National Assembly Budget Office

NABO briefing

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Long-term Fiscal Outlook for the Four Public Pension Schemes

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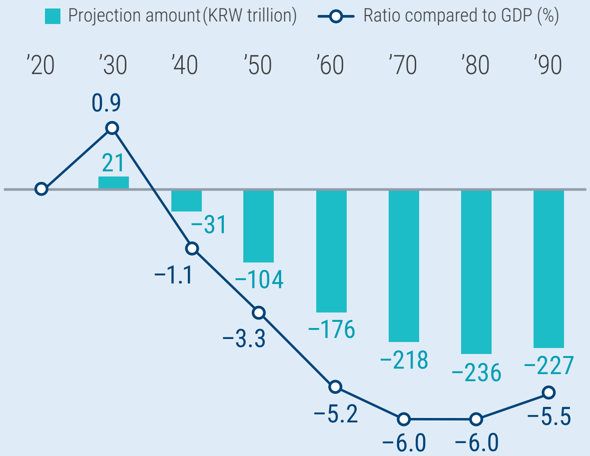
“Public pensions in Korea face various challenges such as fiscal sustainability or equity between different systems. To address these challenges, a long-term fiscal projections of pension systems is required and a discussion for a productive and socially integrated system improvement should follow. In order to comprehensively analyze the four public pensions from a long-term perspective, the National Assembly Budget Office conducted a fiscal projections of income, expenditures, fiscal balance, and reserves by pension program, and analyzed various fiscal evaluation indicators and scenarios based on projection results.”

Key points of long-term fiscal projections for four major public pensions

Target	National Pension, Public Officials' Pension, Teachers' Pension, Military Pension
Period	2020~2090 (70 years)
Projection standard	Based on the assumption that current laws and institutions as of 2020 are not revised
Basic premise	Macroeconomic variables: NABO Deographic changes: Projections by Statistics Korea
Projection items	Revenue, expenditures, fiscal balances, reserves in constant 2020 prices

Balance projections for four major public pensions

(Based on the sums of constant prices)



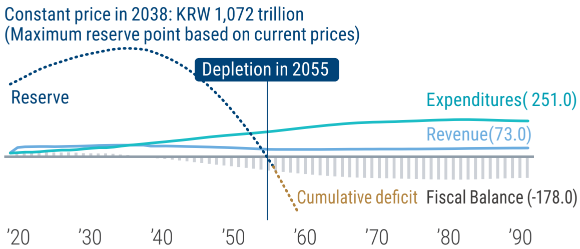
NABO briefing is a summary of a report published by the National Assembly Budget Office for your convenience.
Please find the full version of the report on the NABO’s website (http://korea.nabo.go.kr).

I. Long-term Fiscal Projection

1. National Pension

- Fiscal balance: Turns a deficit in 2039 → A deficit of KRW 178 trillion in2 090 (4.3% of GDP)
- Reserve: Reaches the maximum point in 2038 → Expected to deplete by 2055

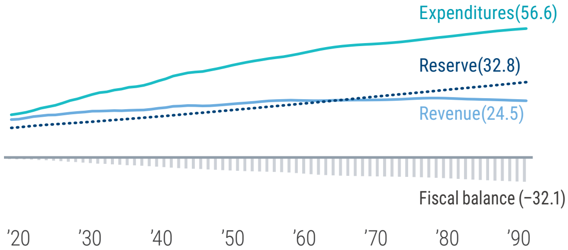
Fiscal balance and reserve projection for the National Pension (Constant prices, KRW trillion)



2. Public Officials' Pension

- Fiscal balance: KRW 2.1 trillion deficit in 2020 → KRW 32.1 trillion deficit in 2090 (0.8% of GDP)
- Reserve: KRW 12.4 trillion in 2020 → KRW 32.8 trillion in 2090

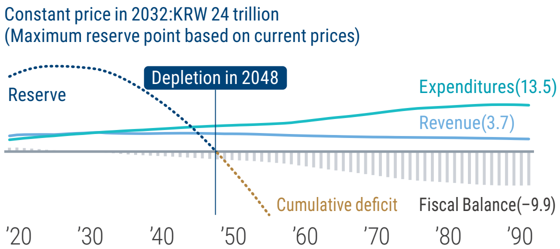
Fiscal balance and reserve projection for the Public Officials' Pension (Constant price, KRW trillion)



3. Teachers' Pension

- Fiscal balance: Turns a deficit in 2033 → A deficit of KRW 9.9 trillion won in 2090
- Reserve: Reaches the maximum point in 2032 → Expected to run out in 2048

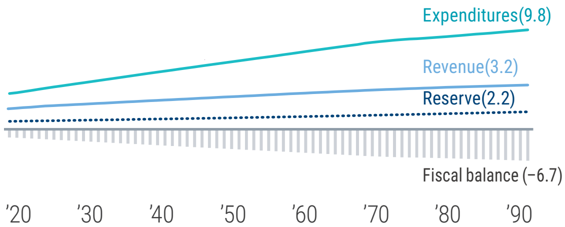
Fiscal balance and reserve projection for the Teacher's Pension (Constant prices, KRW trillion)



4. Military Pension

- Fiscal Balance: KRW 1.7 trillion deficit in 2020 → KRW 6.7 trillion deficit in 2090(0.2% of GDP)
- Reserve: KRW 1.3 trillion in 2020→ KRW 2.2 trillion in 2090

Fiscal balance and reserve projection for Military Pension (Constant price, KRW trillion)

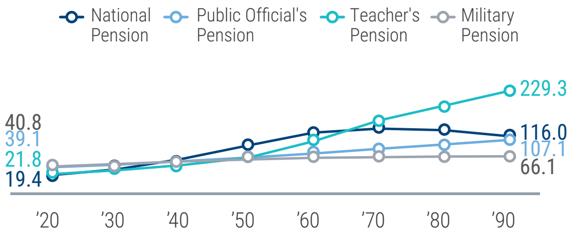


II. Analysis of Fiscal Indicators

1. Dependency ratio*

The dependency ratio in 2090 is 229.3 for the Teachers' Pension, 116.0 for the National Pension, 107.1 for the Public Officials' Pension, and 66.1 for the Military Pension

Dependency ratio of the four public pensions (No. of beneficiaries)

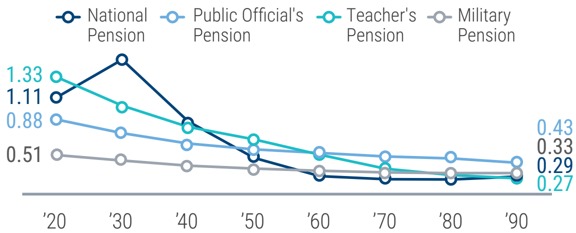


* The number of beneficiaries supported by 100 subscribers

2. Revenue ratio**

The revenue ratio in 2090 is 0.43 for the Public Officials' Pension, 0.33 for the Military Pension, 0.29 for the National Pension, 0.27 for the Teachers' Pension

Revenue ratio of 4 public pensions (multiples)

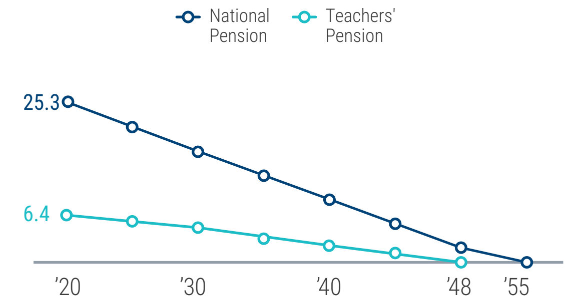


** A specific year's income divided by the year's expenditures

3. Reserve ratio*

As of 2020, the National Pension will continue to decrease from 25.3 and the Teacher's Pension from 6.4 to the point of exhaustion

Reserve ratio of the four public pensions(no. of folds)

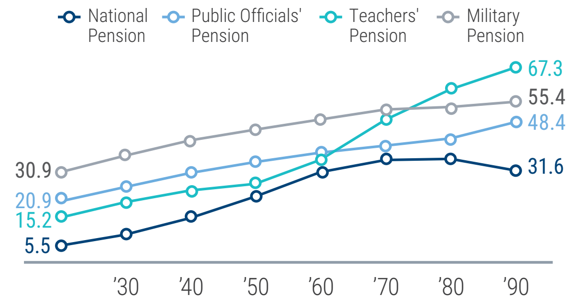


* The specific year's reserve divided by the year's expenditures

4. Pay-as-you-go-cost rate**

The pay-as-you-go-cost rate in 2090 is 67.3 for the Teachers' Pension, 55.4 for the Military pension, 48.4 for the Public Officials' Pension, and 31.6 for the National Pension

Pay-as-you-go-cost rate(%)



** The rate of pension premiums required to cover all pension benefits for a specific year with subscribers' premiums for the year

5. Benefit cost ratio***

The benefit cost ratios of the four major public pensions vary depending on the characteristics of each pension, but they commonly show a benefit cost ratio of more than 2. If the current system is maintained, it will act as a major cause of fiscal sustainability issues when considering future demographic changes.

*** Comparing the ratio of insurance premiums and pension benefits of a specific cohort to the present value

Ⅲ. Scenario Analysis

1. National Pension

Scenario①
Premium rate:9% (as-is)
Replacement rate: 40% (as-is)
Pensionable age: 65→67
Entry age: No changes

Scenario②
Premium rate:9% (as-is)
Replacement rate: 40% (as-is)
Pensionable age: 65→67
Entry age: Raise 2 years

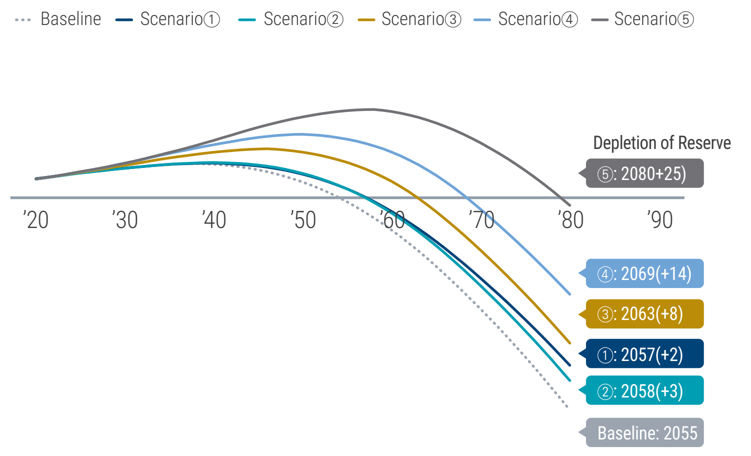
Scenario③
Premium rate: 9 →12%
Replacement rate: 40 → 45%
Pensionable age: 65 → 67
Entry age: No changes

Scenario④
Premium rate: 9 →14%
Replacement rate: 40 → 45%
Pensionable age: 65 → 67
Entry age: No changes

Scenario⑤
Premium rate: 9 →18%
Replacement rate: 40 → 45%
Pensionable age: 65 → 67
Entry age: No changes

- Scenarios to adjust premium rate, replacement rate, and pensionable age
- The depletion of the National Pension reserve is expected to occur in 2 to 25 years after the baseline year

Reserve projection by the National Pension scenarios (Based on current price)



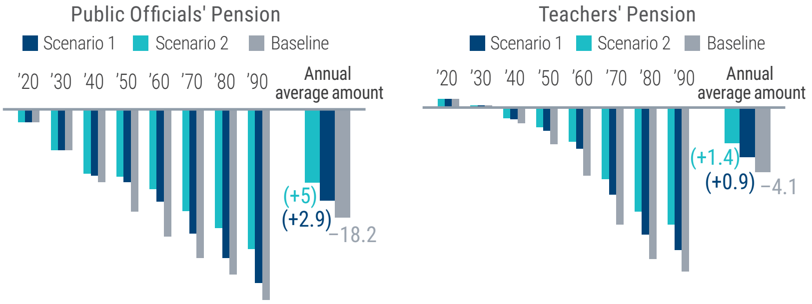
2. Public Officials' Pension, Teachers' Pension

Scenario①
Pension payment rate: 1.7%(as-is)
Pensionable age: 65→67
Retirement age: Extend by 2 years

Scenario②
Pension payment rate: 1.7→1.5%
Pensionable age: 65→67
Retirement age: Extend by 2 years

- Scenarios are made to adjust pension payment rate, pensionable age and retirement
- The fiscal balance of Public Official's Pension is expected to improve by an annual average of KRW 2.9 trillion and KRW 5 trillion per scenario when compared to the baseline. The fiscal balance of Teacher's Pension is expected to improve by an annual average of KRW 0.9 trillion and KRW 1.4 trillion per scenario.

Fiscal balance projection of Public Officials' Pension and Teachers' Pension by scenario(based on constant price, KRW 1 trillion)



3. Military Pension

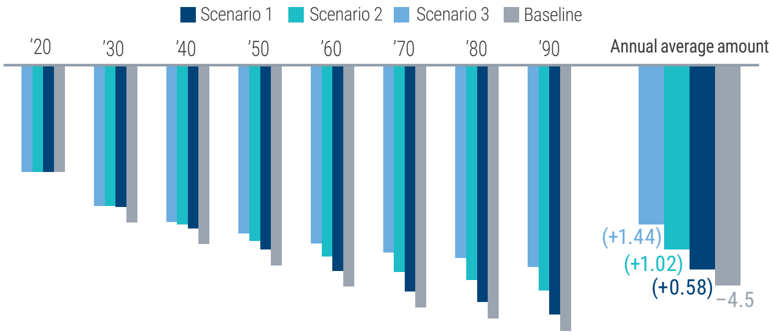
Scenario①
Premium rate: 14→18%
Pension payment rate: 1.9%(as-is)
Pension payment rate for bereaved families 70→60%
Benefit raise: Freeze for 5 years

Scenario②
Premium rate: 14→18%
Pension payment rate: 1.9→1.7%
Pension payment rate for bereaved families: 70→60%
Benefit raise: Freeze for 5 years

Scenario③
Premium rate: 14→18%
Pension payment rate: 1.9→1.5%
Pension payment rate for bereaved families: 70→60%
Benefit raise: Freeze for 5 years

- Scenarios assume that the pension system is revised to the level of the Public Officials' Pension Reform of 2015
- The fiscal balance of the Military Pension is expected to improve by an annual average of KRW 0.58 trillion, KRW 1.02 trillion, and KRW 1.44 trillion per scenario when compared to the baseline

Fiscal balance projection of the Military Pension by scenario
(based on constant price, KRW 1 trillion)



Ⅳ. Implications

1

As a result of comprehensive analysis of the four public pensions, if we do not continuously make efforts to improve the system, the sustainability of public pensions cannot be guaranteed, and the burden on future generations will increase rapidly

2

A discussion about resolving fiscal problems and setting the direction for fiscal improvement are required, accounting for the characteristics of each pension and the fiscal situation

3

Reviewing the introduction of the auto-adjustment pension systems of Sweden, Germany, etc is required to alleviate the social costs resulting from repeated discussions on pension system reform

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