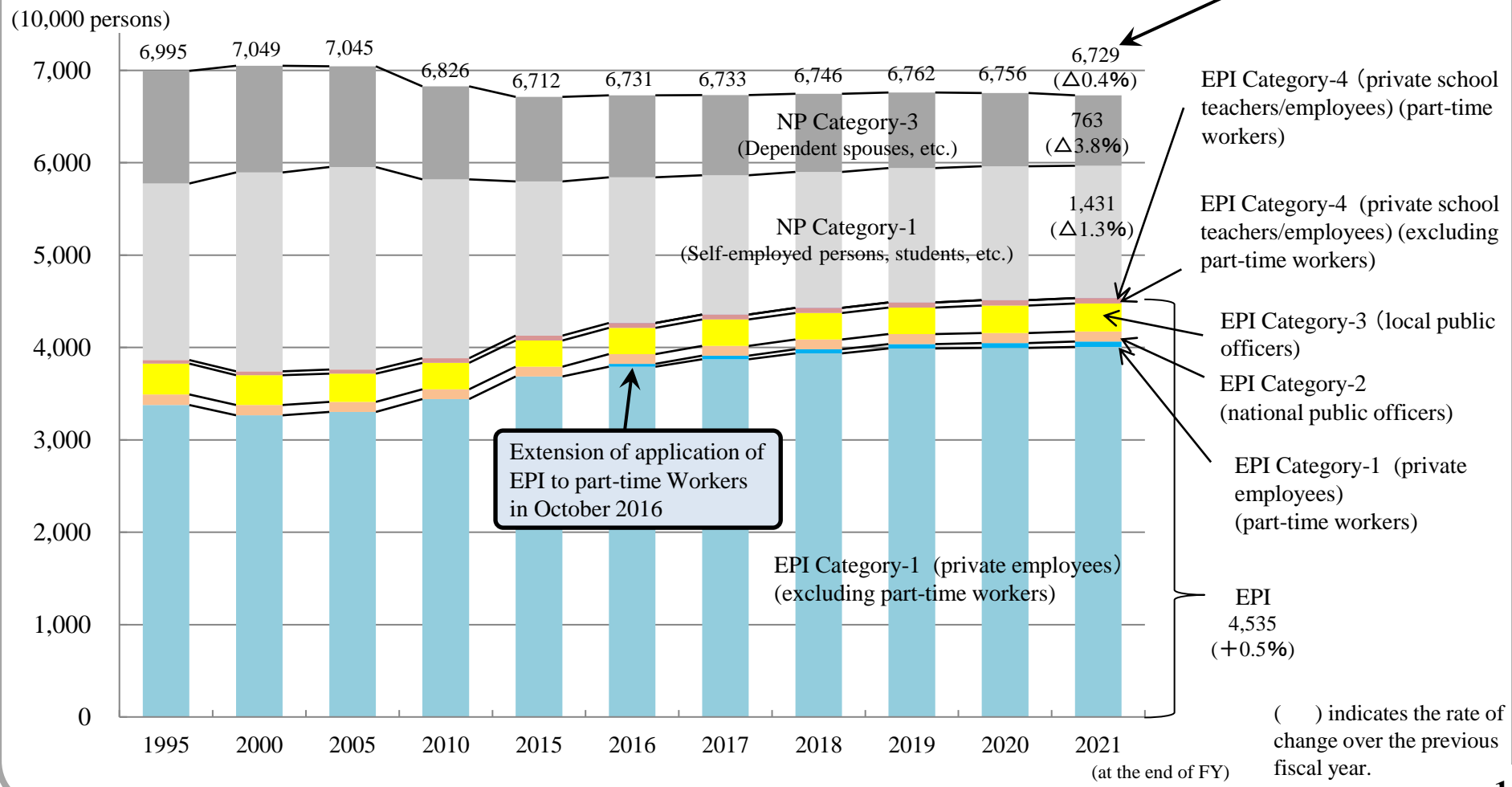
※ This overview contains excerpts from Chapters 2 and 3 of the annual report, as well as reference material, including an overview of the Pension Actuarial Subcommittee of the Social Security Council, Scheme of Pension Plans and the financial structure of public pensions.

Current situation and trends of insured persons (Excerpt from Chapter 2, Section 1)

1. Trends in the number of insured persons with public pensions
2. Age distribution of insured persons
3. Change in age distribution of insured persons (whole EPI)
4. Change in age distribution of insured persons (part-time workers)
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6. Change in age distribution of insured persons (NP Category-3)
7. Distribution of EPI insured persons by standard monthly remuneration

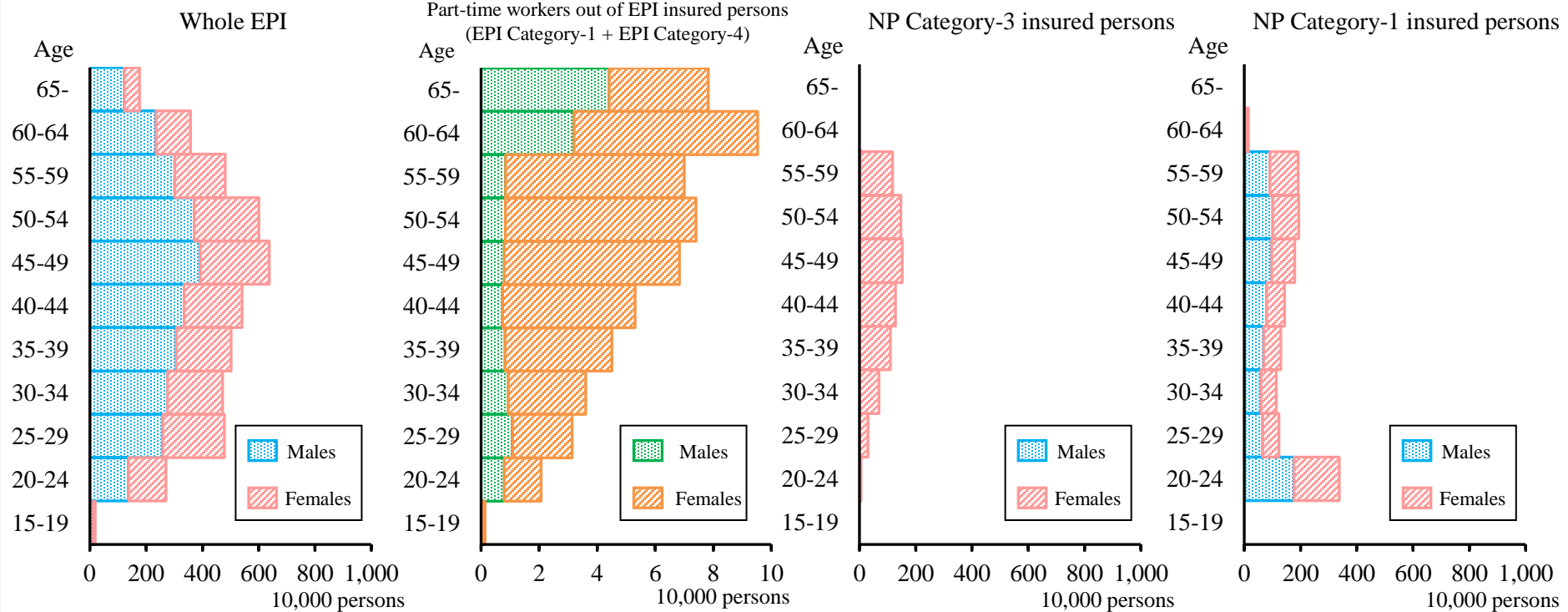
1. Trends in the number of insured persons with public pensions

- In FY2021, while the number of EPI insured persons increased, that of the national pension (NP) Category-1 and Category-3 insured persons decreased and therefore the total number of persons insured under the public pension plans decreased by 0.4%.
- The rate of increase in the number of insured persons for EPI is 0.5%, the rate of increase is 0.4% after part-time workers are excluded. For part-time workers alone, the rate of increase is 7.4% (Males:5.1%, Females:8.2%).



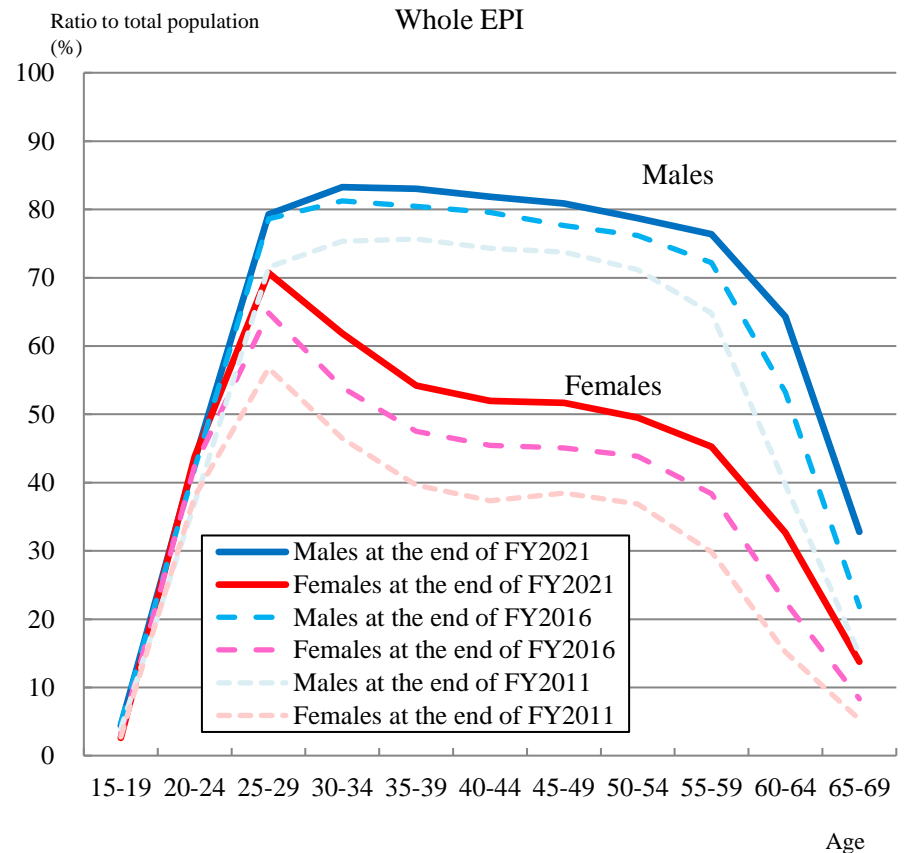
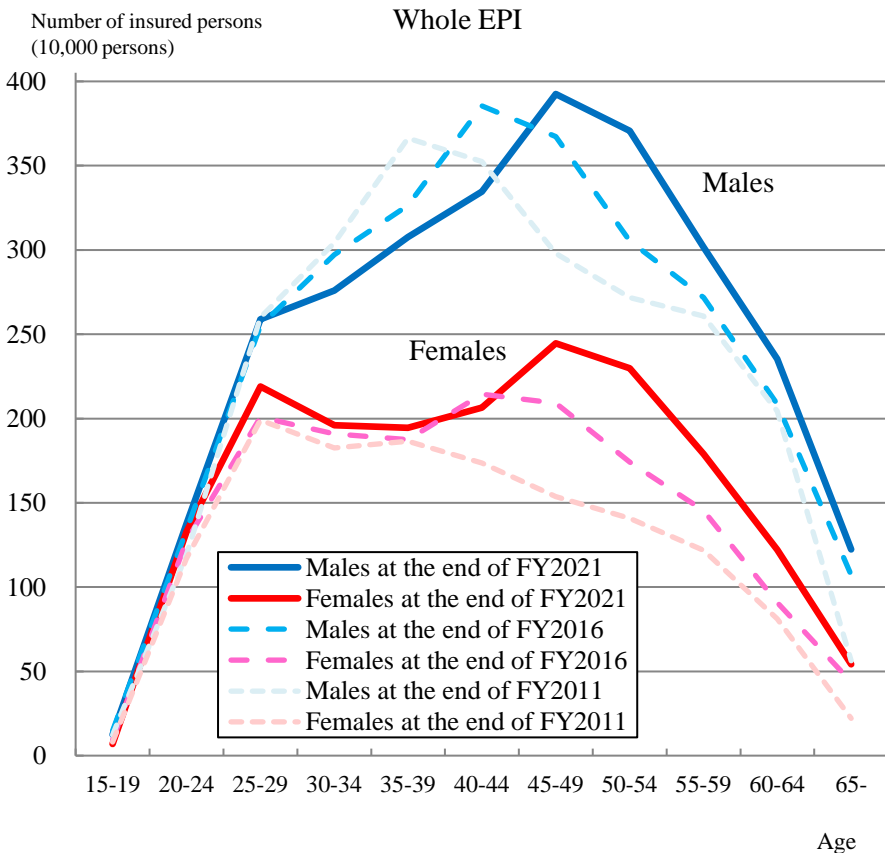
2. Age distribution of insured persons

- The age distribution of the insured persons as of the end of FY2021 shows that the largest proportion of insured persons is in the 45-49 age group for the whole EPI and NP Category-3 insured persons.
- Among part-time workers EPI insured persons (comprising 1.3% of all EPI insured persons), most males are over 60, while most females are between 45 and 64.
- For NP Category-1 insured persons, the 20-24 age group comprises the largest proportion, exceeding 20%.



3. Change in age distribution of insured persons (whole EPI)

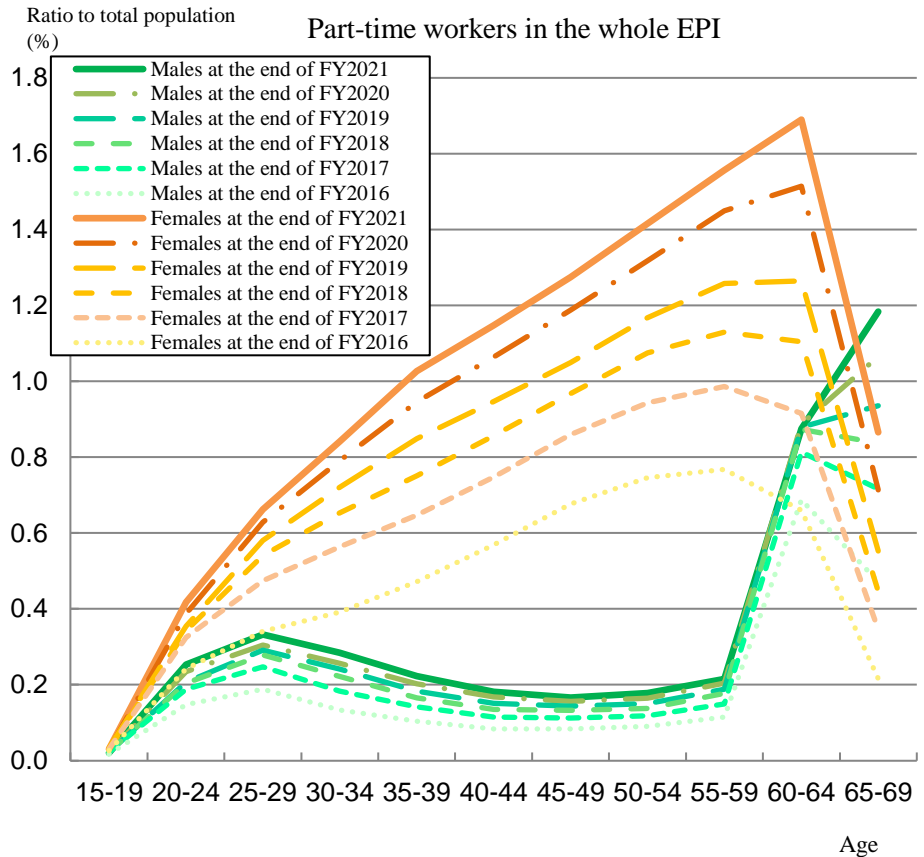
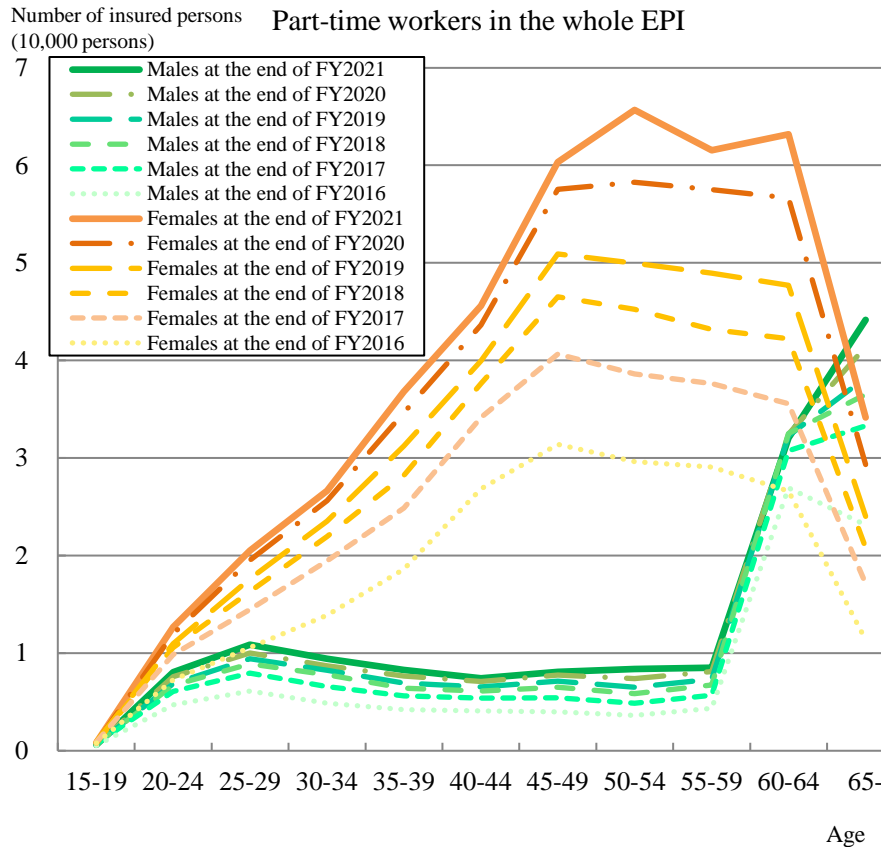
- For the entire group of whole EPI male insured persons, the age group accounting for the largest proportion shifted from 35-39 a decade ago to 40-44 five years ago, followed by 45-49 at the end of FY2021 (as the junior baby-boomer generation aged). For the entire population of whole EPI female insured persons, the number increased except the 15-19 age group and the 40-44 age group. The number of insured persons aged 65-69, both male and female, has also increased in the past five years.
- Viewing insured persons as a percentage of the population, the ratio increased except the 15-19 age group for both males and females, compared with five years before. In particular, as evidenced by the increased percentage of insured aged 65-69 from 21.8 to 32.8% for males and 8.3 to 13.8% for females, positive progress is being made with regard to employment of those 65 years of age or older.



4. Change in age distribution of insured persons (part-time workers)

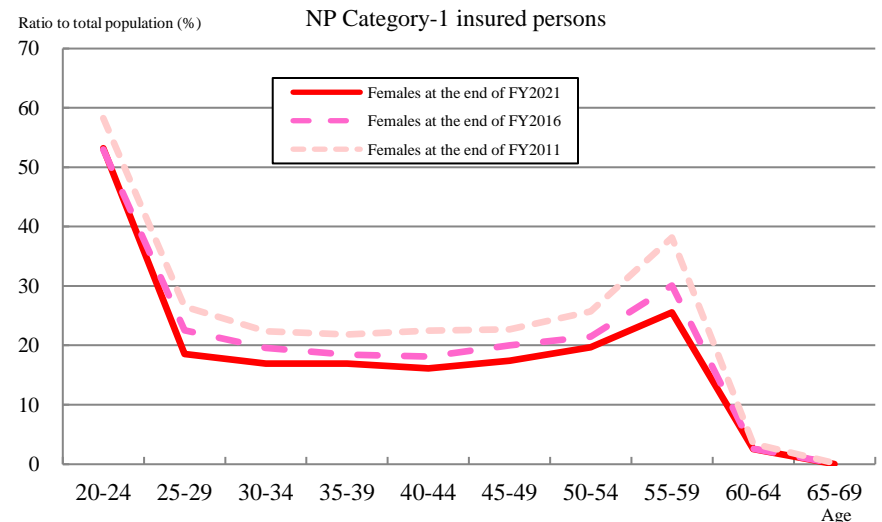
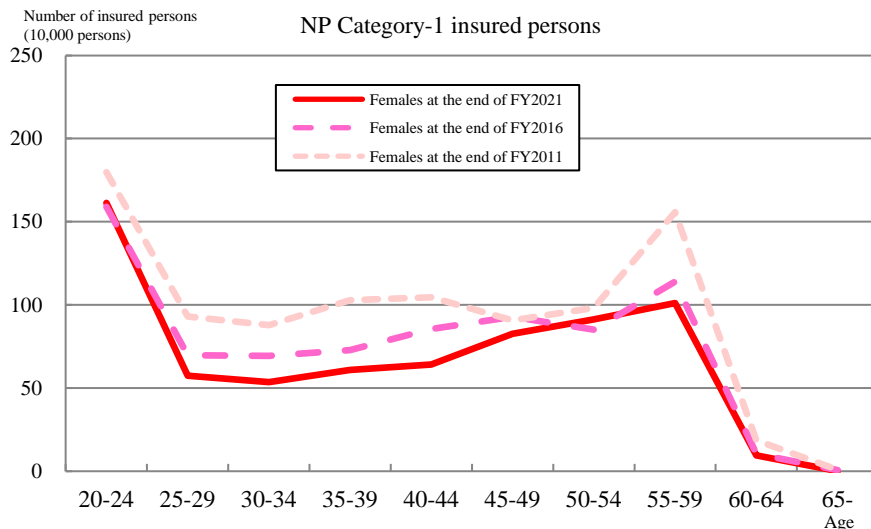
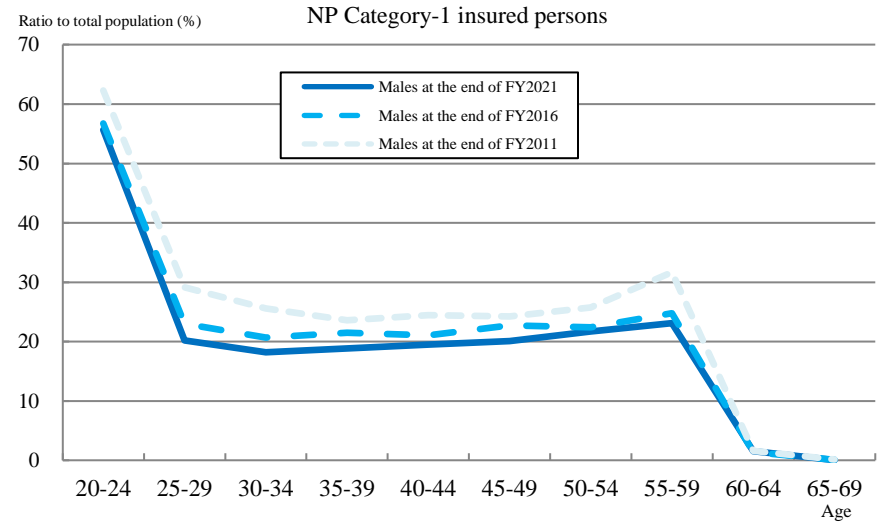
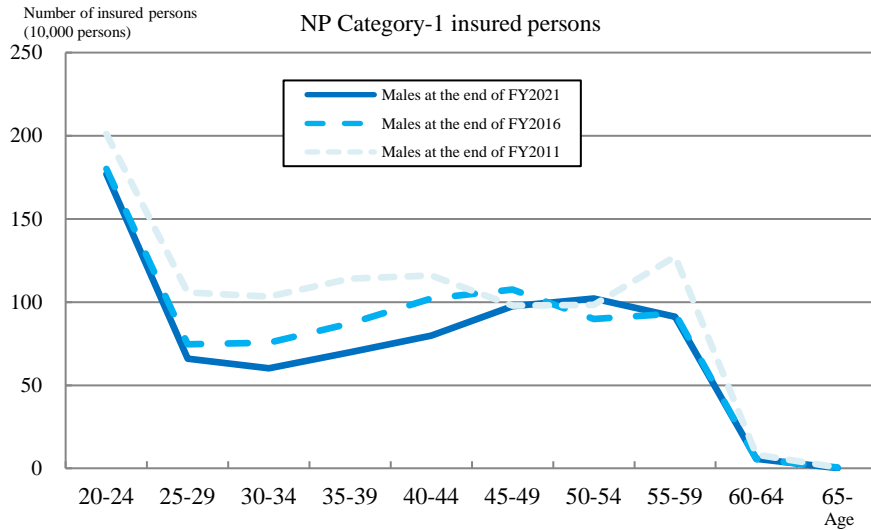
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- For part-time workers (1.3% of the whole EPI), the number of insured persons increased from the end of the previous fiscal year, except for males aged 15-19 and 60-64.
- The number of insured persons as a percentage of the population rose compared to the end of the previous fiscal year, except for males aged 15-19 and 60-64.



5. Change in age distribution of insured persons (NP Category-1)

- For NP Category-1 insured persons, the total number of insured persons declined for both genders, except for the shift in the junior baby-boomer generation.
- The number of insured persons as a percentage of the population fell compared to the end of the fiscal year five years ago, except for males aged 60-64 and females aged 20-24.



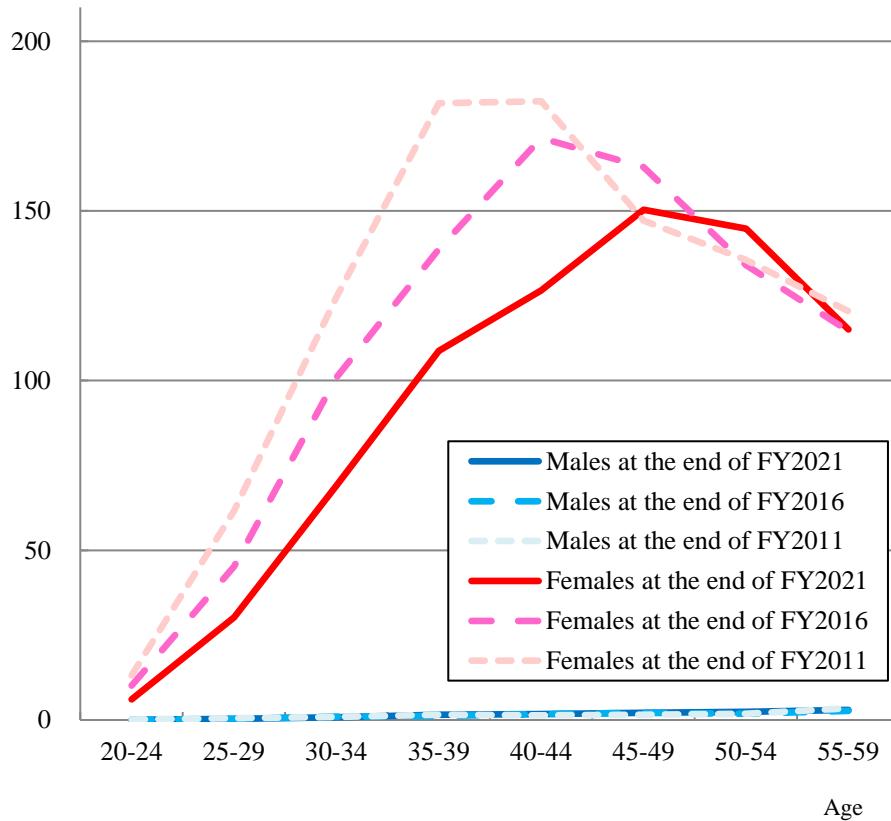
6. Change in age distribution of insured persons (NP Category-3)

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- For female NP Category-3 insured persons, the group under 44 years old has declined significantly.
- Looking at the number of insured persons as a percentage of the population, there was no significant change in the number of males from five years ago, while the number of females declined in all age groups.

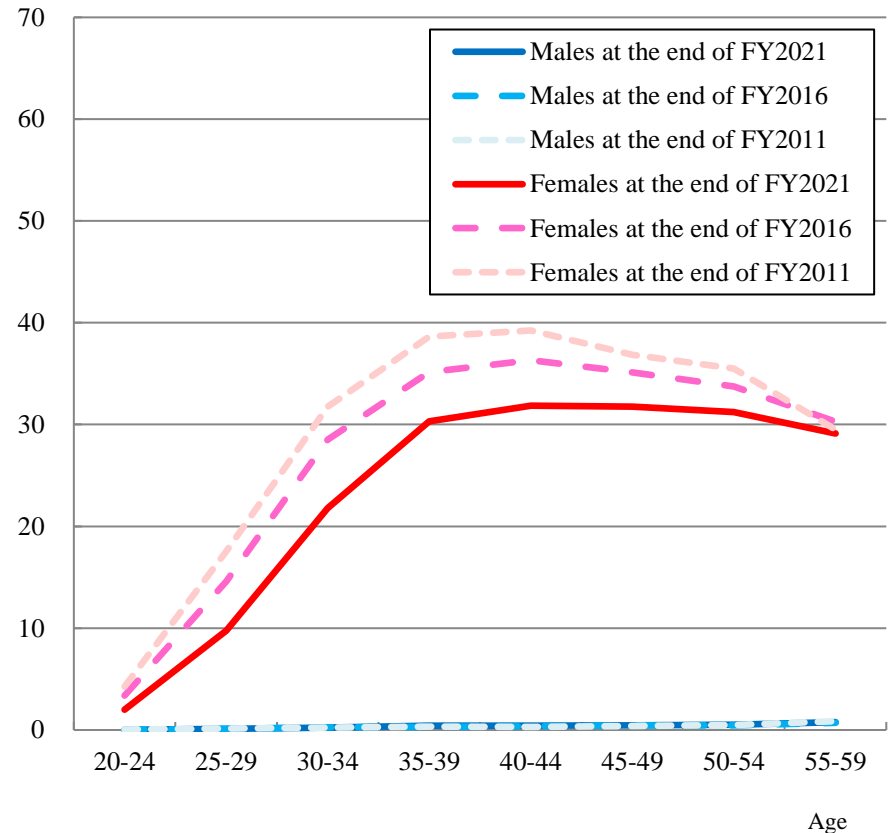
Number of insured
persons (10,000 persons)

NP Category-3 insured persons



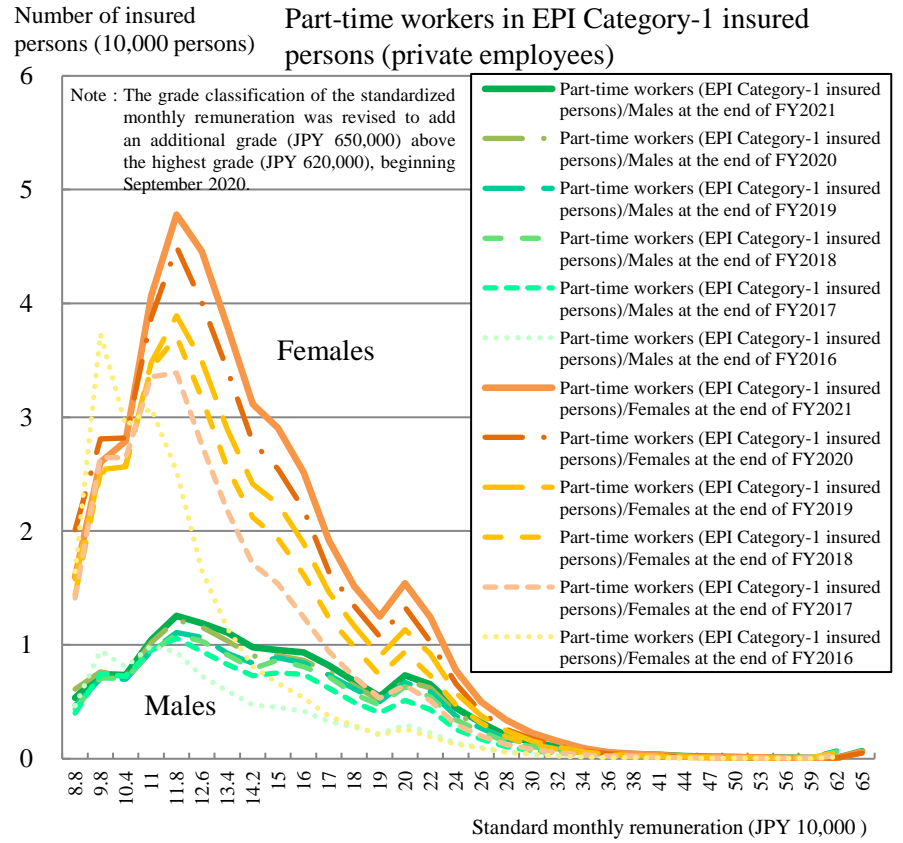
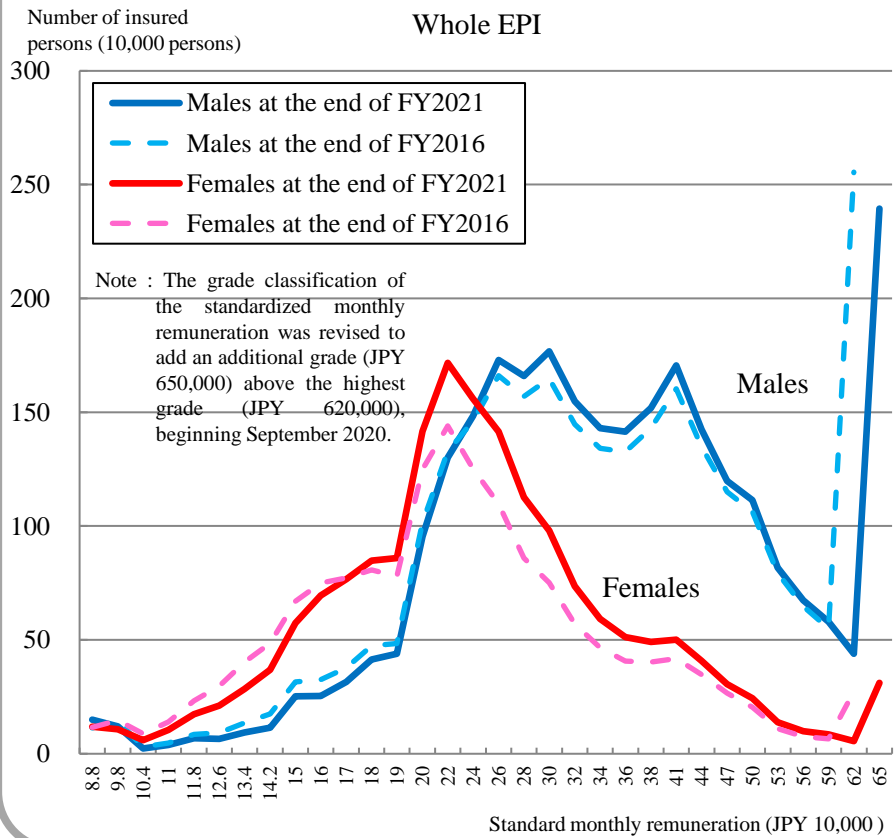
Ratio to total
population (%)

NP Category-3 insured persons



7. Distribution of EPI insured persons by standard monthly remuneration

- The largest standard monthly remuneration of whole EPI received by male insured persons is JPY 650 thousand and the distribution of insured persons peaks at JPY 260-300 thousand and JPY 410 thousand, respectively. The distribution peaks at JPY 220 thousand for whole EPI female insureds.
- Compared to the distribution five years ago, the number of insured persons increased for male insured persons, except in the JPY 98-220 thousand categories. The number of insured persons increased for female insured persons, except in the JPY 98 to 170 thousand categories.
- The distribution of part-time workers in EPI Category-1 insured persons (private employees) peaks at JPY 118 thousand for both genders. Compared to the distribution five years ago, the number of insured persons increased for male insured persons, except in the JPY 98 and 104 thousand categories. The number of insured persons increased for female insured persons, except in the JPY 88 to 104 thousand categories.



Current situation and trends of beneficiaries

(Excerpt from Chapter 2, Section 2)

8. Trends in the total amount of pensions for beneficiaries
9. Age distribution of beneficiaries of old-age pension for long-term contributors
10. Average monthly old-age pension for long-term contributors excluding occupational additions of MAAs, etc. (estimates)
11. Average monthly pension for beneficiaries of old-age pension by age group
12. Number of beneficiaries of old-age pension by class of monthly pension amount

8. Trends in the total amount of pensions for beneficiaries

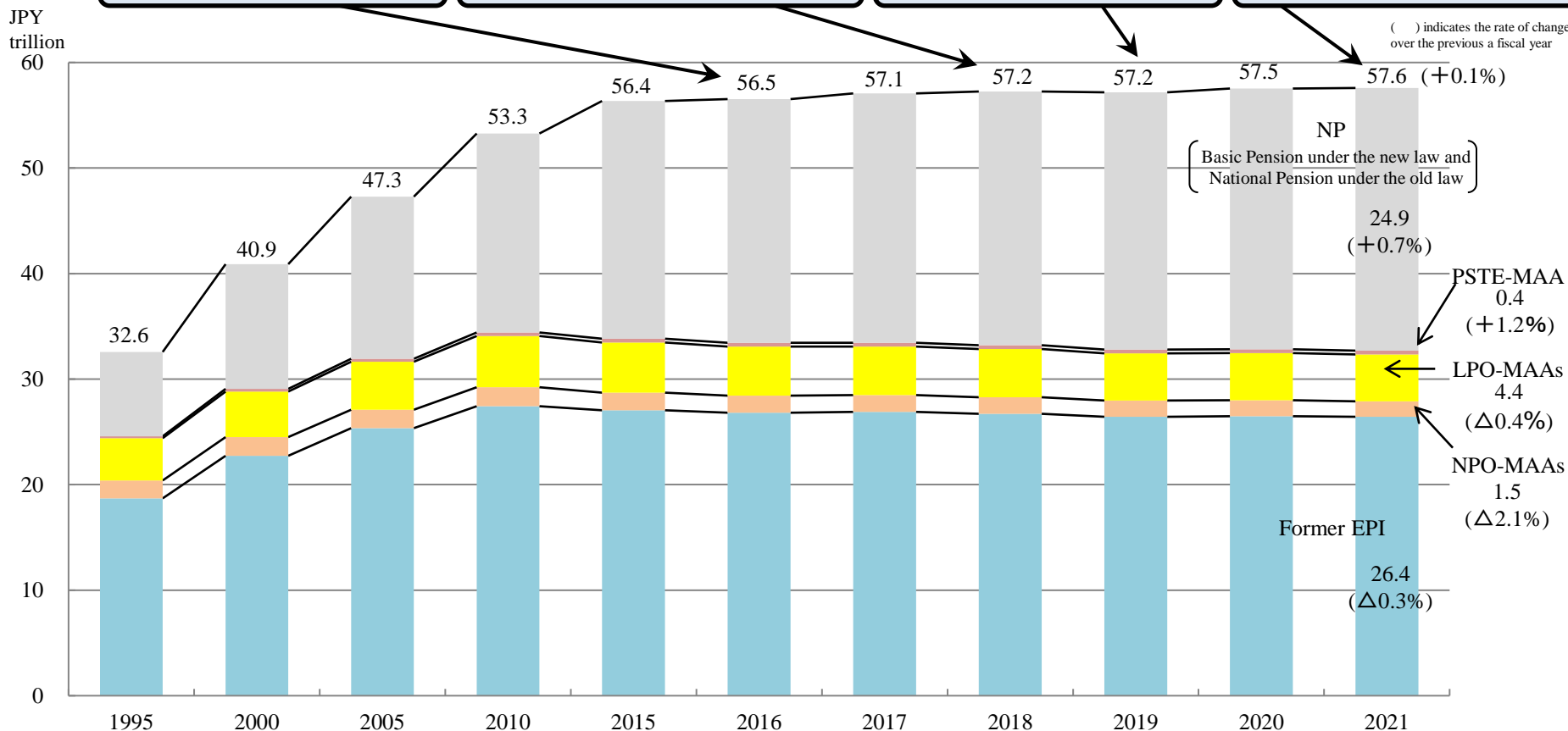
The total pension amounts at the end of FY2021 were JPY 57.6 trillion for all public pension plans. Compared to the end of FY2020, the total pension amount of the former EPI, the National Public Officers' Mutual Aid Associations (NPO-MAAs), and the Local Public Officers Mutual Aid Associations (LPO-MAAs) declined, while that for the Private School Teachers/Employees Mutual Aid Association (PSTE-MAA) and the NP increased.

Pensionable age for the earnings-related portion was raised to 62 years old for male insured persons and MAAs (and other) female insured persons.

Pensionable age for the earnings-related portion was raised to 61 years old for female insured persons of the former EPI and the fixed amount portion of special payment ended.

Pensionable age for the earnings-related portion was raised to 63 years old for male insured persons and MAAs (and other) female insured persons.

Pensionable age for the earnings-related portion was raised to 62 years old for female insured persons of the former EPI.

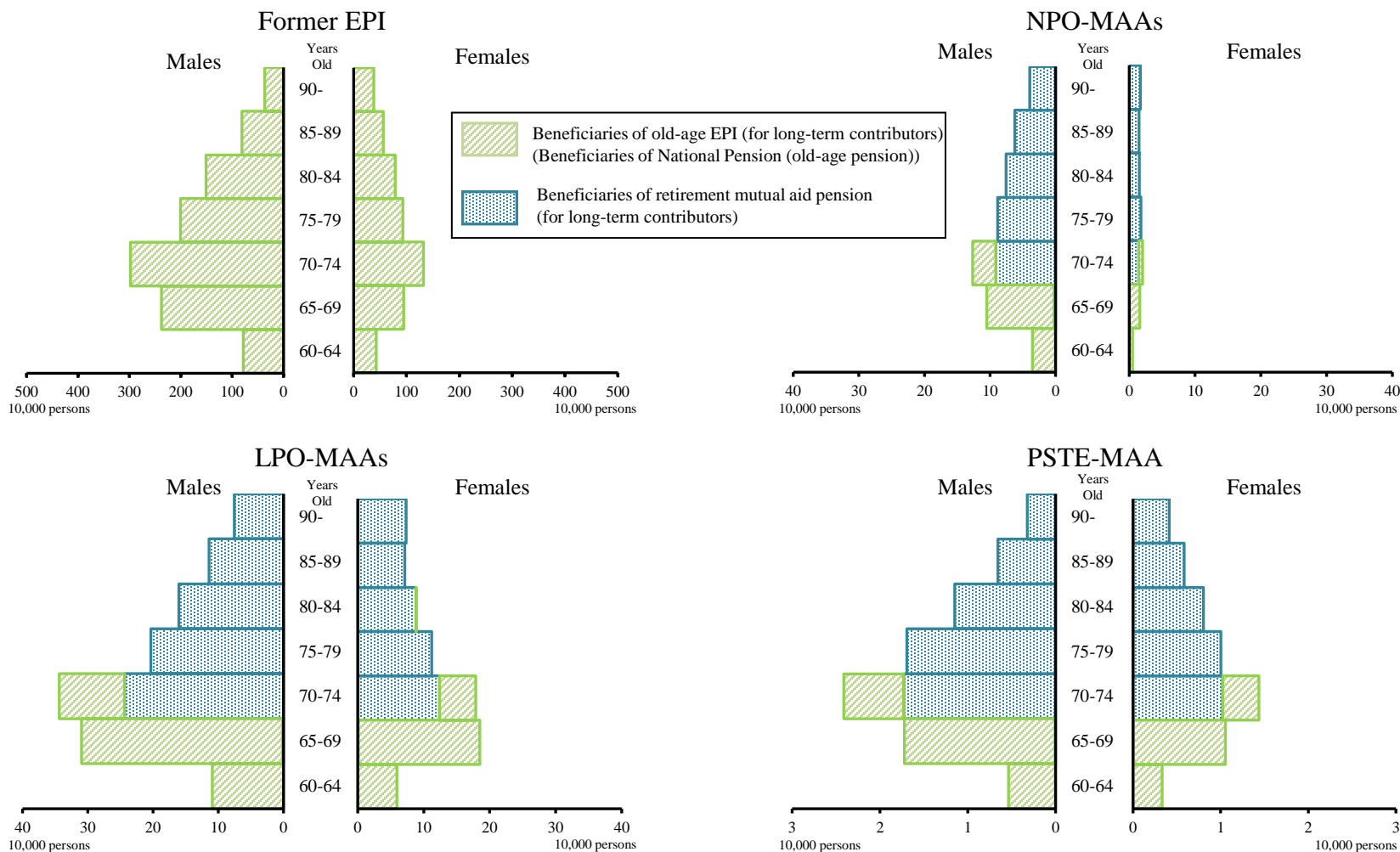


Note: NPO-MAAs, LPO-MAAs, and PSTE-MAA of FY2015 and subsequent years are the total amounts of the total pensions provided to the beneficiaries of MAA pensions and the total pensions provided to the beneficiaries of EPI before the integration of the employee's pension schemes. (at the end of FY)

9. Age distribution of beneficiaries of old-age pension for long-term contributors

- The number of beneficiaries in the age group of 70-74 is the largest excluding the LPO-MAAs females. In the LPO-MAAs females that of 65-69 is the largest.
- The NPO-MAAs are characterized by the paucity of female beneficiaries and the number of female beneficiaries in each over-65 age group remains relatively unchanged.

*“Beneficiaries of old age pension for long-term contributors” mean, as a general rule, those having met the eligibility criteria of 25 years among the beneficiaries of old age (retirement) pensions.



10. Average monthly old-age pension for long-term contributors excluding occupational additions of MAAs, etc. (estimates)

Since mutual aid pensions, such as the pensions provided by MAAs, include occupational additions, the pension actuarial subcommittee estimated the pension amount of the portion equivalent to EPI pension excluding these additions. The average monthly whole EPI was JPY 149 thousand; JPY 166 thousand and 113 thousand for male and female beneficiaries, respectively.

The reason for the difference in the monthly pension amounts among the implementing organizations is that, regarding males, despite the fact the average contribution period in the former EPI exceeds that of NPO-MAAs and PSTE-MAA, the standard remuneration amount (the benchmark for calculating the pension), is deemed to be higher in MAAs, etc. and the age of beneficiaries in MAAs, etc., is higher than that of the former EPI.

Classification	Former EPI	NPO-MAAs	LPO-MAAs	PSTE-MAA	Whole EPI
Average monthly amount of pension (including the amount of the Old-Age Basic Pension)	JPY	JPY	JPY	JPY	JPY
Total	143,965	172,596	176,092	176,053	148,680
Males	163,380	175,911	182,719	191,681	166,087
Females	104,686	155,830	164,735	152,416	113,317
Female-to-male ratio ("males"=100)	64.1	88.6	90.2	79.5	68.2

Note 1: The amounts of retirement mutual aid pension for long-term contributors for NPO-MAAs, LPO-MAAs and PSTE-MAA excluding the occupational addition are estimates.
 Note 2: For NPO-MAAs, LPO-MAAs and PSTE-MAA, the average for beneficiaries of retirement mutual aid pension for long-term contributors and beneficiaries of old-age EPI for long-term contributors.

Regarding females, the difference in the standard remuneration amount (the basis for calculating the pension), the average contribution period in MAAs etc., which is considerably longer than that of the former EPI and the age of beneficiaries in NPO-MAAs and PSTE-MAA, which exceeds that of the former EPI, seem to be having an impact.

11. Average monthly pension for beneficiaries of old-age pension by age group

The average monthly pension amount for the former EPI has been declining, as the average length of contribution has been prolonged for all beneficiaries. The main reasons are considered to be the following:

- (1) Decline in benefit multiplying factors of the earnings-related portion, (2) decline in unit price of fixed amount portion, (3) increase in the pensionable age for the fixed amount portion, (4) decline in number of persons eligible for dependency addition, (5) pension revision rate*, and (6) elimination of “special level” overpayment (negative revision of pension amounts).

* Since FY2012, the revision rates were negative in FY 2012, FY 2017, and FY 2021, in addition to (6).

Average monthly amount of pension (JPY 10,000)

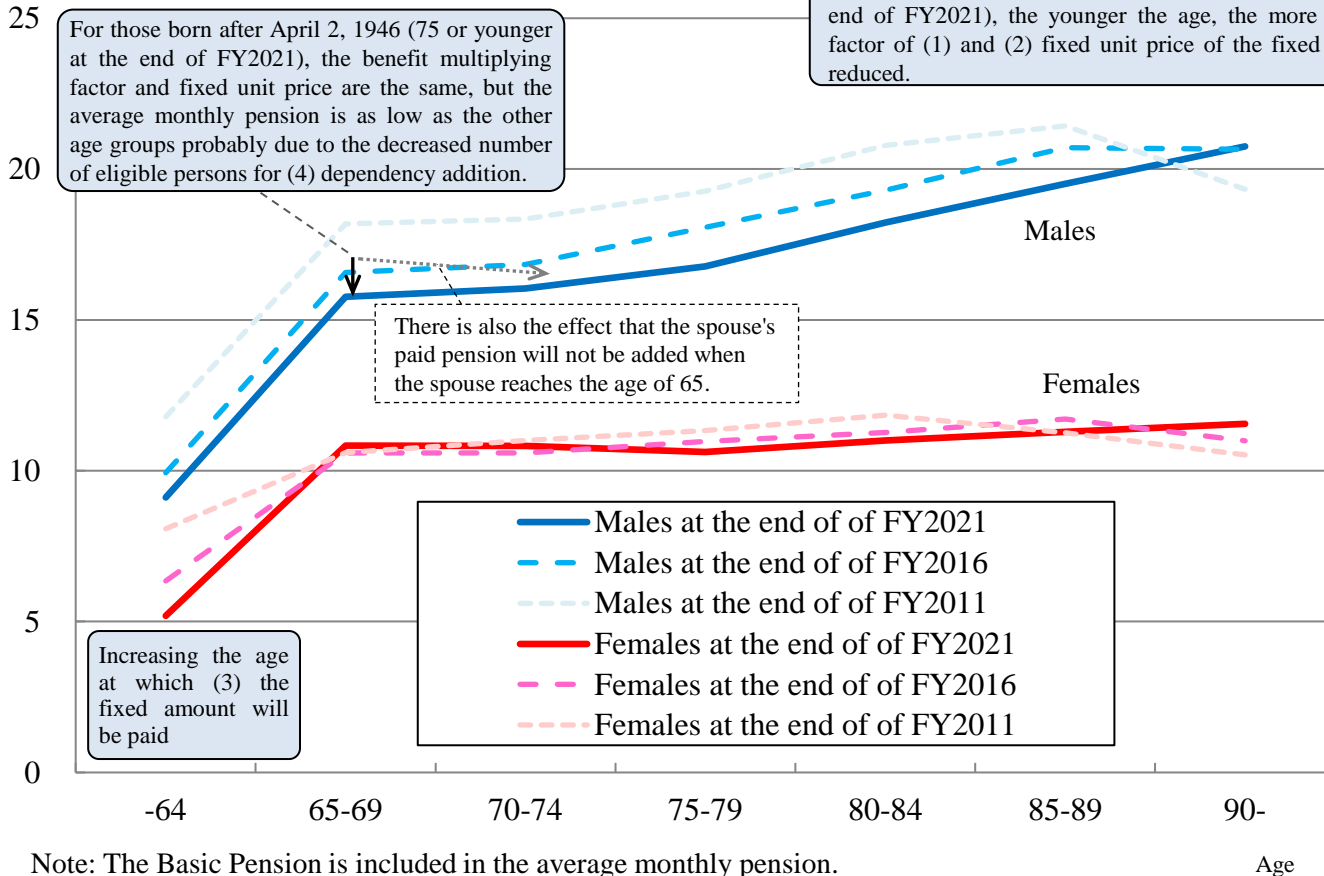
Former EPI

The average pension enrollment period has been increasing for younger generations, while for those born before April 1, 1946 (76 or older at the end of FY2021), the younger the age, the more the benefit multiplying factor of (1) and (2) fixed unit price of the fixed amount part have been reduced.

For those born after April 2, 1946 (75 or younger at the end of FY2021), the benefit multiplying factor and fixed unit price are the same, but the average monthly pension is as low as the other age groups probably due to the decreased number of eligible persons for (4) dependency addition.

There is also the effect that the spouse's paid pension will not be added when the spouse reaches the age of 65.

From the end of FY2011 to the end of FY2016 in addition to reduction of (1) benefit multiplying factor and (2) fixed unit price, there will also be the impact of (6) the elimination of special levels.



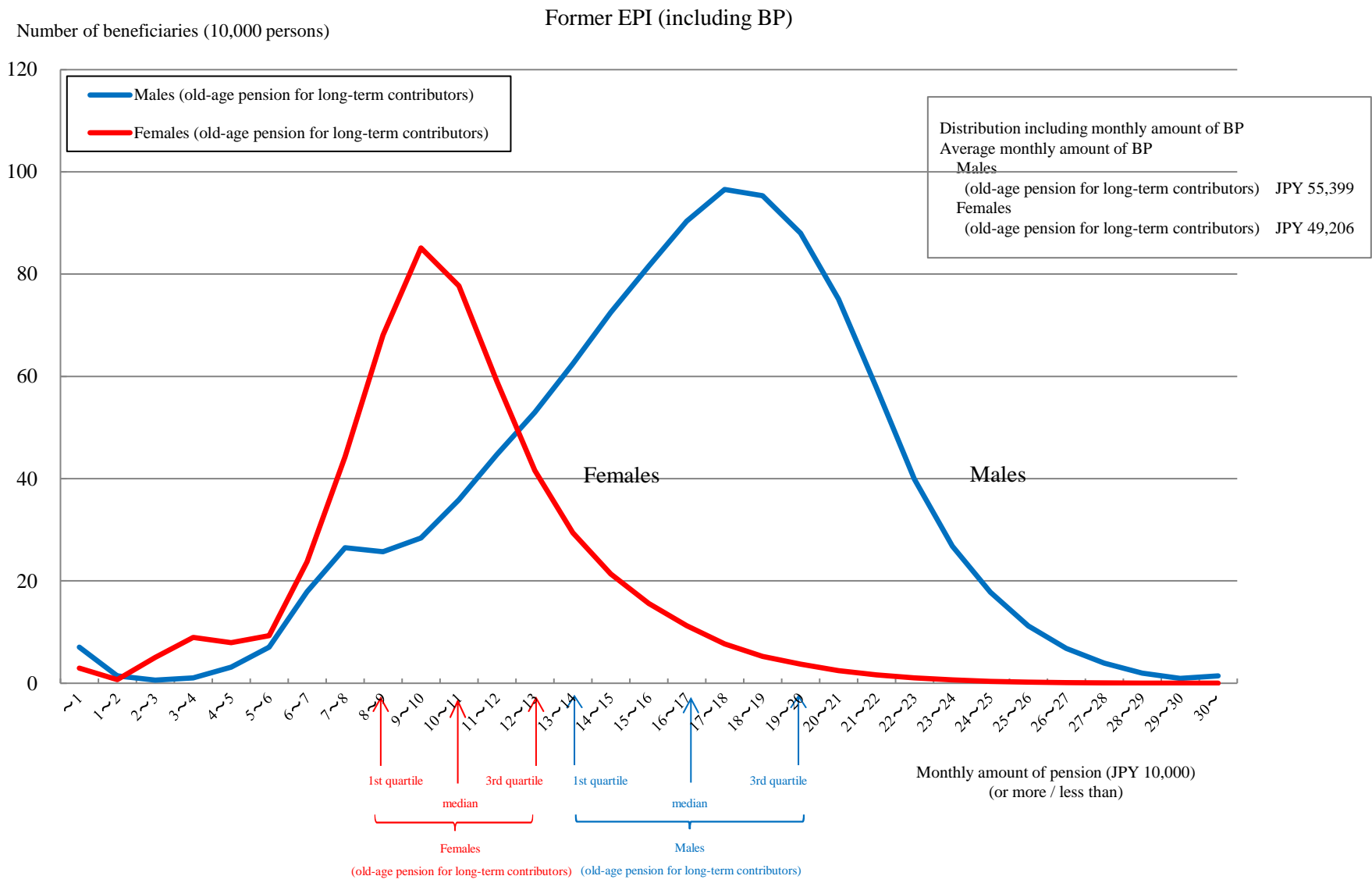
Note: The Basic Pension is included in the average monthly pension.

Age

12. Number of beneficiaries of old-age pension by class of monthly pension amount

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The amount includes the Basic Pension. The number of beneficiaries peaks at JPY 160-200 thousand for male beneficiaries and JPY 80-120 thousand for female beneficiaries.



Current situation of fiscal revenue and expenditure (Excerpt from Chapter 2, Section 3)

13. Annual balance of revenues and expenditures in FY2021
14. Analysis of the factors causing an increase or decrease in contribution income for EPI
15. Analysis of the factors causing an increase or decrease in contribution income of the current year for National Pension Account of NP

13. Annual balance of revenues and expenditures in FY2021

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- The annual balance of revenues was analyzed for “Annual balance of revenues and expenditures excluding investment income” and “Investment income” separately.
- The revenue of the public pension plans as a whole was composed of JPY 39.9 trillion of the contribution income, JPY 13.3 trillion of the national and local government subsidies, etc., and so on. The total amount of revenues excluding investment income was JPY 54.0 trillion. The expenditure side was mainly composed of JPY 53.4 trillion of benefit disbursements, and the total amount of expenditures was JPY 53.7 trillion. As a result, the annual balance of revenues and expenditures excluding investment income was positive JPY 0.3 trillion.
- The investment income was positive JPY 11.9 trillion on a market value basis. This was due to the significant rise in foreign stock markets and the depreciation of the yen.
- The reserve of the public pension plans as a whole at the end of FY2021 was JPY 246.1 trillion on a market value basis which increased by JPY 12.2 trillion compared with the previous fiscal year.

Classification		Whole Employees' Pension Insurance	National Pension		Public pension plans as a whole
			National Pension Account	Basic Pension Account	
		JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million
Reserves at the previous fiscal year end (a)		2,193,421	103,259	41,942	2,338,623
Revenues (adjusted financial status base)	Total amount	510,732	34,409	253,955	539,818
	(of which) Contribution income	385,995	13,496	•	399,491
	(of which) National and local government subsidies etc.	113,965	18,915	•	132,880
	(of which) Subsidies from Basic Pension	3,474	1,958	•	(*1)
	(of which) Revenue of the contribution to Basic Pension	•	•	253,847	(*2)
Expenditures (adjusted financial status base)	Total amount	512,527	37,426	246,363	537,037
	(of which) Benefit disbursements	289,699	2,965	240,926	533,590
	(of which) Contribution to Basic Pension	220,556	33,291	•	(*2)
	(of which) Benefits equivalent to Basic Pension (Subsidies from Basic Pension)	•	•	5,432	(*1)
Annual balance of revenues and expenditures excluding investment income (b)		△1,795	△3,016	7,592	2,781
Investment income (c)		113,692	5,319	4	119,016
Others (d)		210	79	-	289
Reserves at the fiscal year end (a + b + c + d)		2,305,528	105,642	49,539	2,460,709
Change in reserves from the previous fiscal year end		112,107	2,382	7,597	122,086

Note 1 To observe whole EPI and the fiscal revenue and expenditure situation for EPI as a whole, “give-and-take” exchanges between EPI implementing organizations are excluded from both revenues and expenditures.

In the same way, “give-and-take” transactions within the public pension plans (*1) and (*2) are excluded from both revenues and expenditures for the public pension plans as a whole.

Note 2 Whole EPI and Public pension plans as a whole do not include the substitutional portion managed by EPFs.

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.

14. Analysis of the factors causing an increase or decrease in contribution income for EPI

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Trends in contribution income for EPI

Trends in contribution income for EPI

FY	EPI Account	NPO-MAAs	LPO-MAAs	PSTE-MAA	Whole EPI
	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million	JPY 100 million
2020	320,612	12,849	34,553	4,788	372,802
2021	333,535	12,918	34,575	4,967	385,995

Rate of change over previous FY (%)

2021	4.0	0.5	0.1	3.7	3.5
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Note: EPI Account and Whole EPI do not include the substitutional portion managed by EPFs.

The increase in the number of insured persons significantly boosted the contribution income.

The decrease in the average amounts of standard remuneration contributed to the decrease in contribution income.

Classification		EPI Account	NPO-MAAs	LPO-MAAs	PSTE-MAA
		%	%	%	%
Rate of change over previous FY (contribution income)		4.0	0.5	0.1	3.7
Contributions by factor	Number of insured persons	0.5	0.3	1.5	1.3
	Average amounts of standard remuneration	1.3	0.2	Δ1.3	0.7
	Contribution rate	—	—	—	2.3
	Others	2.3	0.0	Δ0.1	Δ0.6

Note1: The contributions of each factor are estimates, being expressed in terms of the rate against contribution income in the previous fiscal year.

Note2: The fiscal year average is used for the number of insured persons.

“Others” are the residual of factor analysis, which includes the impact of the special contribution postponement system implemented as a response to the COVID-19 pandemic*.

* One-year postponement of payment of contribution for the period from January to December 2020 upon application

The increase in contribution rates in FY2021 contributed to the increase in contribution income.

15. Analysis of the factors causing an increase or decrease in contribution income of the current year for National Pension Account of NP

FY	Contribution income	Contributions for current FY	Contributions for preceding FY	Payment rate for current FY	Final payment rate	Contributions
	JPY 100 million	JPY 100 million	JPY 100 million	%	%	
2019	13,458	12,817	641	69.3	78.0	16,410
2020	13,365	12,749	616	71.5		16,540
2021	13,496	12,836	660	73.9		16,610

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

The increase of proportion of number of contribution-exempted insured persons contributed to the decline in contribution income.

Rise in the nominal amount of NP contributions contributed to the increase in contribution income.

FY	Rate of change over previous FY (%)			Difference from previous FY	
2019	Δ3.2	Δ2.6	Δ14.6	1.1	0.8
2020	Δ0.7	Δ0.5	Δ3.9	2.2	
2021	1.0	0.7	7.1	2.4	

Note1: The payment rate of NP contributions is the ratio of the number of months actually paid to the number of months in which contributions should be paid. The number of months to be paid is the number of months to be paid as the concerned fiscal year's portion of contributions (not including the number of statutory exemption months, the number of full exemption months applied, number of special case months for students and number of suspension months for the youth), and the number of months paid is the number of months actually paid during that year (until the end of April of the following year). In addition, the number of months to be paid and the number of months actually paid are counted as one month even for those who paid partially the contributions.
Note2: Contributions can be paid for the preceding two years' portion. Final payment rate is the payment rate including contributions paid in the preceding fiscal years.

Classification	2019	2020	2021	
	%	%	%	
Rate of change over previous FY (Contributions for current FY)	Δ2.6	Δ0.5	0.7	
Contribution by factor	Number of insured persons	Δ2.0	Δ0.3	Δ1.1
	Proportion of number of contribution-exempted insured persons	Δ1.8	Δ3.3	Δ3.2
	Amount of contributions	0.3	0.8	0.5
	Payment rate	1.7	3.2	3.3
	Others	Δ0.7	Δ1.0	1.2

Note1: Contributions by factor are estimates, being expressed as a ratio to contributions for the current year's portion in the previous fiscal year.

Note2: The fiscal year average is used for the number of insured persons.

Note3: The amount of contributions is the weighted average in consideration of the number of months received.

The increase in the payment rate contributed to the increase in contribution income.

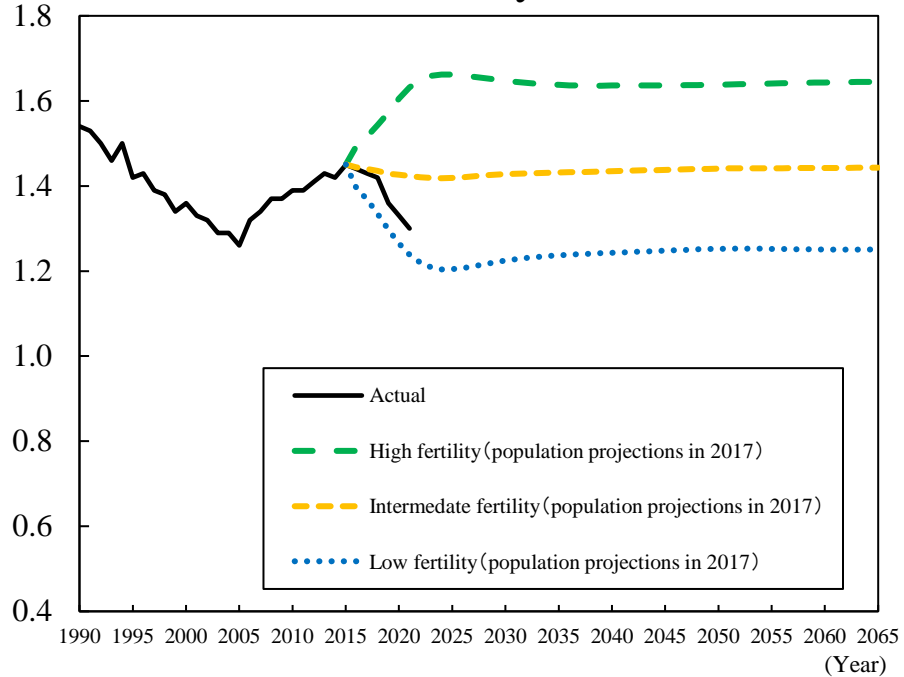
**Comparison of actual and projected fiscal revenues and expenditures, etc.
and actuarial indices
(Excerpt from Chapter 3, Section 2 and 3)**

16. Comparison of actual results and assumptions for total fertility rate and average life expectancies at 65
17. Comparison of actual and assumed inflation rates
18. Comparison of actual rates of real wage increase and assumed rates
19. Comparison of actual substantial investment returns and assumptions
20. Comparison of actual labor force participation rates and assumed rates
21. Comparison of actual number of insured persons and future projections
22. Comparison of actual number of beneficiaries and future projections
23. Comparison of actual contribution income and future projections
24. Comparison of actual benefit disbursement and future projections
25. Comparison of actual contributions to Basic Pension and the future projections
26. Comparison of actual reserves and future projections
27. Comparison of actual actuarial indices and future projections

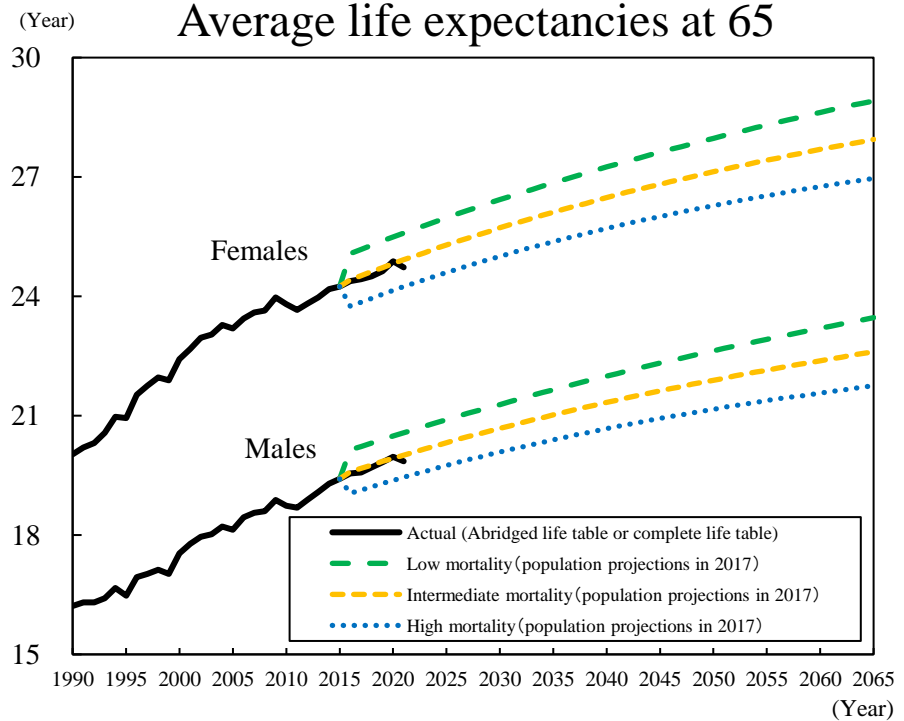
16. Comparison of actual results and assumptions for total fertility rate and average life expectancies at 65

- The actual fertility rate in 2021 was 0.03 lower than the previous year and roughly in the middle of the assumed intermediate fertility rate and the assumed low fertility rate in the 2017 population projections, but the deviation from the assumed intermediate fertility rate has widened compared to 2019.
- The actual average life expectancies of Japanese nationals aged 65 in 2021 were 0.11 years lower for males and 0.14 years lower for females than the previous year, and below the assumed intermediate mortality for both males and females.

Total fertility rate

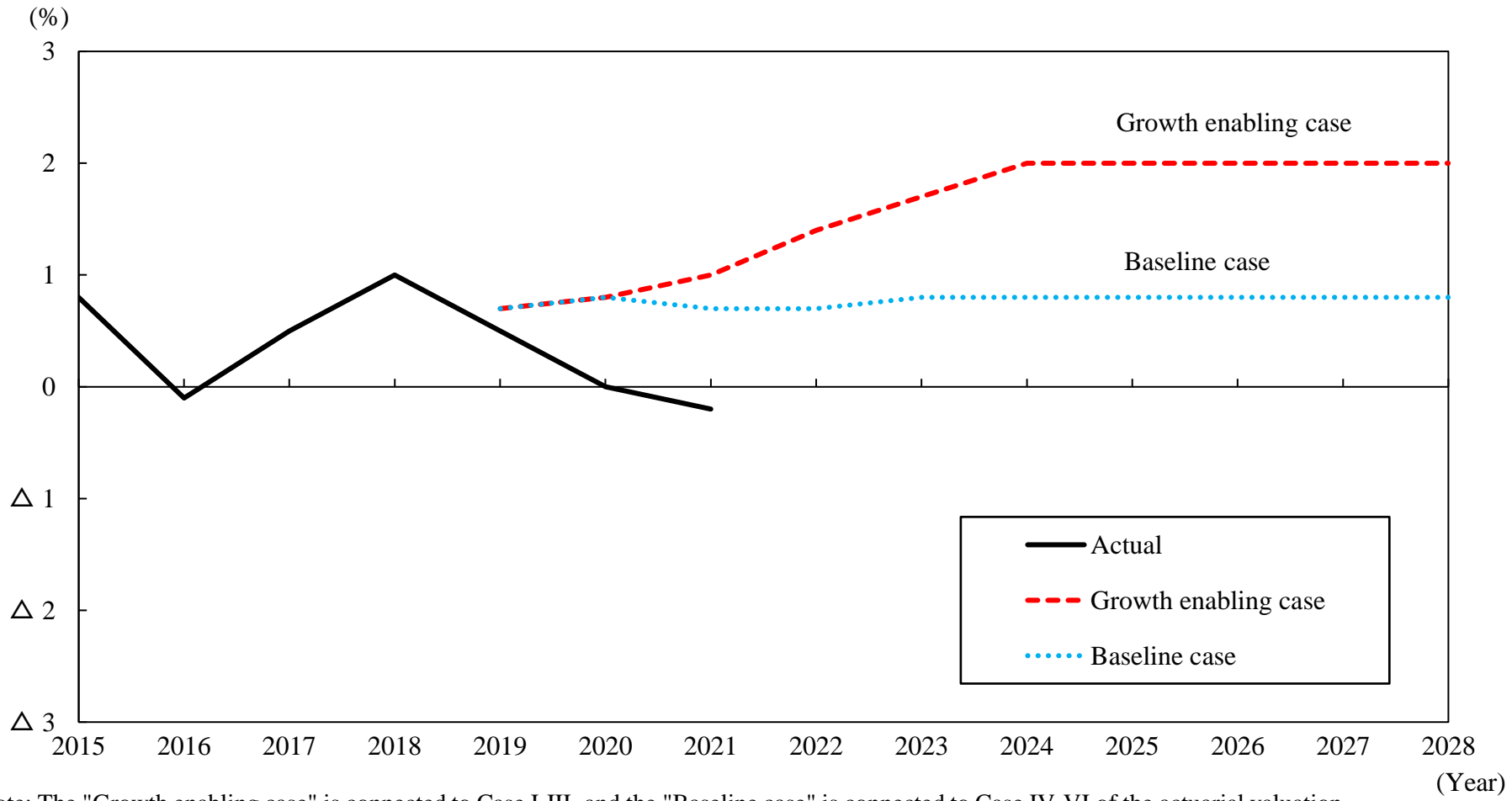


Average life expectancies at 65



17. Comparison of actual and assumed inflation rates

The actual inflation rate in 2021 was -0.2%, and lower than the assumptions made in the actuarial valuation, in both growth enabling and baseline cases. This was mainly because “Gasoline” and “Kerosene” rose due to high crude oil prices, “Telephone charges (mobile phone)” fell.

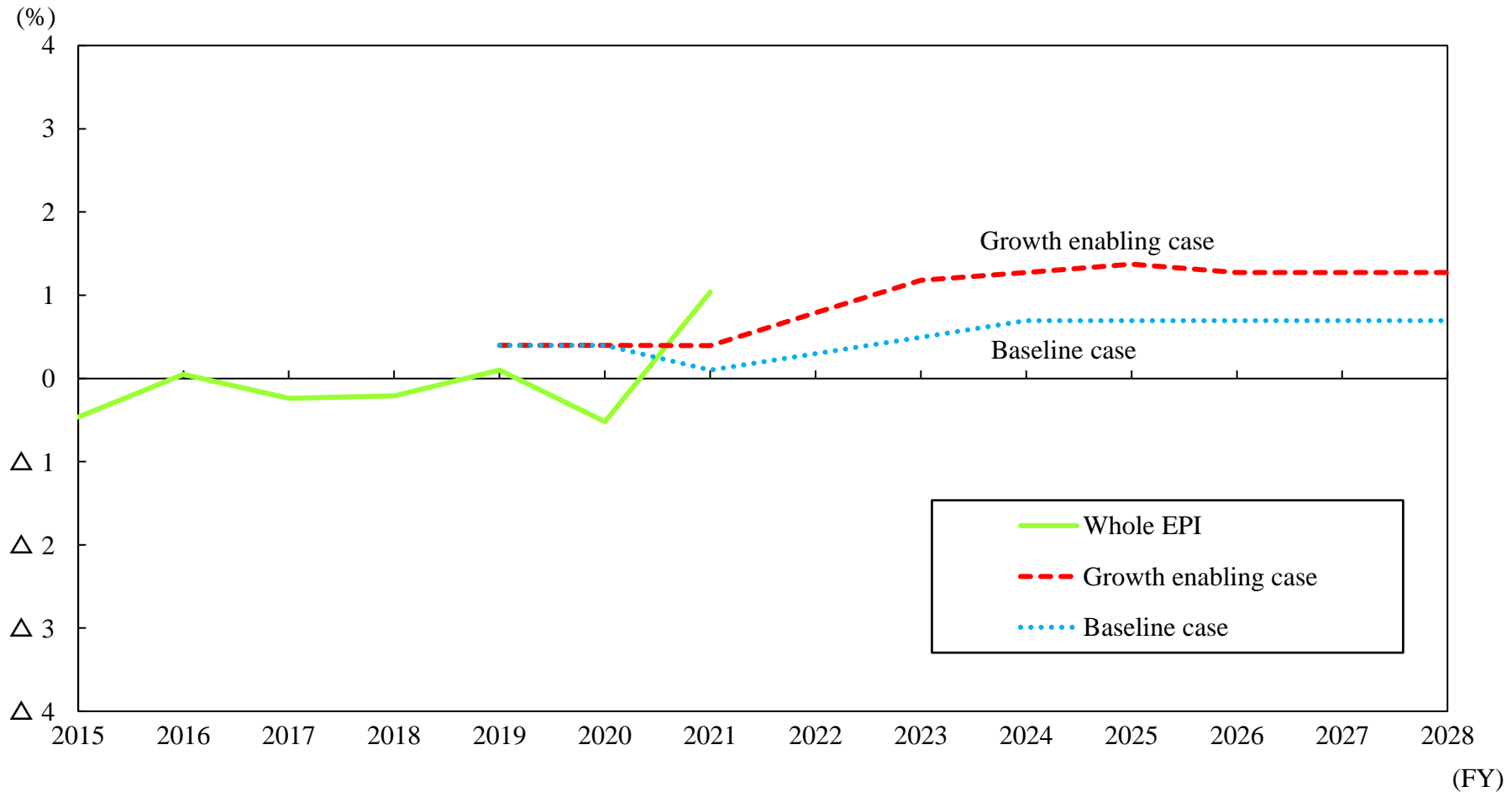


Note: The "Growth enabling case" is connected to Case I-III, and the "Baseline case" is connected to Case IV-VI of the actuarial valuation.

18. Comparison of actual rates of real wage increase and assumed rates

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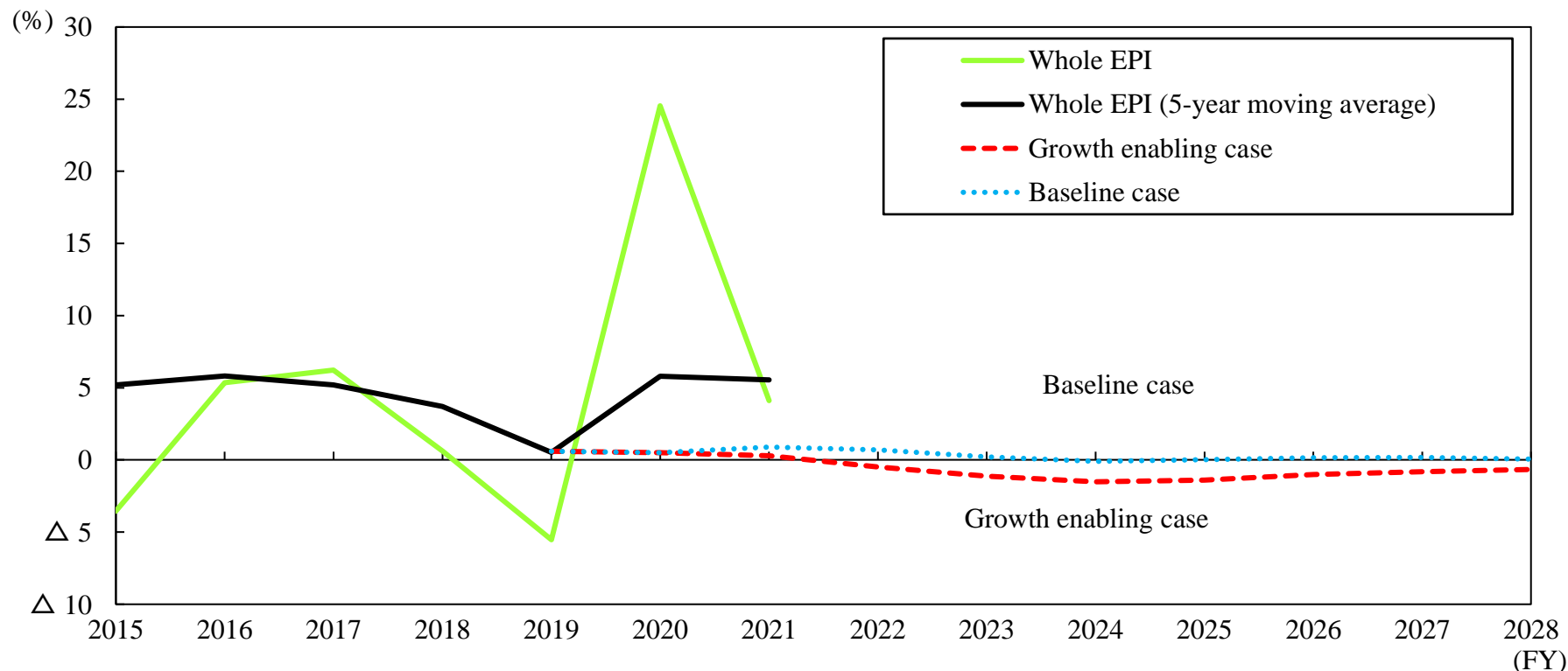
The actual rate of real wage increase (adjusted for price inflation) in FY2021 exceeded the assumption in the actuarial valuation.



Note: The "Growth Enabling Case" is connected to Case I-III, and the "Baseline Case" is connected to Case IV-VI of the actuarial valuation.

19. Comparison of actual substantial investment returns and assumptions

The actual substantial investment return (adjusted for nominal wage increase) in FY2021 exceeded the assumption in the actuarial valuation. This was due to the significant rise in foreign stock markets and the depreciation of the yen.



Note 1: The whole EPI (five-year moving average) is calculated by averaging the substantial investment returns for the five years prior to the fiscal year in question, for the whole EPI FY2015 and subsequent years, and for the former EPI for FY2014 and earlier.

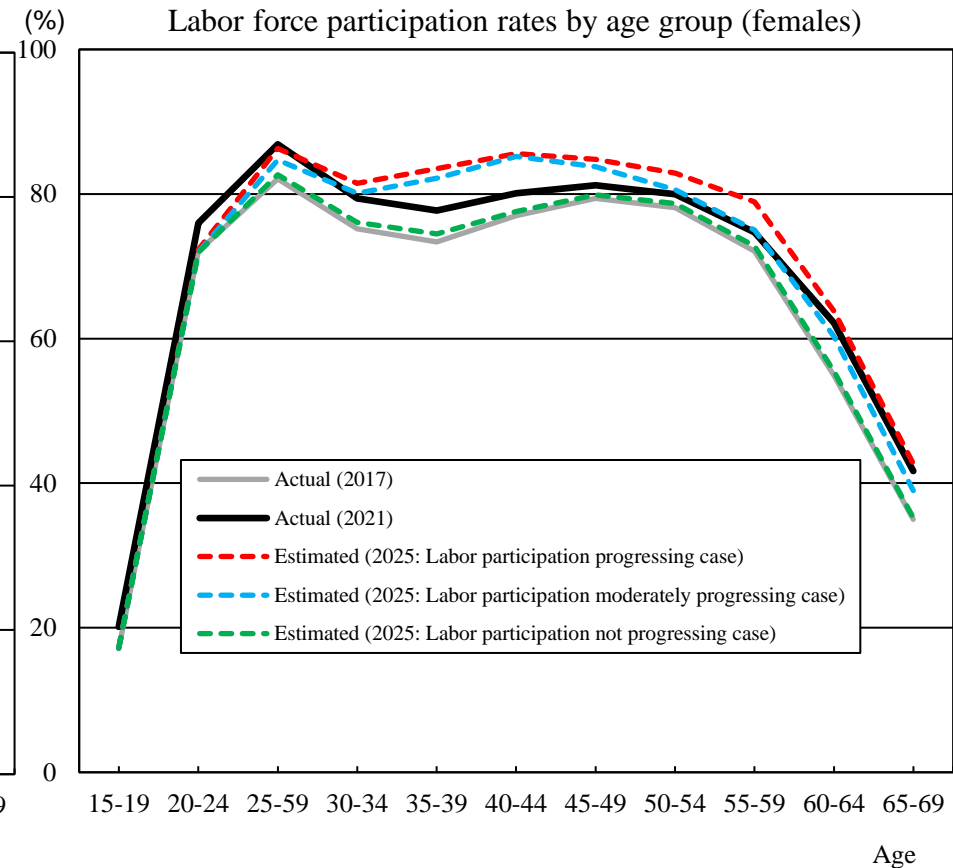
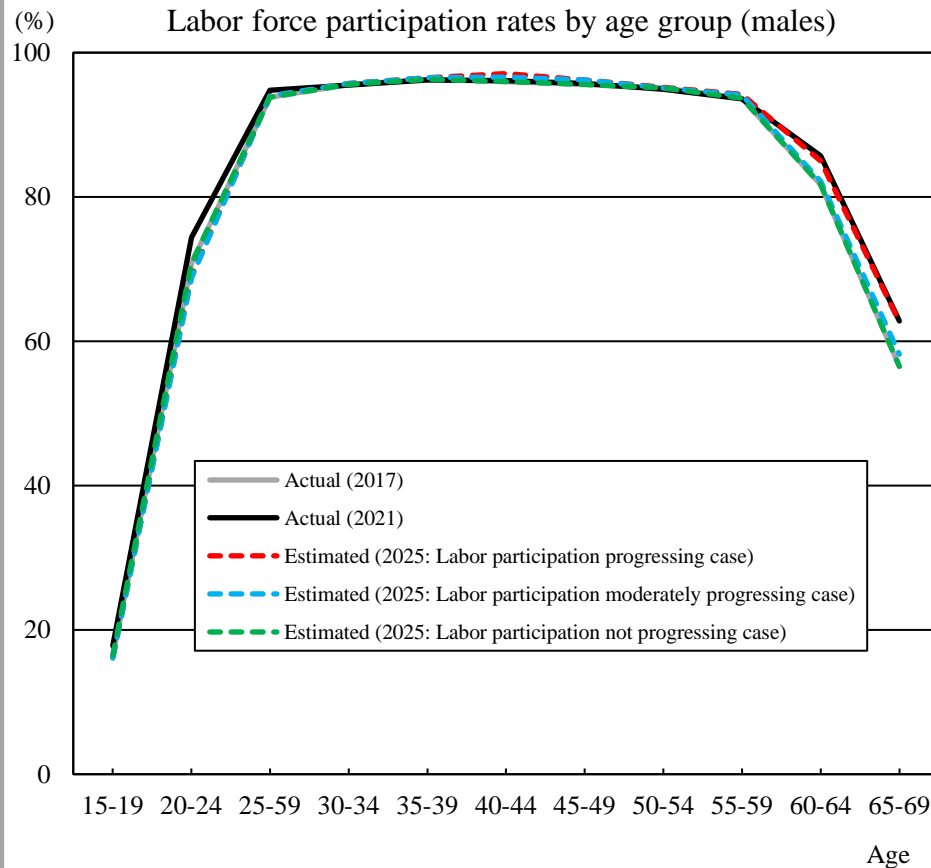
Note 2: The "Growth enabling case" is connected to Case I-III, and the "Baseline case" is connected to Case IV-VI of the actuarial valuation.

As public pension plan contributions and newly awarded benefits vary in accordance with rates of nominal wage increase, the actual investment return and the assumption used for future projections are best compared from a long-term perspective by comparing the substantial investment return (adjusted for nominal wage increase).

20. Comparison of actual labor force participation rates and assumed rates

Comparing* the actual results in 2021 with the labor participation progressing case estimates, the actual results exceeded the labor participation progressing case estimates for males aged 15-29 and over-60, and females aged 15-29.

*Note: The future projections compared are four years ahead of the actual performance.

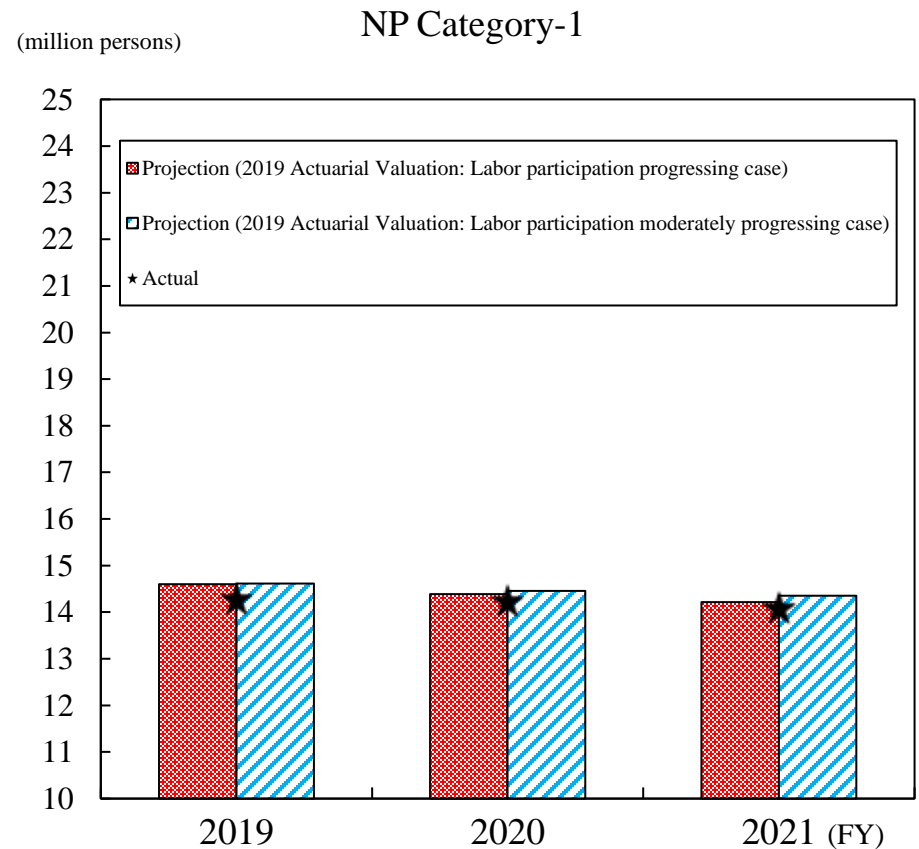
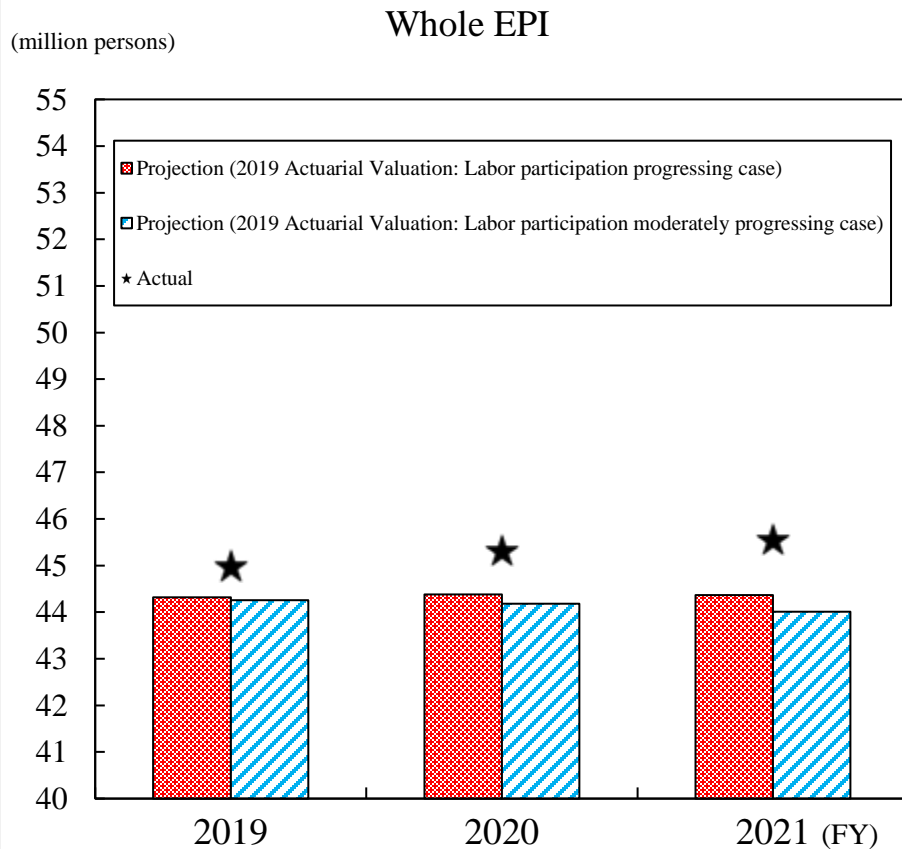


Note: The “Labor participation progressing case” corresponds to Case I-III, the “Labor participation moderately progressing case” to Case IV and V, and the “Labor participation not progressing case” corresponds to Case VI of the actuarial valuation.

21. Comparison of actual number of insured persons and future projections

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report

In FY2021, the actual result (marked with “★” in the figure below) exceeds the future projections (bar graph) for the whole EPI, while the actual result is lower than the future projections for NP Category-1 insured persons.

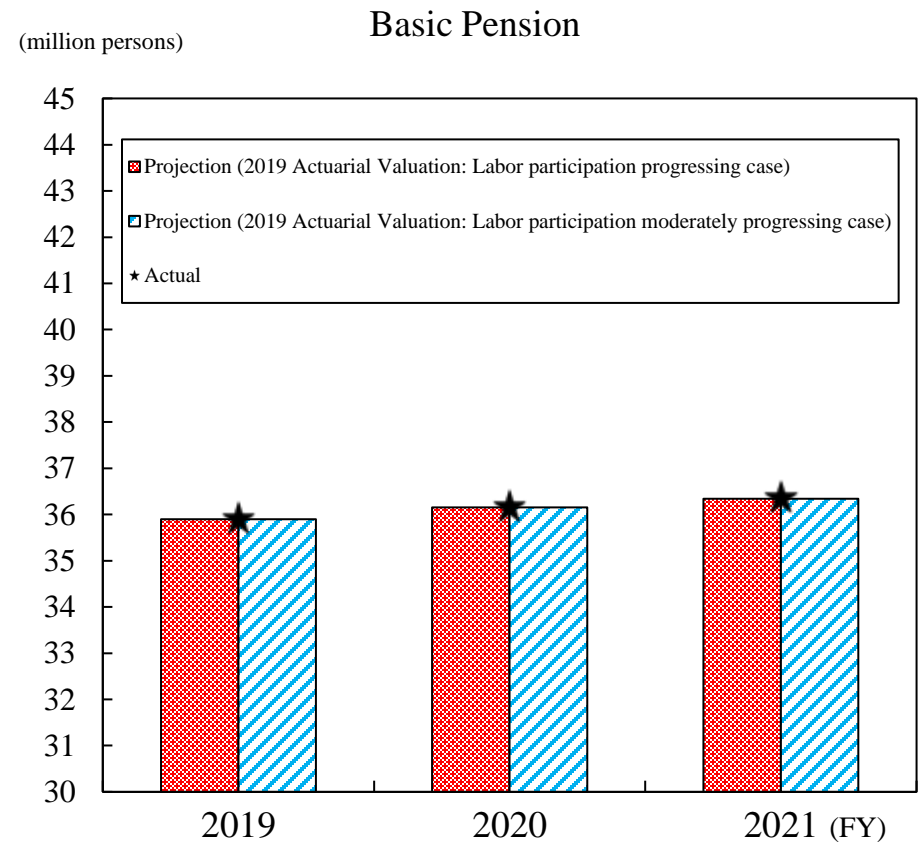
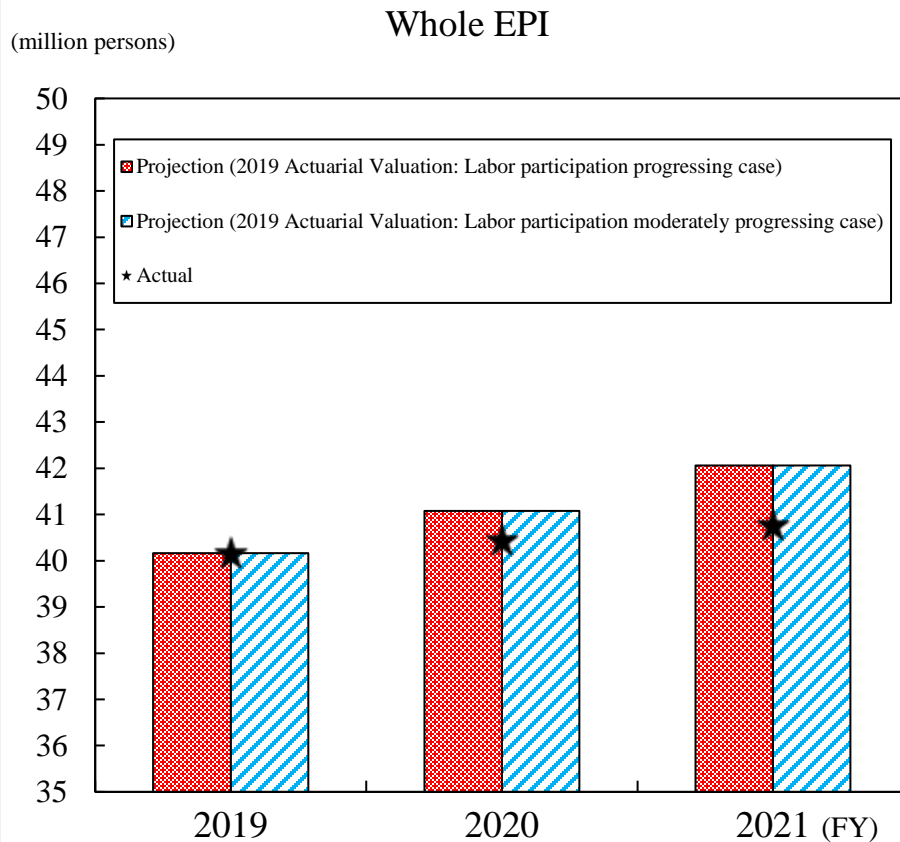


Note: The “Labor participation progressing case” corresponds to Case I-III, and the “Labor participation moderately progressing Case” corresponds to Case IV and V of the actuarial valuation.

22. Comparison of actual number of beneficiaries and future projections

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report

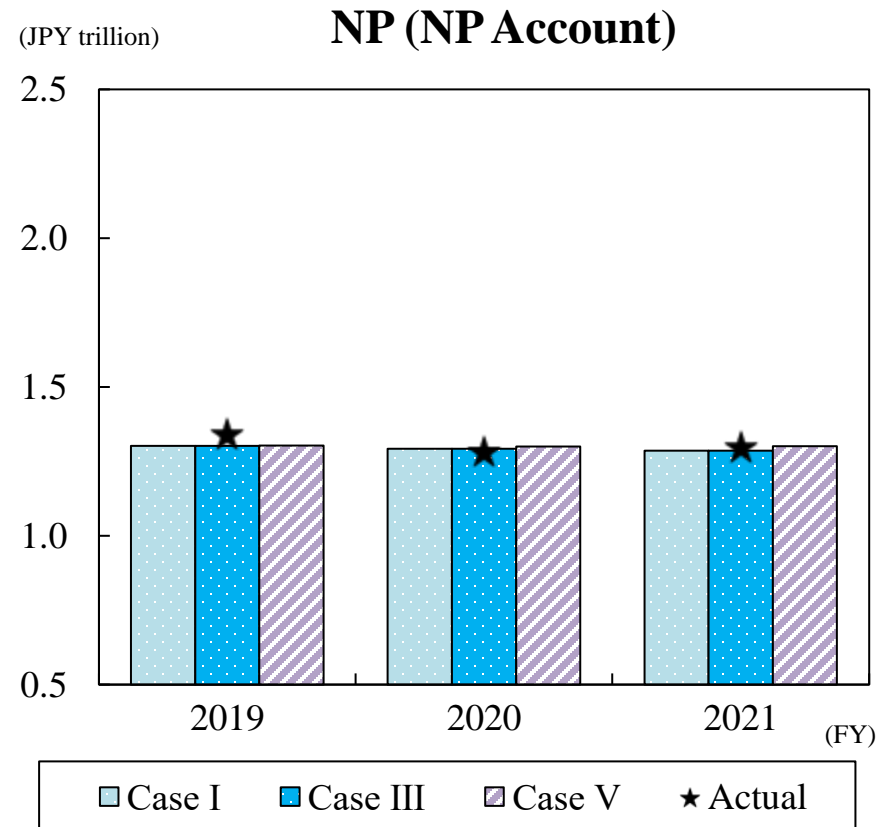
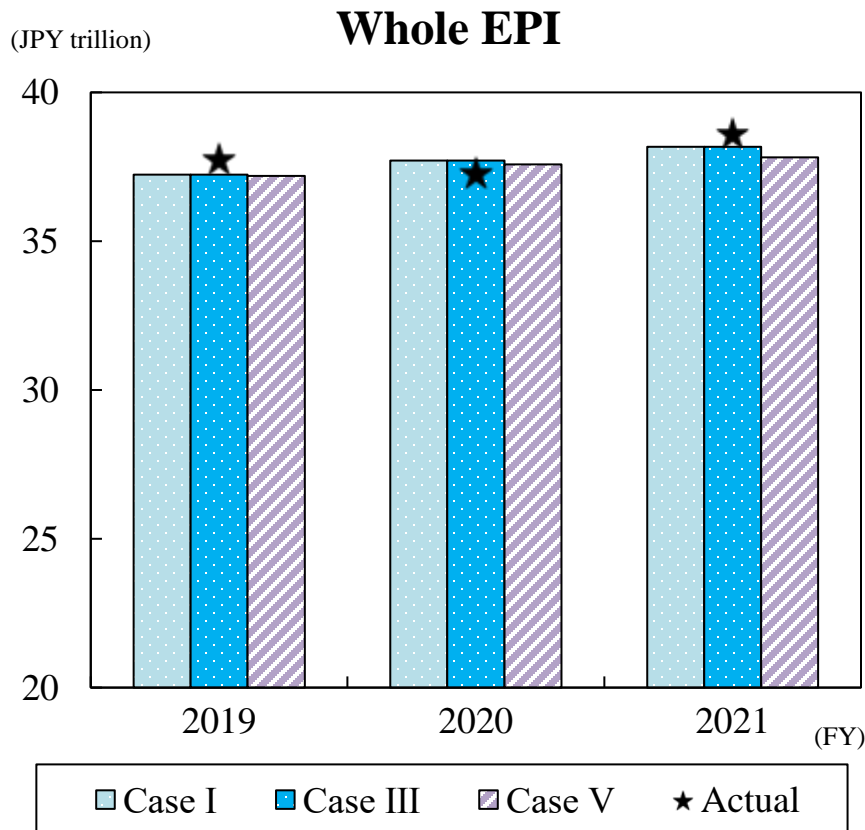
In FY2021, the actual result (marked with “★” in the figure below) is lower than the future projections (bar graph) for the whole EPI, while the actual result is almost equivalent to the future projection for the basic pension.



Note: The “Labor participation progressing case” corresponds to Case I-III, and the “Labor participation moderately progressing case” corresponds to Case IV and V of the actuarial valuation.

23. Comparison of actual contribution income and future projections

In FY2021, the actual results (marked with “★” in the figure below) exceed the future projections (bar graph) for both the whole EPI and the National Pension Account of NP.

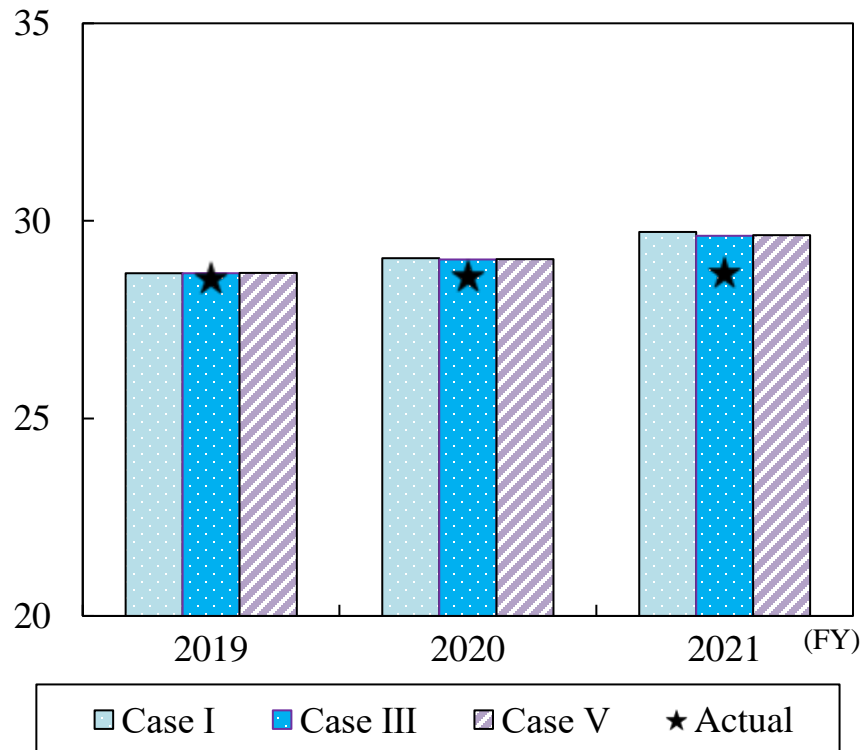


24. Comparison of actual benefit disbursement and future projections

In FY2021, the actual result (marked with “★” in the figure below) is lower than the future projections (bar graph) for the whole EPI, while the actual result exceeds the future projection for the National Pension Account of NP [Benefit disbursement of additional pension plan for NP category-1 insured persons and voluntary insured persons, etc.].

Whole EPI

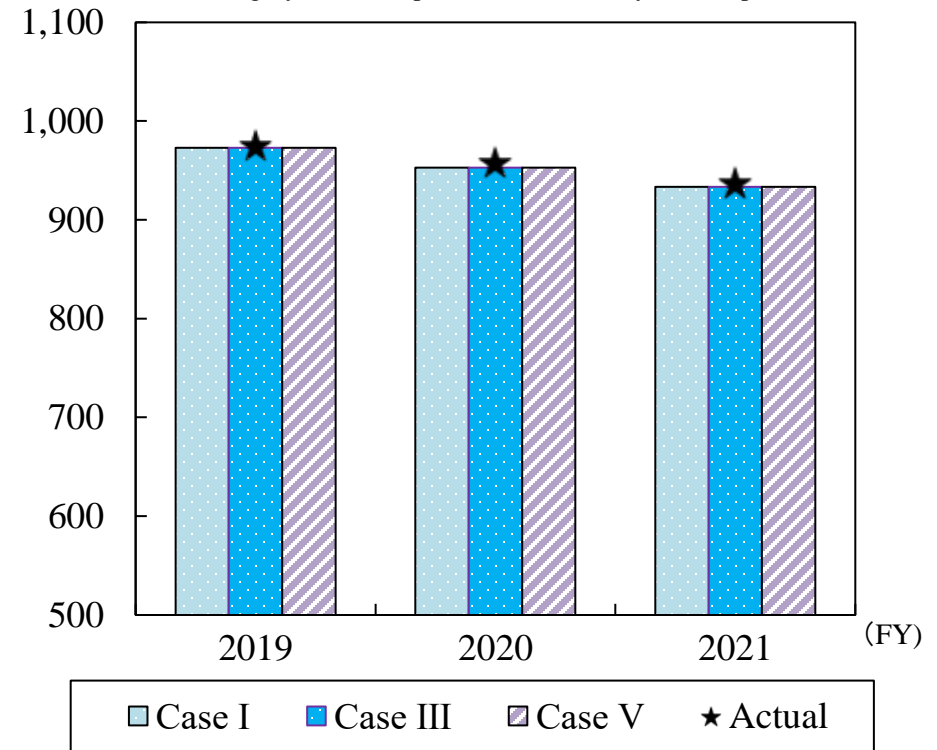
(JPY trillion)



NP (NP Account)

(JPY 100 million)

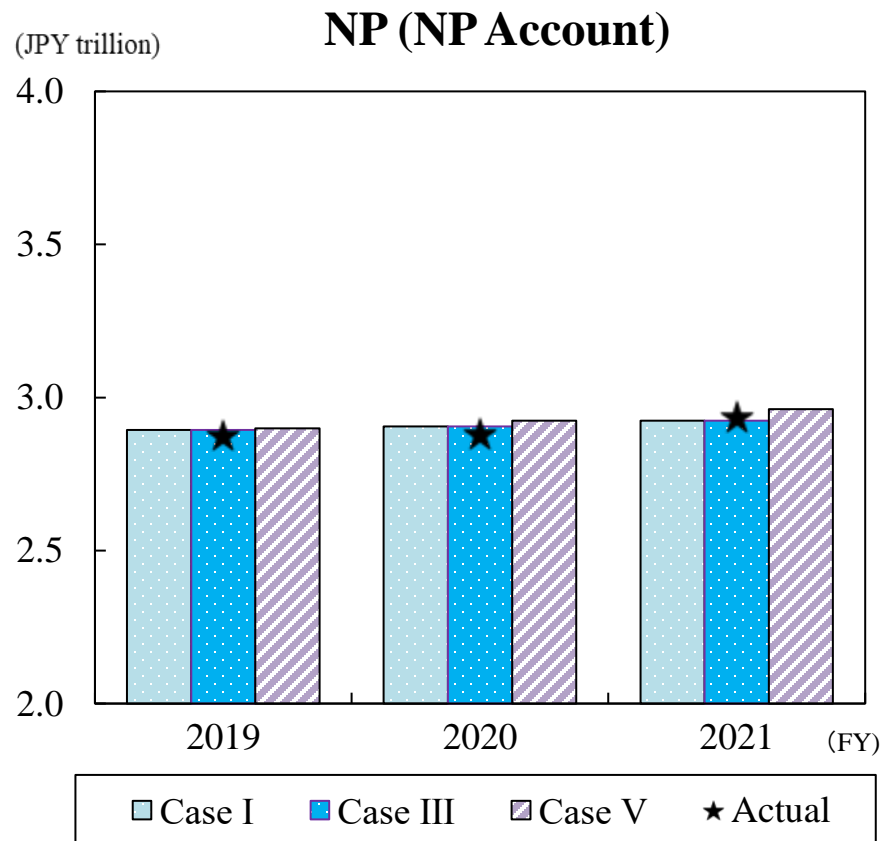
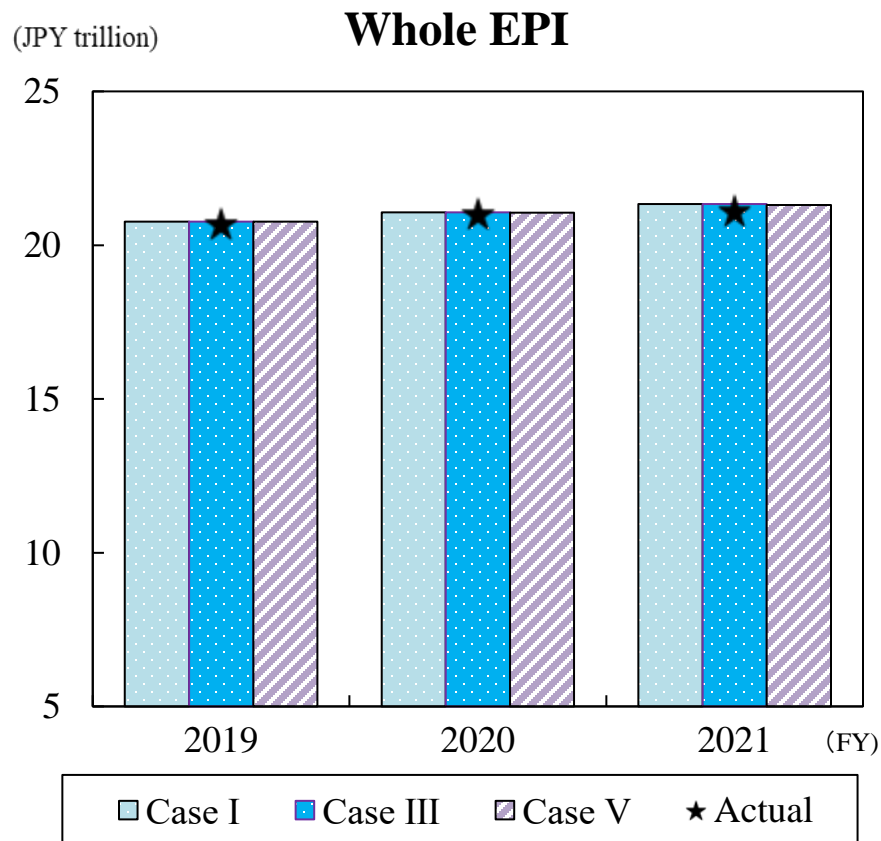
[Benefit disbursement of additional pension plan for NP category-1 insured persons and voluntary insured persons, etc.]



Note: Excludes benefit cost of Basic Pensions and National Pensions equivalent to BP provided by the Old Law.

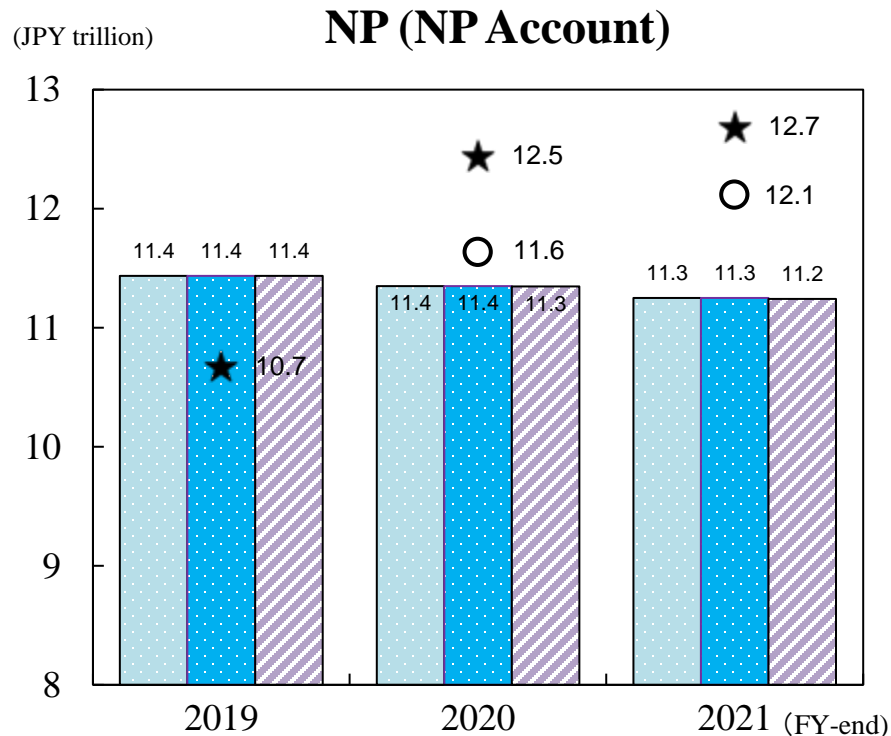
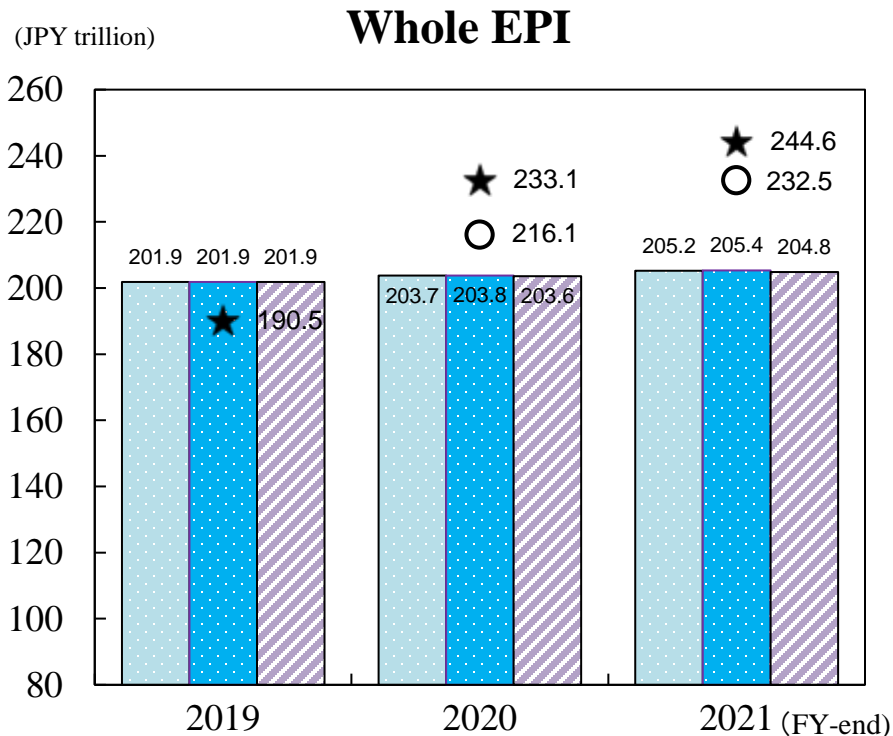
25. Comparison of actual contributions to Basic Pension and the future projections

In FY2021, the whole EPI (marked with “★” in the figure below) is lower than the future projections (bar graph), while the actual result of the National Pension Account of NP is almost equivalent to the future projections.



26. Comparison of actual reserves and future projections

- At the end of FY2021, the actual results for both the whole EPI and the National Pension Account of NP (marked with “★” in the figure below) exceeded the future projection (bar graph). This was due to the significant rise in foreign stock markets and the depreciation of the yen.
 - The reserve amounts smoothed for changes in market valuation* (marked with “○” in the figure below, calculated from FY2020) also exceeded the future projection at the end of FY2021.
- * The difference between investment income on a market value basis and historical average income is smoothed out for the past five fiscal years and reflected in the reserve valuation.



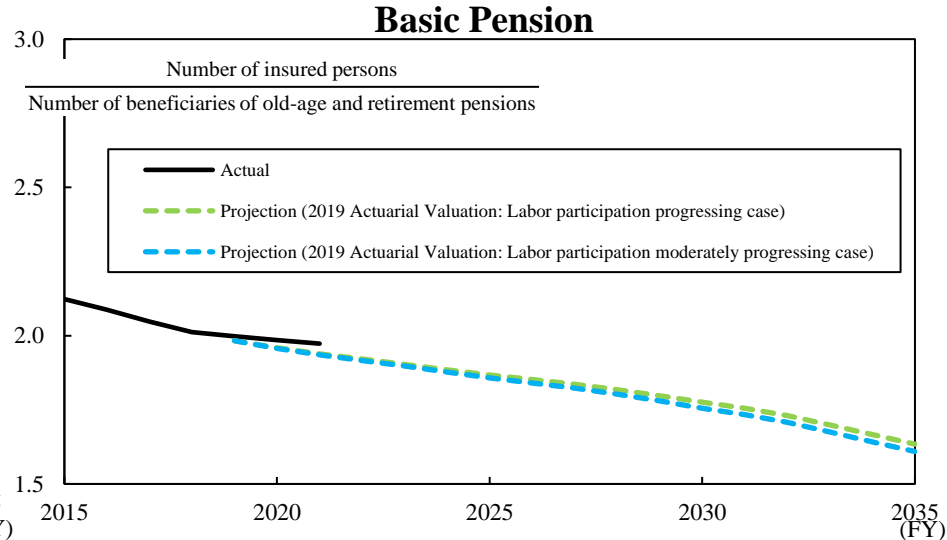
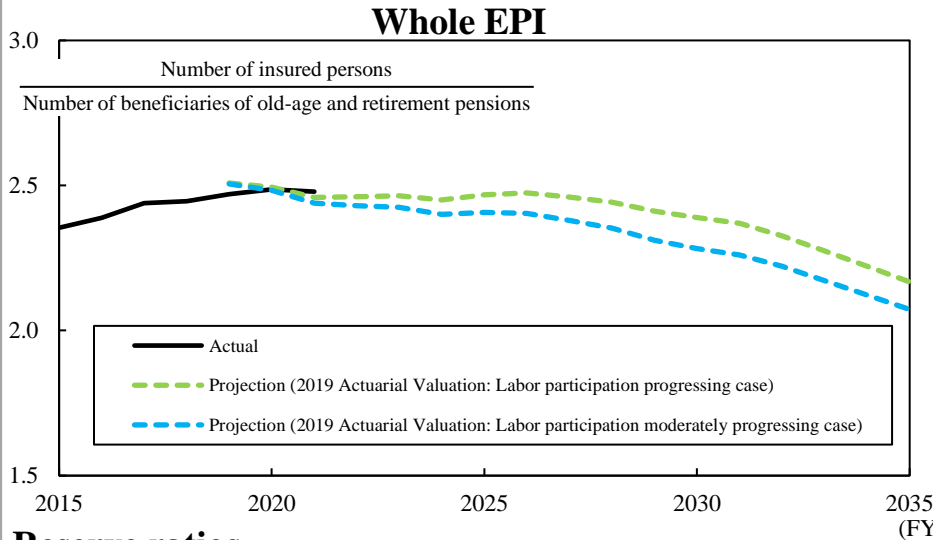
Case I Case III Case V ★ Actual ○ Smoothed

Case I Case III Case V ★ Actual ○ Smoothed

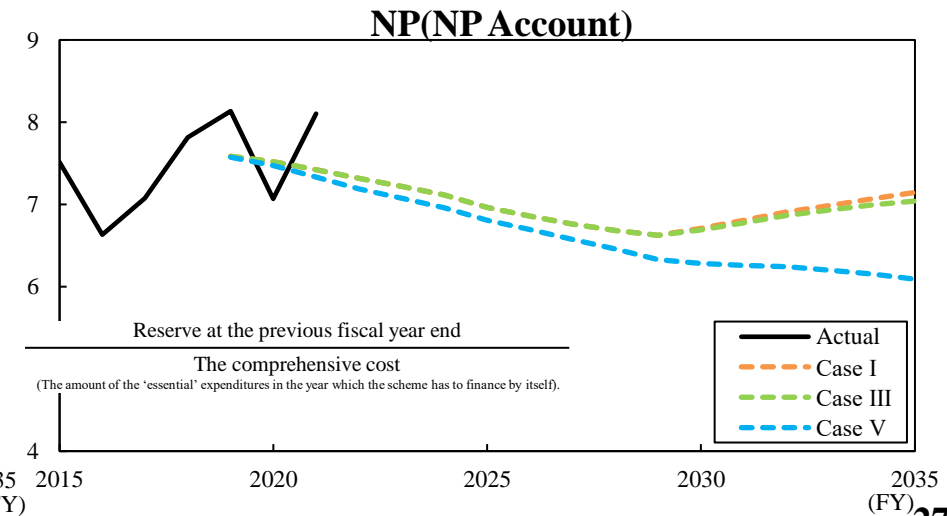
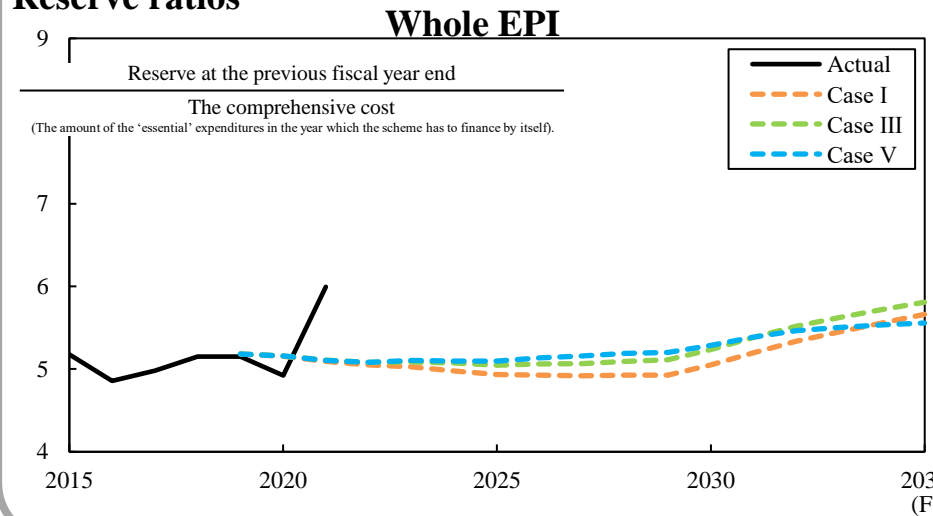
27. Comparison of actual actuarial indices and future projections

- In FY2021, the actual results of pension support ratios for both the whole EPI and the Basic Pension exceeded the future projection.
- In FY2021, the actual results of reserve ratios for both the whole EPI and the National Pension Account of NP exceeded the future projection.

Pension support ratios



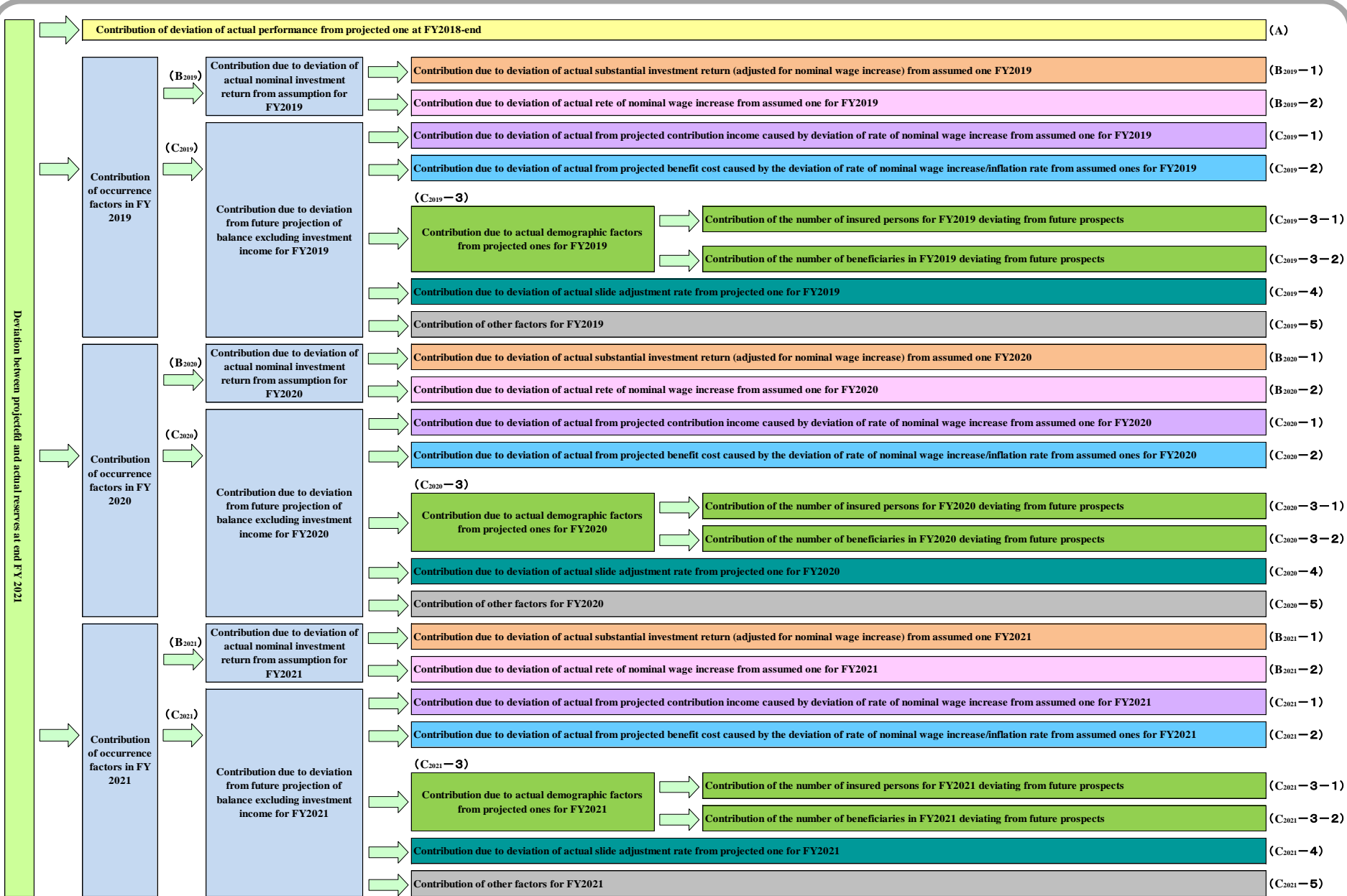
Reserve ratios



Analysis of deviations in reserves and evaluation of actuarial status of EPI and the Public Pension Plans (Excerpt from Chapter 3, Sections 4, 5 and 6)

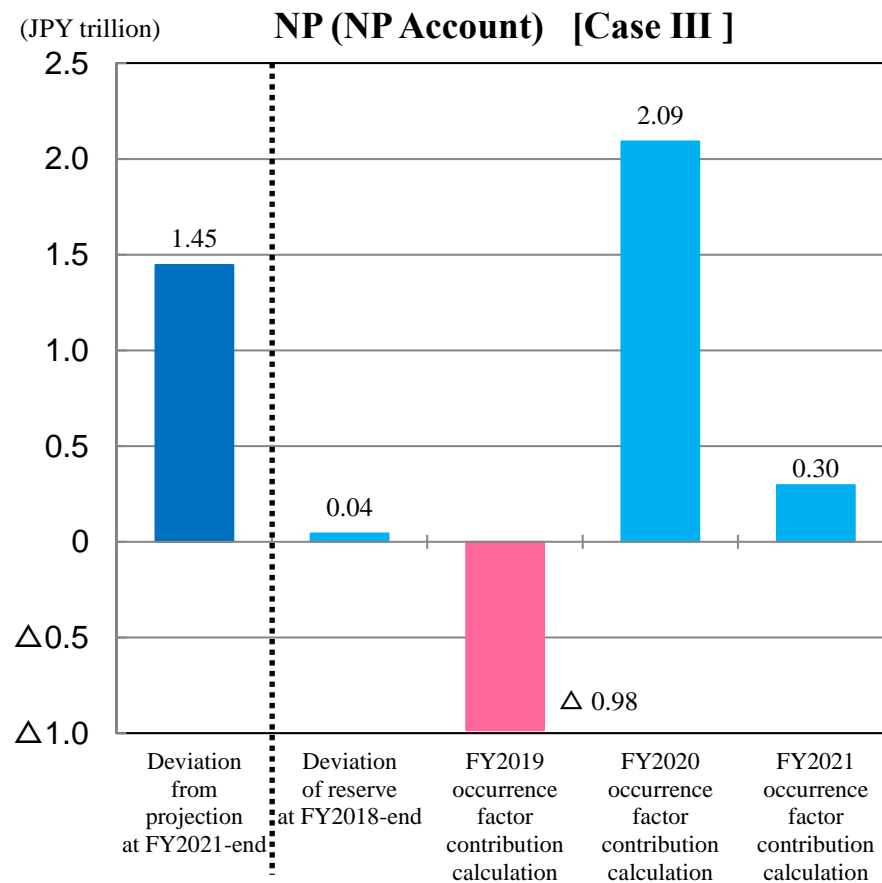
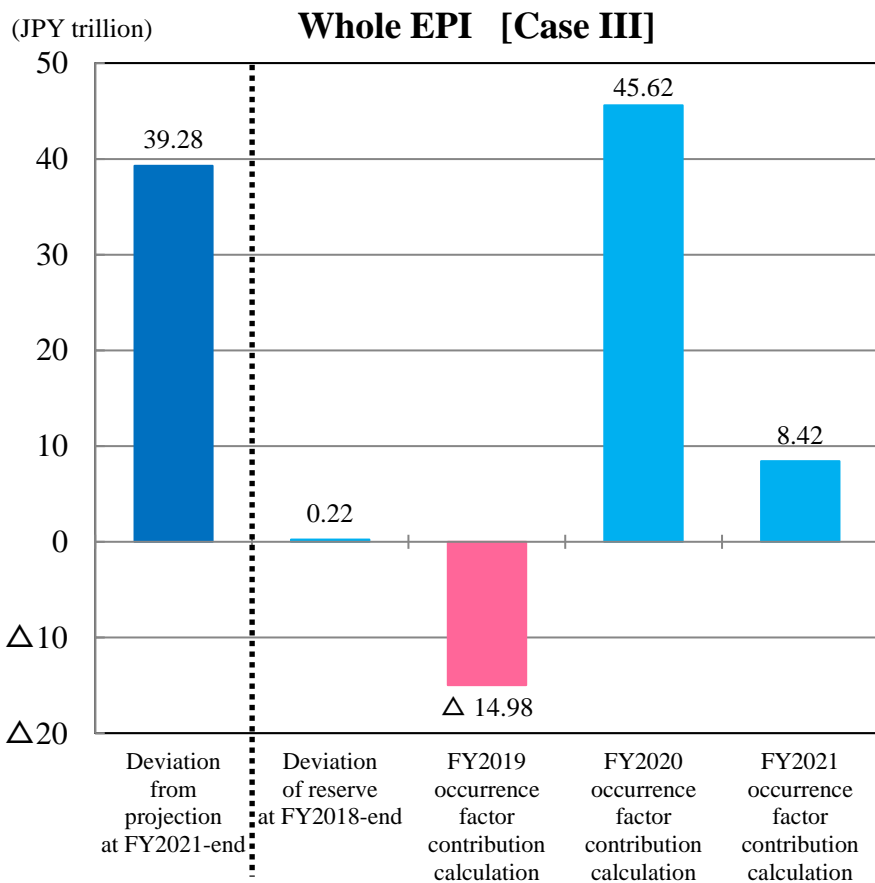
28. Flow of deviation analysis in actual reserves and future projections
29. Deviation of actual reserves and future projections by generated year
30. Results of deviation analysis in reserve (deviation that occurred in FY2021, whole EPI)
31. Results of deviation analysis in reserve (deviation that occurred in FY2021, NP)
32. Evaluation of the actuarial status for EPI (1)
33. Evaluation of the actuarial status for EPI (2)
34. Evaluation of the actuarial status for the Public Pension Plans

28. Flow of deviation analysis in actual reserves and future projections



29. Deviation of actual reserves and future projections by generated year

Actual reserves for the whole EPI and National Pension Account of NP as of the end of FY2021 exceeded the future projections. This was because the total amount of FY2020 occurrence factor contribution calculation and FY2021 one was more than cancel out the negative contribution of FY2019 occurrence factor contribution calculation.

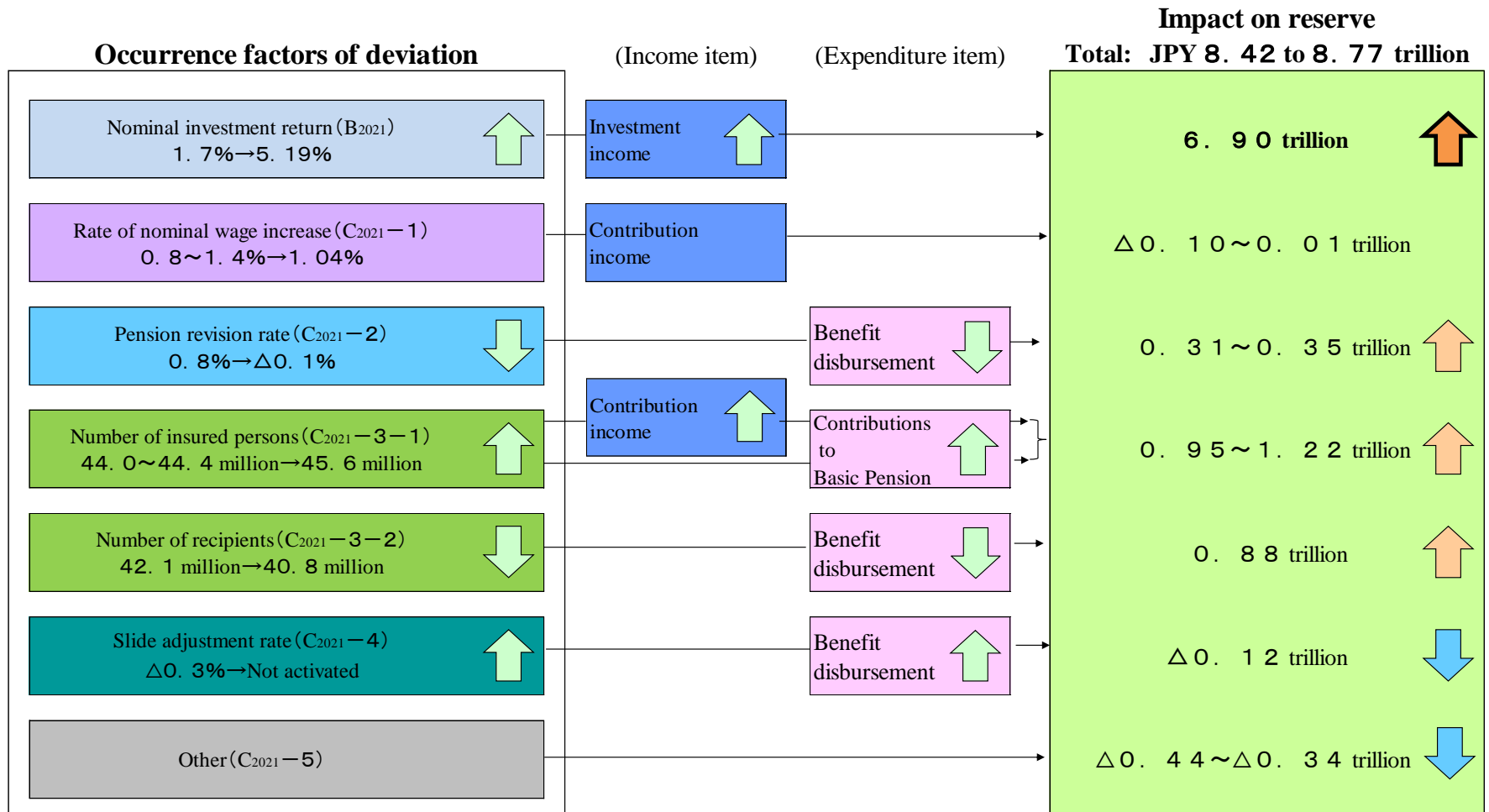


Note: The results are the same for Case I and V.

30. Results of deviation analysis in reserve (deviation that occurred in FY2021, whole EPI)

The divergence in the reserve for whole EPI in FY2021 (JPY 8.42 to 8.77 trillion) was mainly due to the divergence in the nominal investment return (JPY 6.90 trillion), caused by the significant rise in foreign stock markets and the depreciation of the yen.

Whole EPI

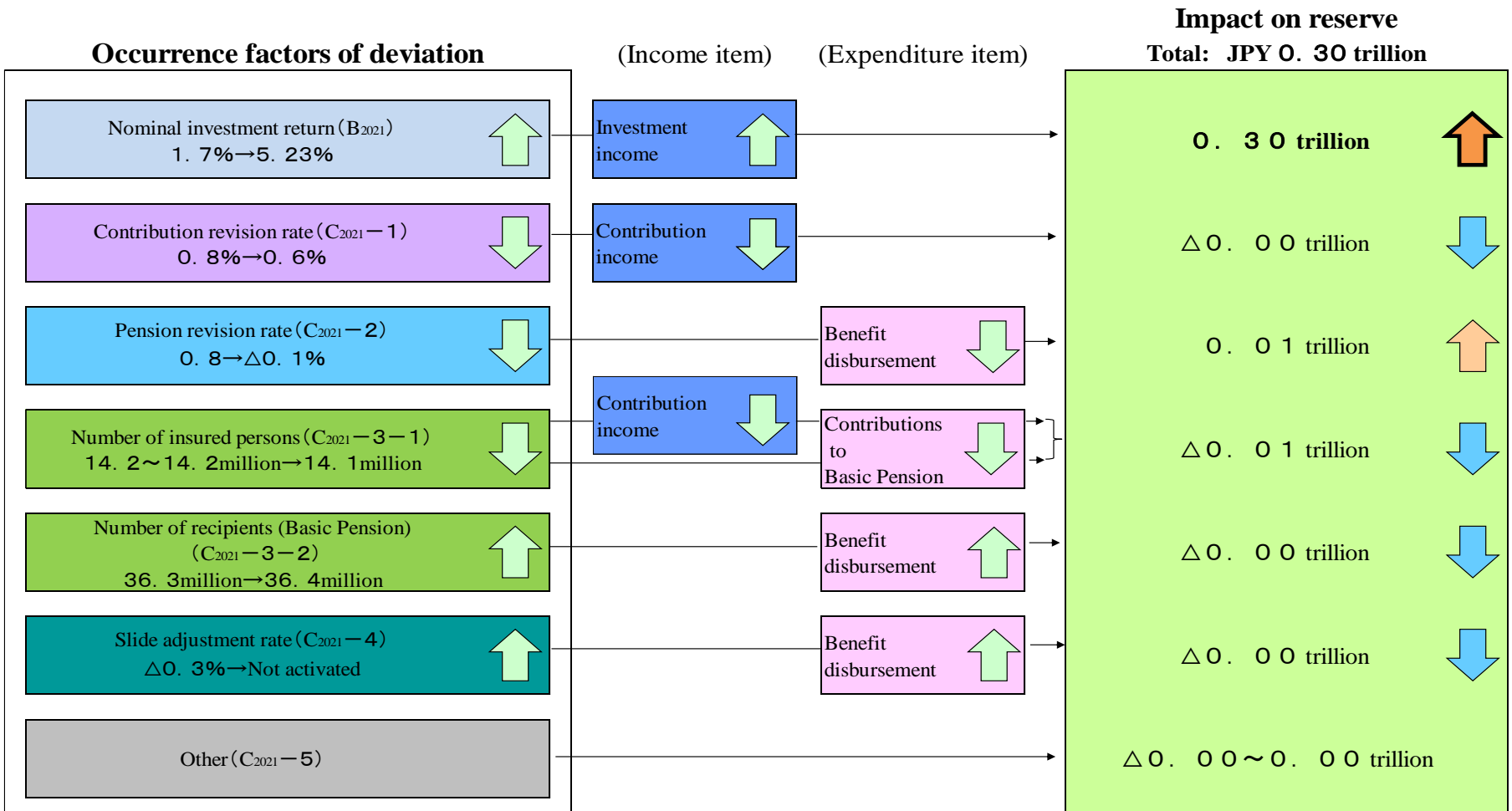


Note: Deviation in reserves is extracted by the factor to be summarized, and the maximum and minimum values are indicated for Cases I, III and V.

31. Results of deviation analysis in reserve (deviation that occurred in FY2021, NP)

The divergence in the reserve for the National Pension Account of NP in FY2021 (JPY 0.30 trillion) was mainly due to the divergence in the nominal investment return (JPY 0.30 trillion), caused by the significant rise in foreign stock markets and the depreciation of the yen.

NP (NP Account)



Note: Deviation in reserves is extracted by the factor to be summarized, and the maximum and minimum values are indicated for Cases I, III and V.

32. Evaluation of the actuarial status for EPI (1)

- The evaluation of the actuarial status for EPI is carried out by considering the difference between actual reserve and ‘baseline reserve for assessment (estimate).’

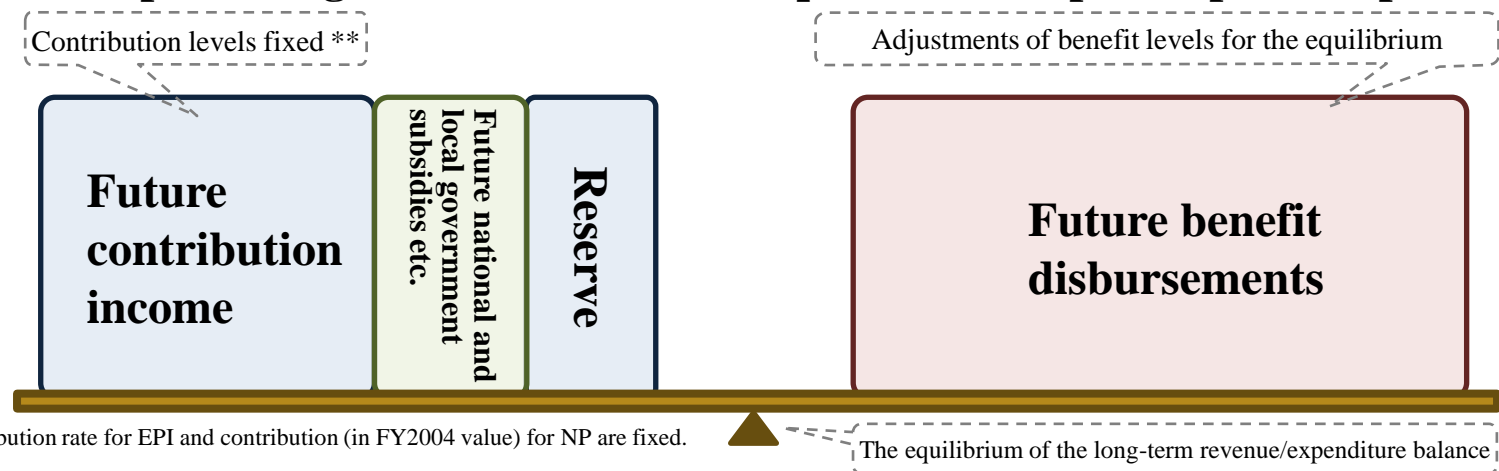
Here, ‘baseline reserve for assessment (estimate)’ is the amount for which the future projections for the reserves are adjusted for the gap between the actual rate of nominal wage increase and inflation rate and those assumed in the actuarial valuation.*

* See P280 and P281 of the full text of annual report.

- In this consideration, based on the following:
 - The financial equilibrium of public pension plans is achieved by the total financial resources of future contribution income, future national and local government subsidies etc. and current reserve, and future benefit disbursements.
 - The plan is designed to automatically adjust benefit levels so that future benefit disbursements is balanced with whole financial resources such as future contribution income, reserve, while contribution levels are fixed.

the actuarial status is evaluated by comparing with whole financial resources (reserves and future contribution income).

Conceptual diagram of the financial equilibrium of public pension plans



** Contribution rate for EPI and contribution (in FY2004 value) for NP are fixed.

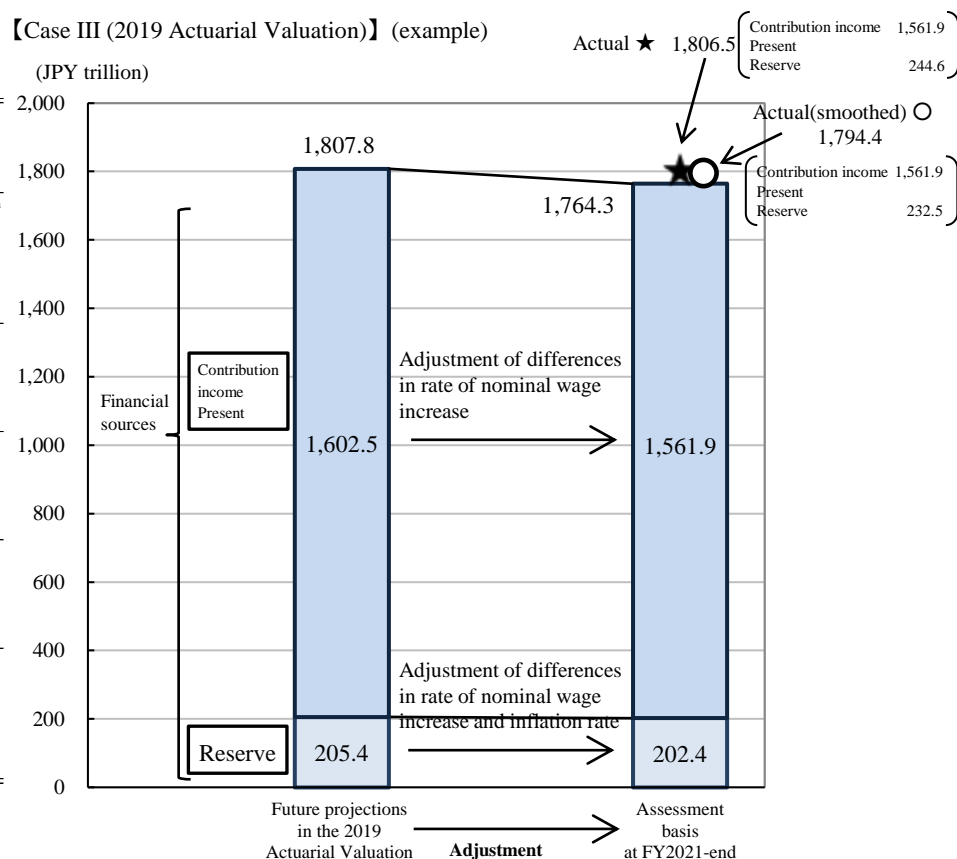
33. Evaluation of the actuarial status for EPI (2)

An analysis of the financial situation of EPI at the end of FY2021 in Cases I, III and V (2019 Actuarial valuation) and Cases III and V (2020 Plan Revision) reveals a positive difference between actual reserves and “baseline reserves for evaluation (projection)” within the range of 2.2 to 2.4% against financial resources (reserves and future contribution income).

[Using the reserved amount smoothed for change in market valuation, the range is 1.6 to 1.7%.]

【Case III (2019 Actuarial Valuation)】 (example)

	Case I (2019 Actuarial Valuation)	Case III (2019 Actuarial Valuation)	Case V (2019 Actuarial Valuation)	Case III (2020 Plan Revision)	Case V (2020 Plan Revision)
	JPY trillion	JPY trillion	JPY trillion	JPY trillion	JPY trillion
Actual reserve ①	244.6 [232.5]	244.6 [232.5]	244.6 [232.5]	244.6 [232.5]	244.6 [232.5]
Baseline reserve for assessment (estimate) ②	202.4	202.4	203.0	202.4	203.0
Difference between actual reserve and baseline reserve for assessment (estimate) ③= ①-②	42.3 [30.2]	42.2 [30.1]	41.6 [29.5]	42.2 [30.1]	41.6 [29.5]
Financial sources (reserve and future contribution income) ④	1,880.6	1,764.3	1,768.5	1,776.5	1,778.8
Ratio of the difference between actual reserve and baseline reserve for assessment (estimate) to financial resources (reserve and future contribution income) ③/④	% 2.2 [1.6]	% 2.4 [1.7]	% 2.4 [1.7]	% 2.4 [1.7]	% 2.3 [1.7]



Note : [] indicates the value when the reserved amount smoothed for change in market valuation is used.

*Baseline reserve for assessment (estimate) is the amount for which the future projections for the reserves are adjusted for the gap between the actual rate of nominal wage increase and inflation rate and those assumed in the actuarial valuation.

- It was confirmed that the number of NP Category-1 insured persons continues to be lower than the future projections of the actuarial valuation, and the number of insured persons for Whole EPI continues to exceed the future projection.

In addition, the actual fertility rate in 2019-2021 was roughly in the middle of the assumed intermediate fertility rate and the assumed low fertility rate in the 2017 population projections, but the deviation from the assumed intermediate fertility rate has widened compared to 2019.

- Should these deviations from future projections continue over the medium to long term, rather than temporarily, the impact on finance of public pensions would be significant.
- 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.

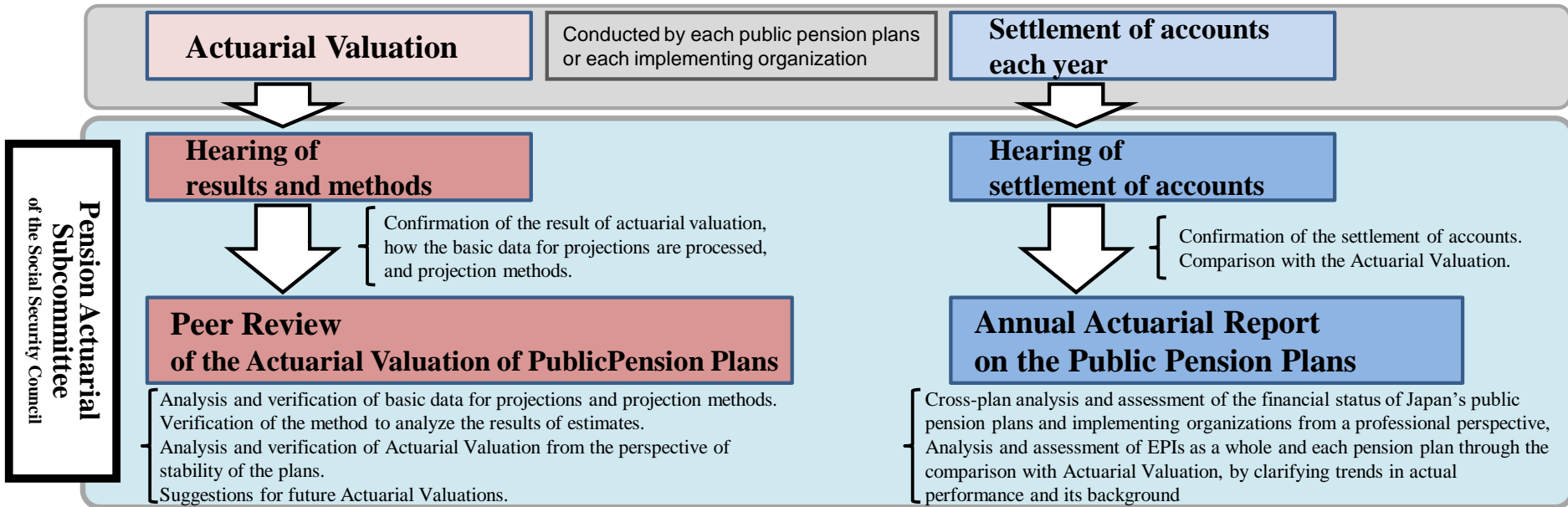
Pension Actuarial Subcommittee of the Social Security Council

Pension Actuarial Subcommittee of the Social Security Council

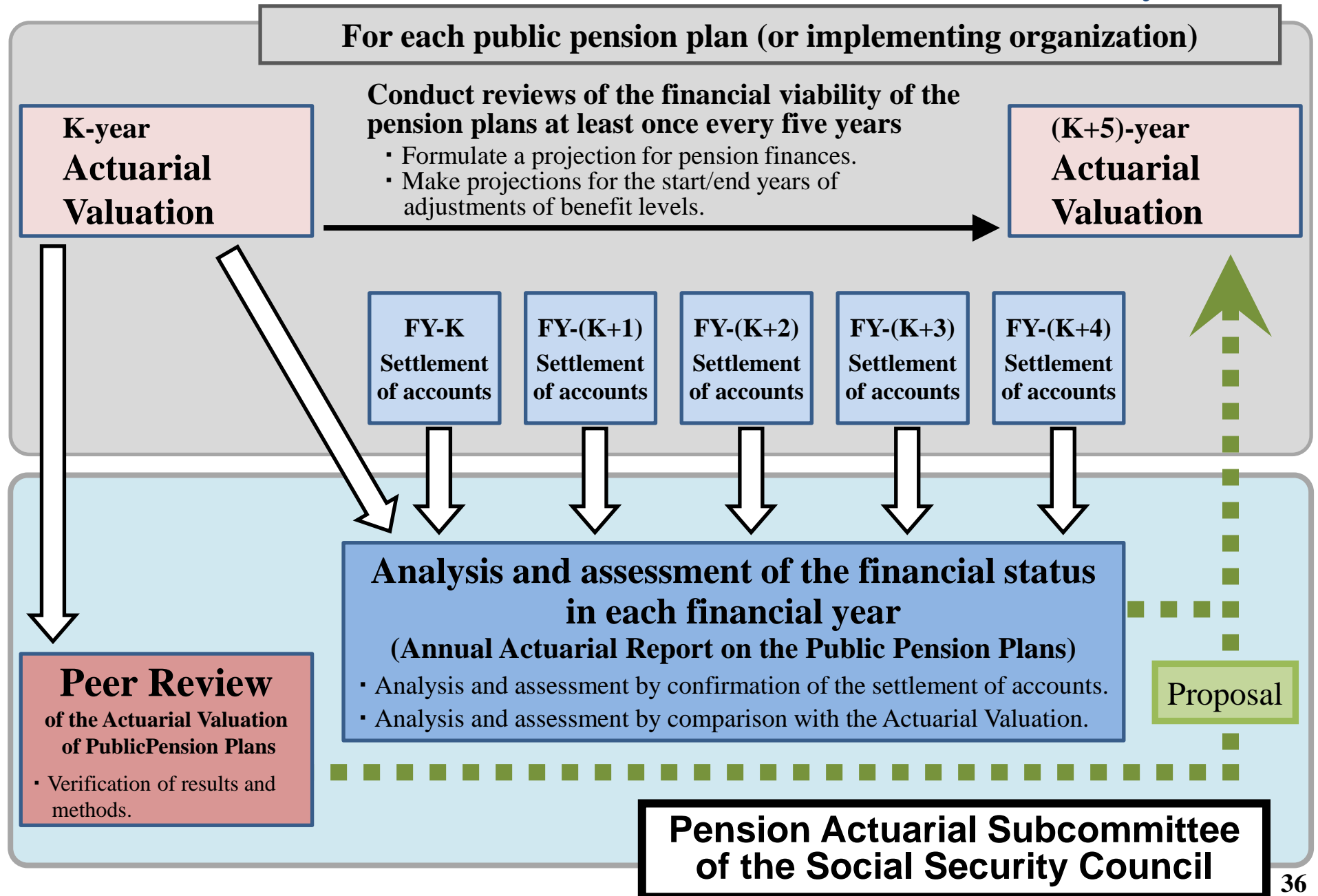
- The Pension Actuarial Subcommittee was established in the Social Security Council and is tasked by the cabinet decision to promote the integration of the public pension plans (2001) with reviewing the stability and fairness of employee pension plans when financial reviews and actuarial valuations are conducted and with obtaining reports on the financial status of each plan every fiscal year.
- Following the integration of employees' pension plans in October 2015, the results of actuarial valuation and reports on the settlement of accounts for each fiscal year are requested and discussed from the perspective of ensuring plans stability.

Cabinet decision on “promotion of the integration of public pension plans (2001)”

It is requested that the Social Security Council establish a subcommittee comprising persons with expertise and experience in the field of pension actuarial science and that the subcommittee be required to report annually on ensuring the stability and fairness of employees' pension plans, in addition to verification at the time of actuarial valuation.

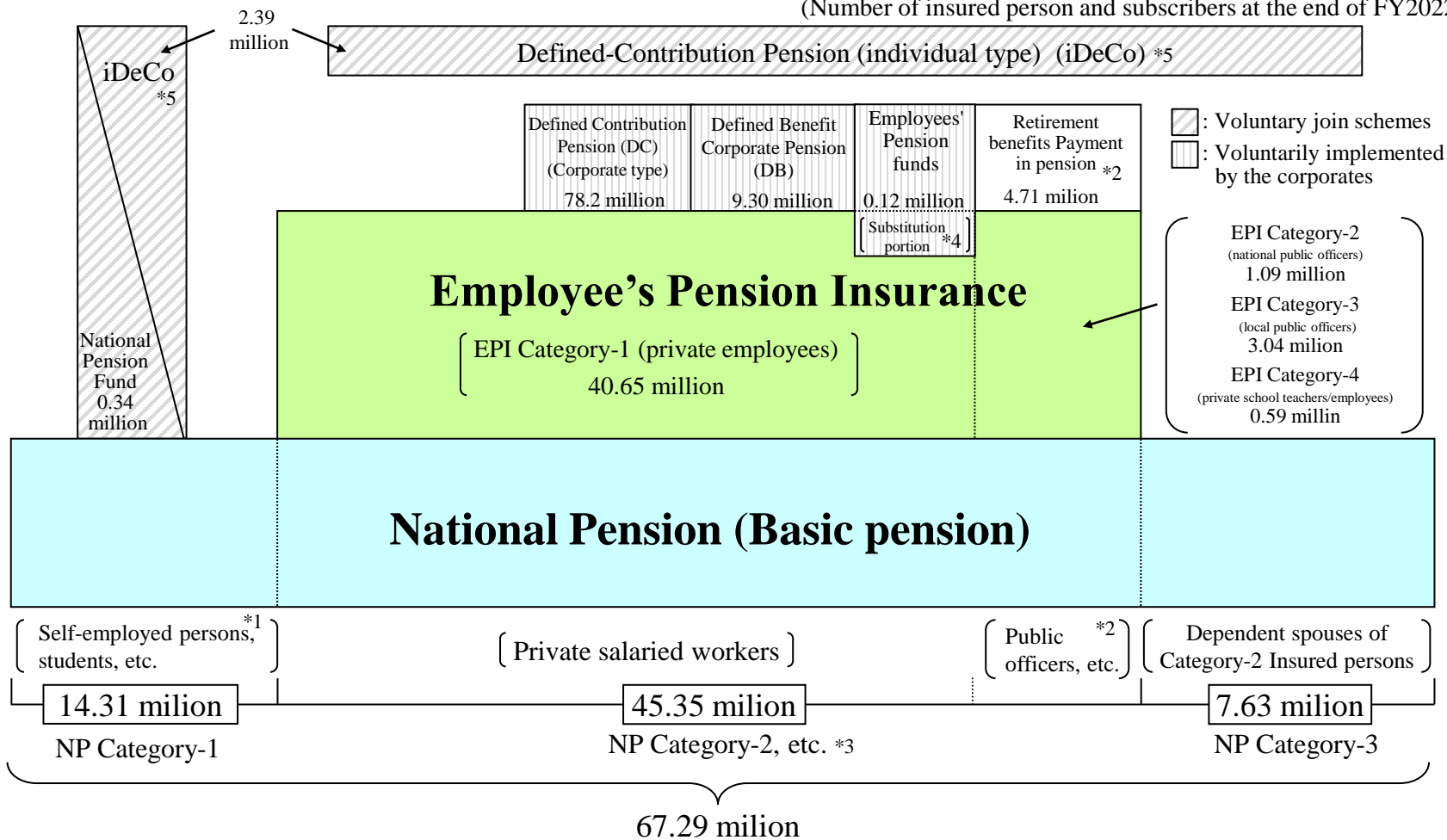


Role of the Pension Actuarial Subcommittee of the Social Security Council



Scheme of Pension Plans

(Number of insured person and subscribers at the end of FY2022)



*1 According to 'the Survey on the Insured of National Pension (2020),' as of March 31, 2020, 19.4% of the NP Category-1 were self-employed, 7.5% were family employees, 6.3% were in permanent employment, 32.6% were in part-time or temporary employment, and 31.2% were unemployed. According to the same survey, students accounted for 21.1% of the total number of insured of NP Category-1.

*2 In response to the integration of the Employees Pension Schemes, public officers and private school teachers joined Employees' Pension from October 1, 2015. Moreover, the portion added according to job category in Mutual Aid Pension was abolished and retirement benefits payment in pension were newly introduced. However, as for the portion for the subscription period of Mutual Aid Pension by September 30, 2015, the portion added according to job category is paid according to subscription period even after October 2015.

*3 Category-2 insured person, etc. refers to the insured persons of EPI (including beneficiaries aged 65 years or above of pension benefits for old-age or retirement in addition to Category-2 insured person).

*4 The Employees' Pension Fund provides a portion of the Old-age Employees' Pension (the "substituted portion" in the figure) on behalf of the government.

*5 Regarding the individual type of defined contribution pension (iDeCo), from January 2017, it is limited to the case where the corporate pension participant (the corporate type participant of the defined contribution pension is limited for the case as stipulated in the regulations), public employees and other mutual aid participants and the category-3 insured person of the national pension can also participate, so that the range of participation has been expanded, so that basically all insured persons under the age of 60 can join.

(Reference 4) Financial Structure of Public Pensions

The insured person, depending on his or her insured category, pays contributions to the NP Account, the EPI Account, or the Accounting for the EPI of the Mutual Aid Associations, the beneficiaries receive pension payments from the BP Account for pension benefits of BP and from the account in which contributions were paid for other pension benefits.

