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The effect of the introduction of mandatory
Category 3 contributions on the poverty rate for
the elderly in Japan

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Outline

1. *Background*

- ▶ Public pension scheme in Japan
- ▶ Argument about Category 3 subscribers
- ▶ Purpose of this study

2. *Methods*

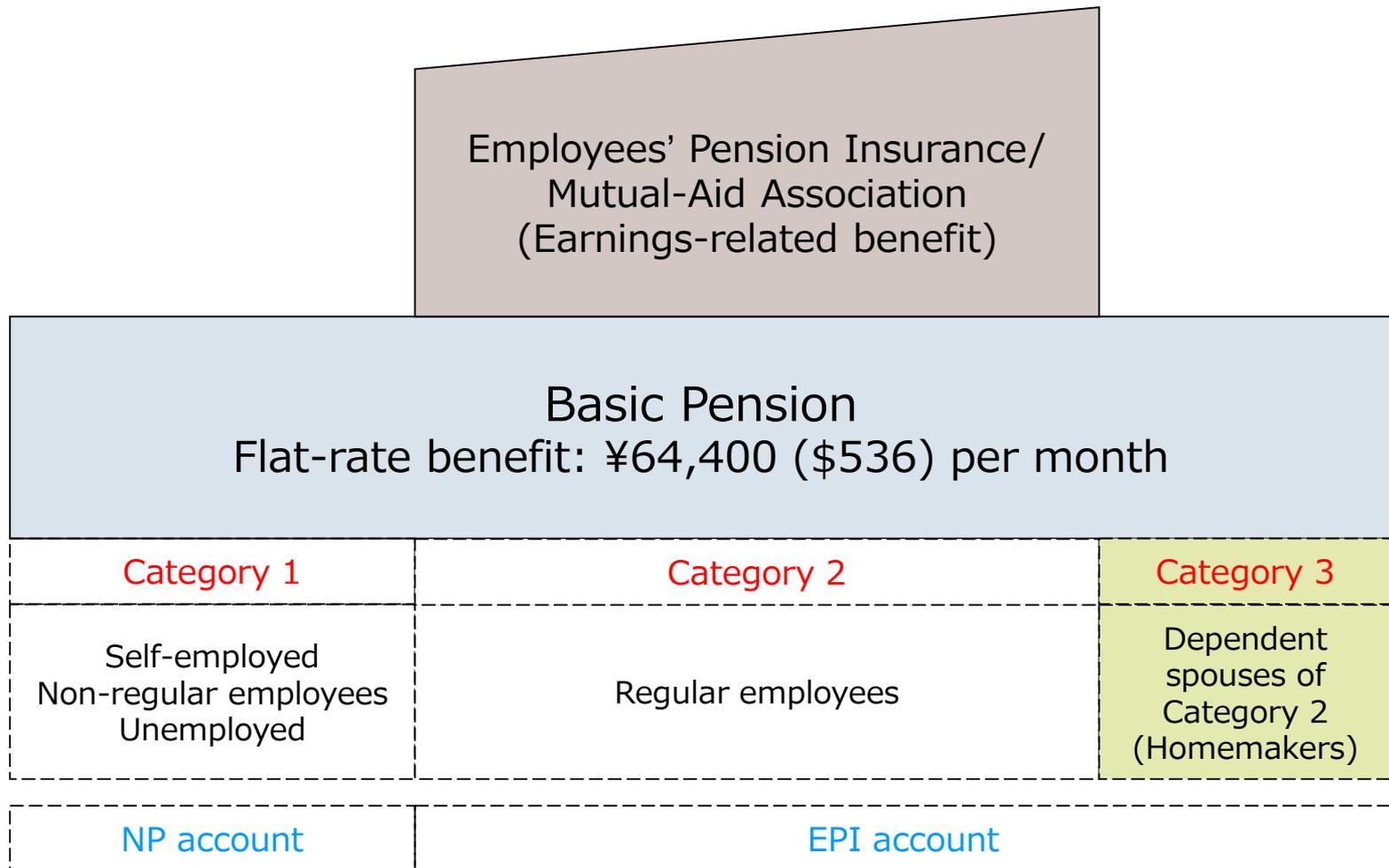
- ▶ Actuarial valuation
- ▶ Dynamic microsimulation model

3. *Effects of mandatory Category 3 contribution*

- ▶ Distribution of pension amounts
- ▶ Future trends in poverty rates

4. *Conclusions*

Public pension scheme in Japan



Numbers of subscribers (in million)

Category	Male	Female	Employment status
Total	34.7 (100.0%)	32.5 (100.0%)	
1	9.3 (26.7%)	8.8 (27.1%)	Self-employed Non-regular employees Unemployed
2	25.3 (73.0%)	14.3 (44.2%)	Regular employees
3	0.1 (0.3%)	9.3 (28.8%)	Homemakers

Source: 2013 Annual Report (MHLW, 2014)

Contributions and benefits

▶ *Category 1 subscribers*

- ▶ They must pay their own contributions.
- ▶ If they do not pay their contribution, their basic pension will be reduced.
- ▶ 40 percent of Category 1 subscribers do not pay their contribution. (They will face a poverty risk in their old age.)

▶ *Category 2 subscribers*

- ▶ Their contributions are deducted from their salary.
- ▶ Non-payment of contribution is not a problem.

▶ *Category 3 subscribers (homemakers)*

- ▶ They do not have to contribute to the basic pension.
- ▶ But they are deemed to have paid their contributions.
- ▶ Thus they are entitled to a full basic pension.

Why so generous for homemakers?

- ▶ The social security system in Japan was developed under the premise that postwar families are common.
 - (1) Men and women are married.
 - (2) Husbands work as regular employees and wives are dependent homemakers.
 - (3) Husbands and wives seldom get divorced.
- ▶ Therefore, the social security system is particularly generous toward dependent wives and widows.
- ▶ However, these premises are no longer valid.

Controversial issue

▶ *Pros*

- ▶ The 1985 amendment established pension rights for women as homemakers had up until then participated in the public pension scheme only voluntarily.
- ▶ The amendment is an important safety net for homemakers (dependent wives).

▶ *Cons*

- ▶ The amendment violates a fundamental rule of the social insurance system, namely, to provide benefits according to contributions.
- ▶ It might have a bad effect on women's labor force participation because homemakers have an advantage in pension benefits.

Purpose of this study

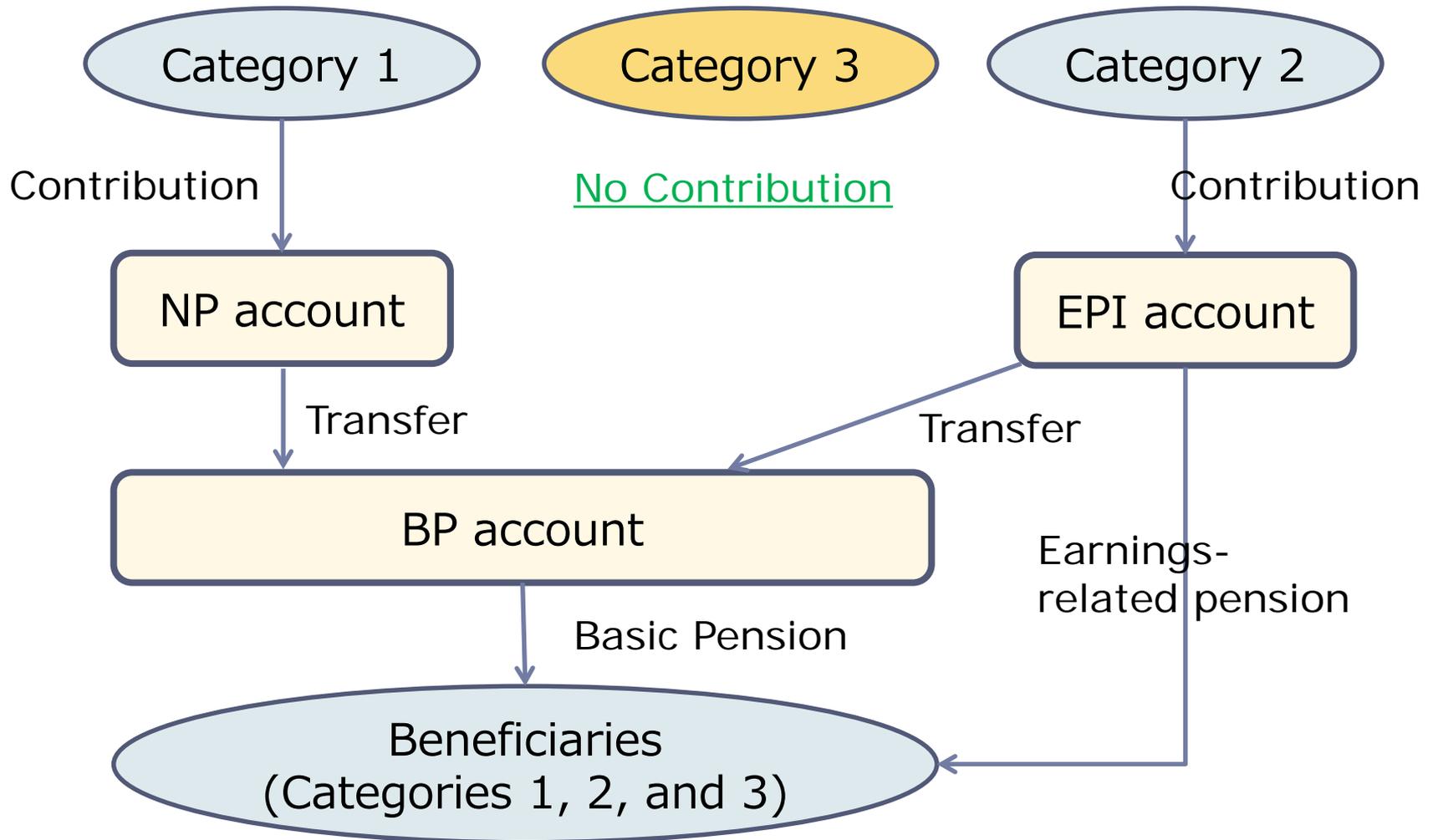
- ▶ *Current argument about Category 3 contribution*
 - ▶ Philosophical disputation
 - ▶ Ideological conflict
 - ▶ No scientific evidence

- ▶ *Purpose of this study*
 - ▶ Present scientific evidence.
 - ▶ Evaluate adequacy of pension benefits using a poverty rate for the elderly in the future.

Anticipated results

- ▶ Homemakers' basic pension benefits would be reduced because of their non-payment of the newly introduced contribution.
 - > It would increase the poverty rate.
- ▶ However, the surplus from the new contribution could be devoted to increasing pension benefits.
 - > It would lower the poverty rate.

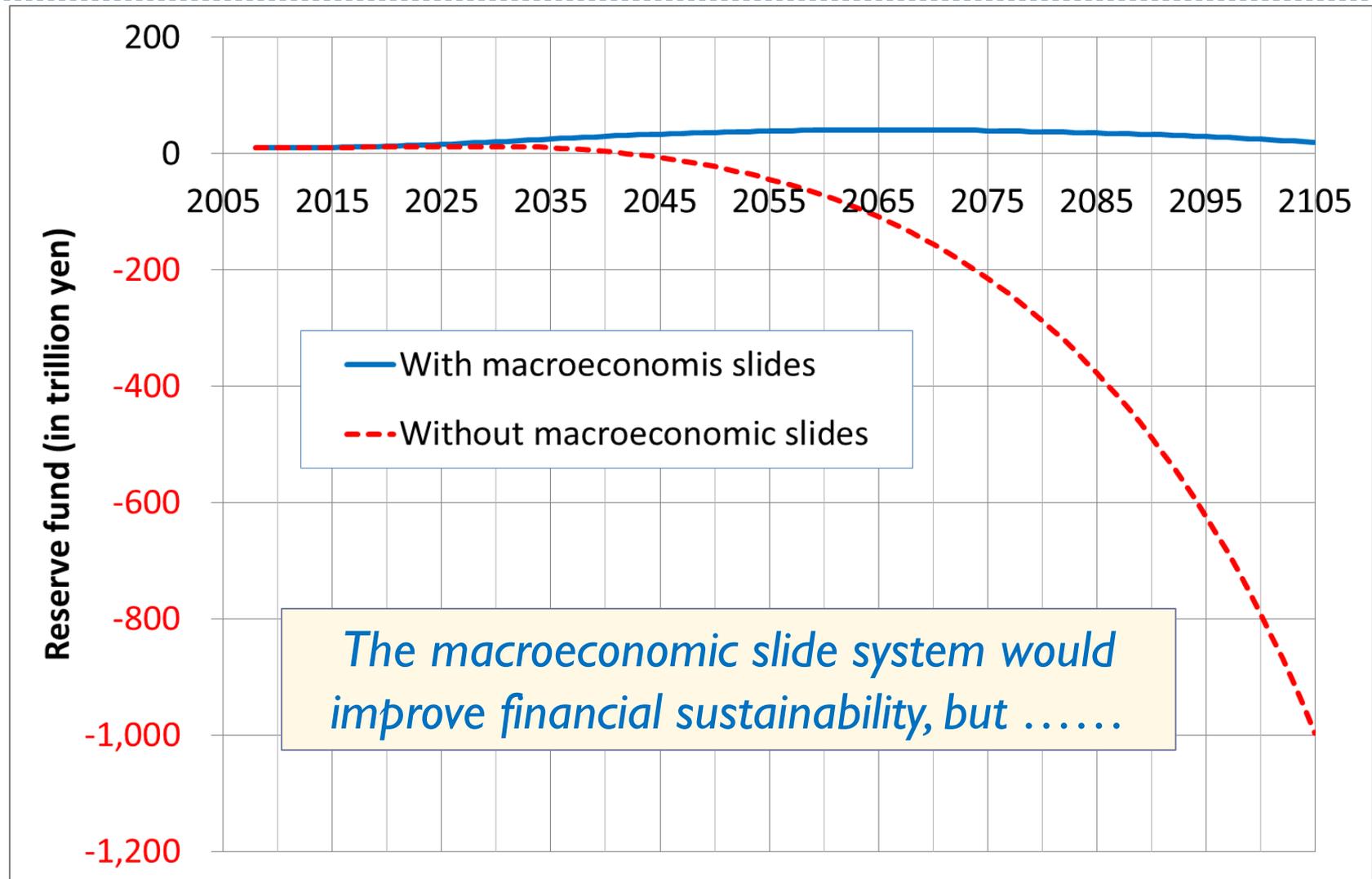
Flow of pension funds



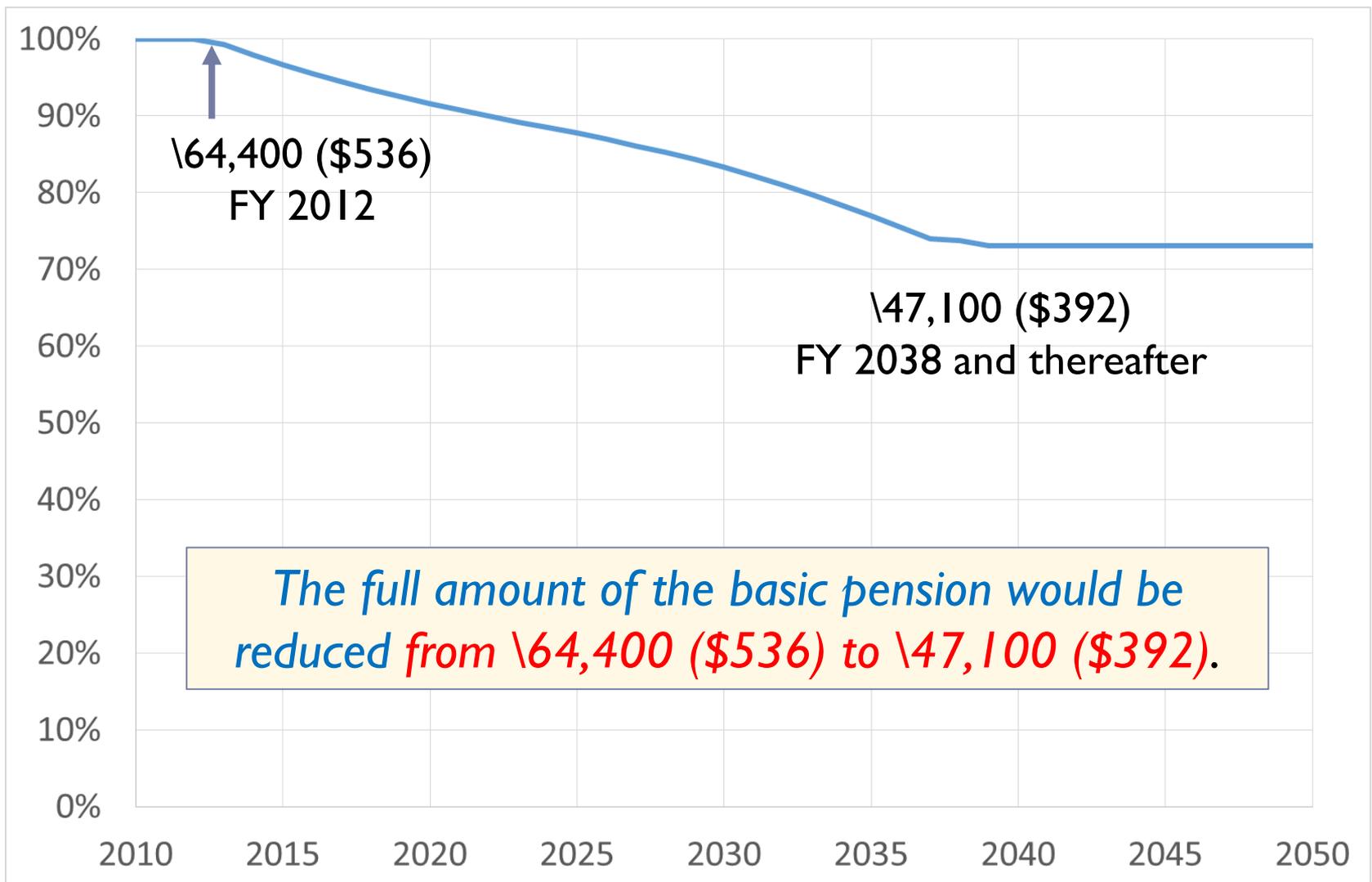
The 2009 Actuarial Valuation

- ▶ The public pension scheme in Japan is currently not a defined benefit plan but a defined contribution plan.
- ▶ The level of pension benefits is reduced automatically to achieve the financial equilibrium of the pension accounts.
 - (1) Make financial projections without any reduction of the current level of pension benefits.
 - (2) Calculate how much the level of pension benefits should be reduced (known as the “macroeconomic slide system”) to achieve financial equilibrium.
 - (3) Check the final level of pension benefits (replacement ratio defined by government).

Financial projections for NP account



Macroeconomic slide for BP



Replacement ratio

- ▶ The indicator of the level of pension benefits is a replacement ratio that is defined by the Japanese government.

Replacement ratio

$$= \frac{\text{Husband's pension} + \text{Wife's pension (before tax)}}{\text{Average income of active males (after tax)}}$$

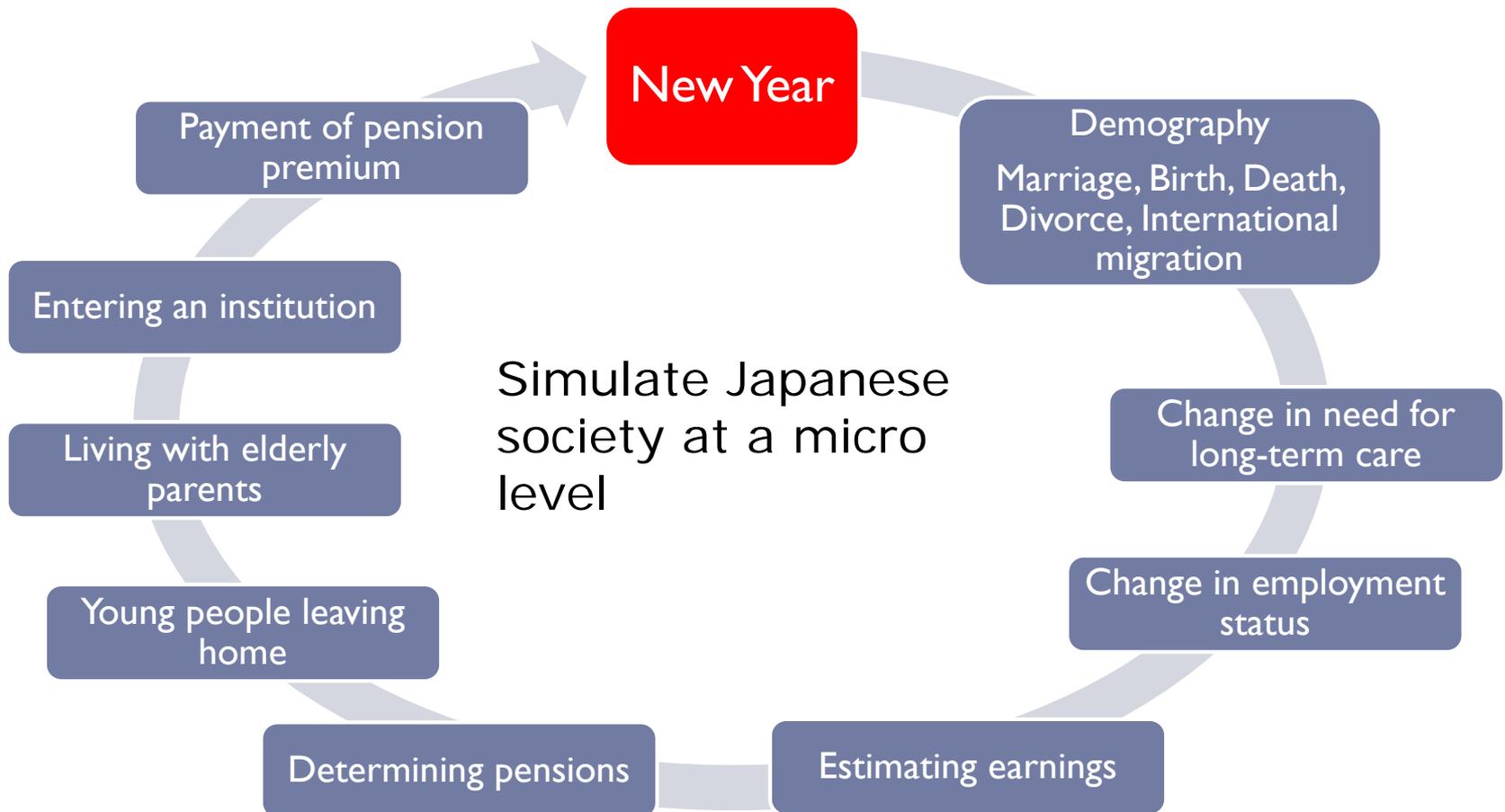
- ▶ The husband is covered by the EPI from 20–59 years.
- ▶ The wife, who is the same age as her husband, has always been dependent on him. (Category 3 subscribers)
- ▶ The pension amount is that at the age of 65 years.

Indicator of adequacy

- ▶ The replacement ratio defined by the government seems to be insufficient as an indicator of adequacy.
 - ▶ No longer “typical model”
 - ▶ Inconsistent between the denominator and numerator
- ▶ Adequacy is evaluated by the poverty rate for the elderly.
 - ▶ Poverty line: the level of livelihood assistance stipulated by the Public Assistance Act
 - ▶ Method to estimate: dynamic microsimulation model

Method—microsimulation model

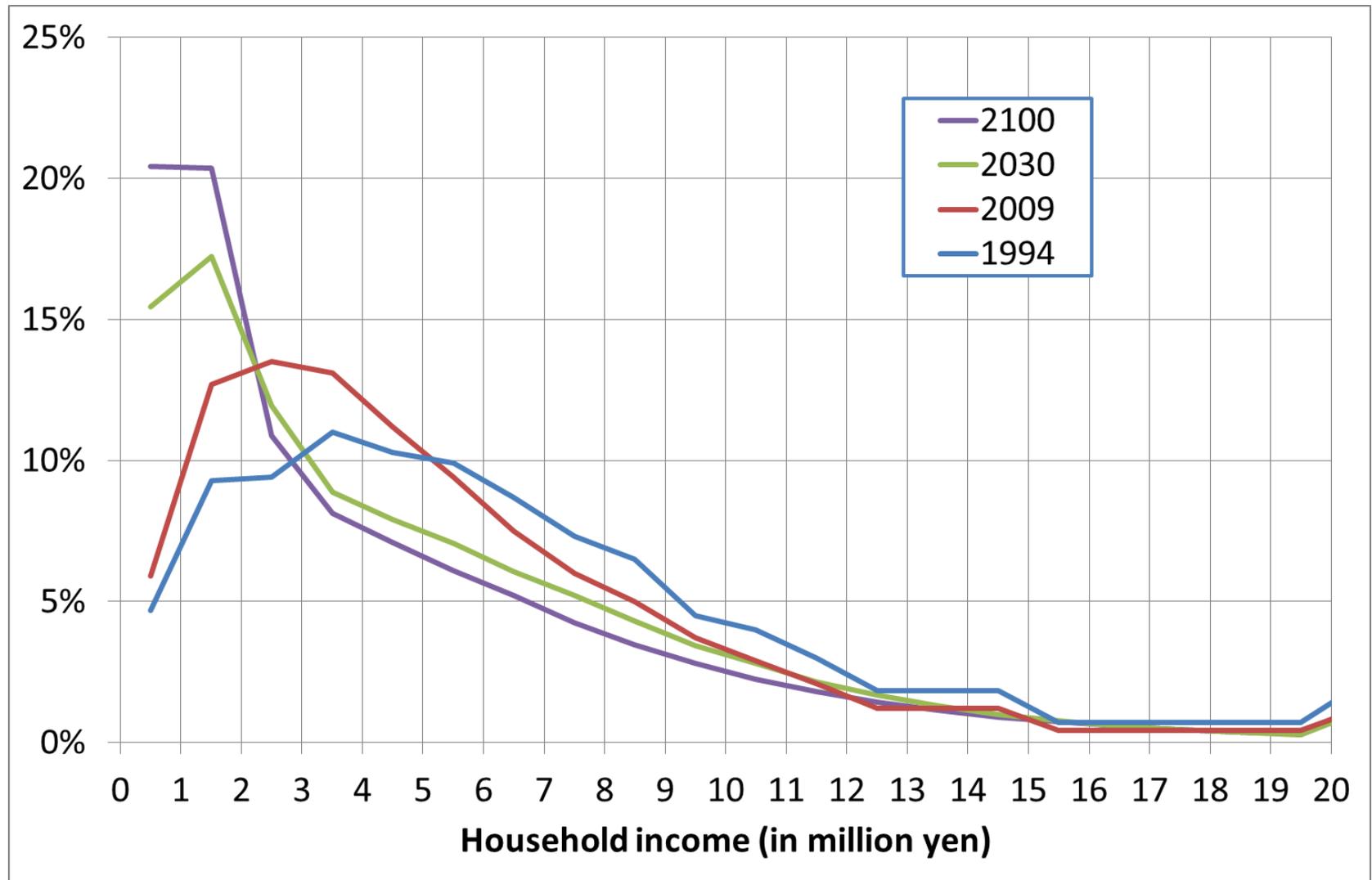
▶ *Integrated Analytical Model for Household Simulation (INAHSIM)*



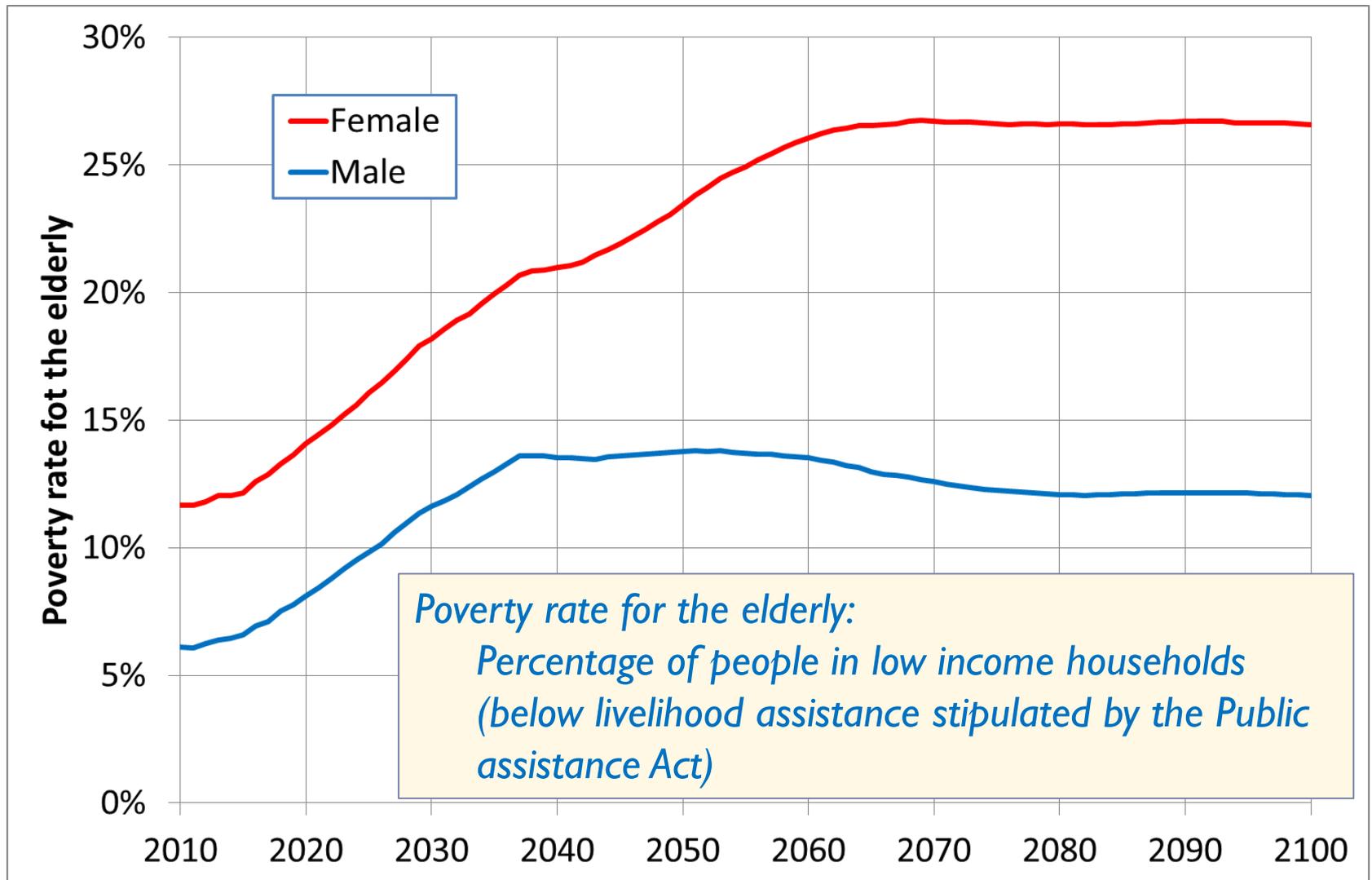
Key assumptions and simulation

- ▶ *Key assumptions*
 - ▶ Demography (birth, death, marriage, divorce, and immigration)
 - ▶ Household changes after demographic events
 - ▶ Changes in employment status and earnings
 - ▶ Living with elderly parents
 - ▶ Determining pension amounts and their adjustments
 - ▶ Contribution payment behavior of Category 3 subscribers: same as that of Category I subscribers
- ▶ *Procedures of estimating the poverty rates*
 - ▶ Estimate households and household members at a micro level.
 - ▶ Estimate household income and specify the household below poverty line.
 - ▶ Count the number of people who belong to the low income households.

Household income distribution



Poverty rates (Current scheme)



Effect of mandatory Category 3 contributions

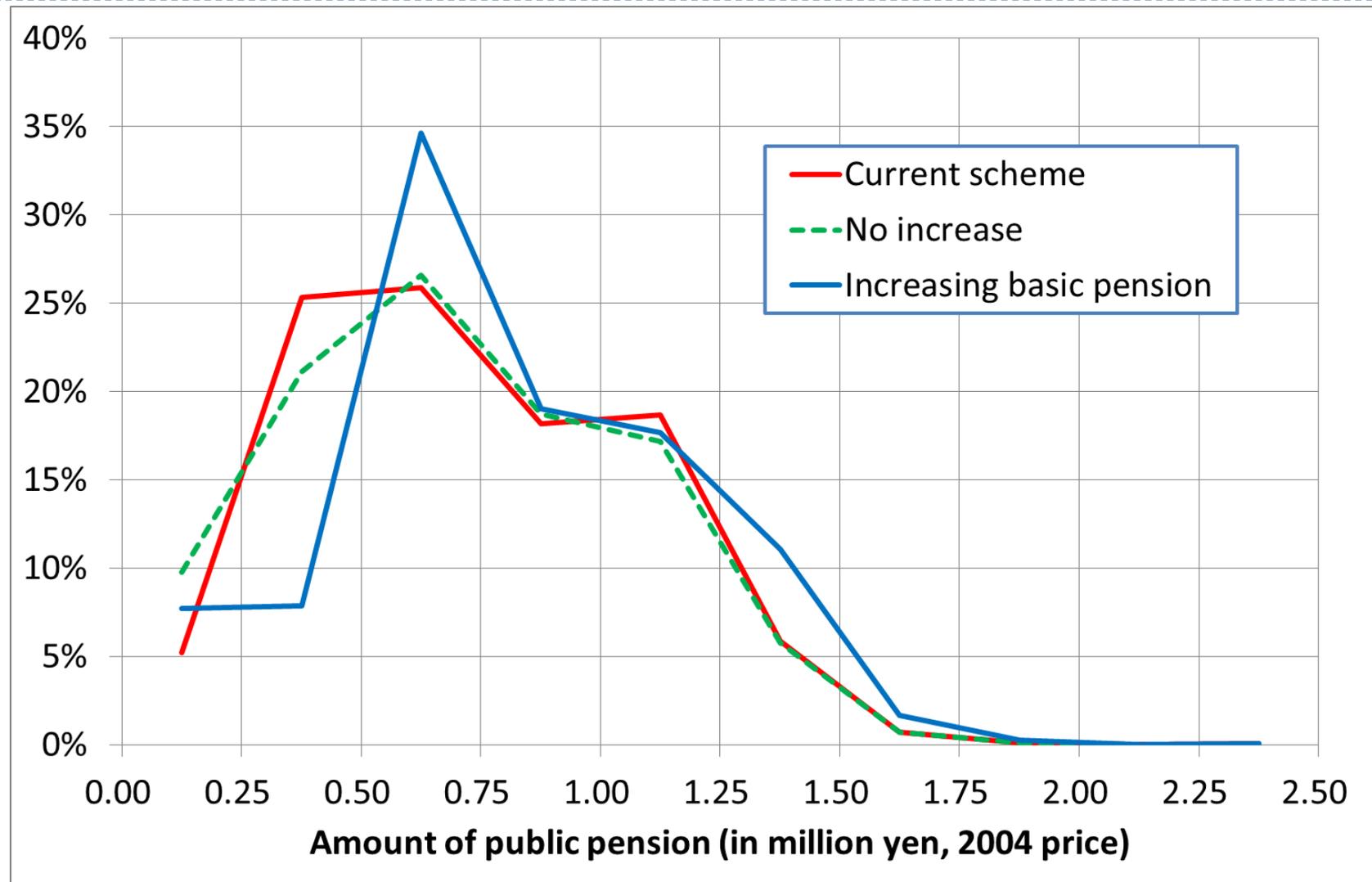
▶ *Comparison of 3 Plans*

- ▶ Current scheme
- ▶ Mandatory Category 3 contribution but no increase in the basic pension (for comparison)
- ▶ Mandatory Category 3 contribution and devoting the surplus to increasing the basic pension

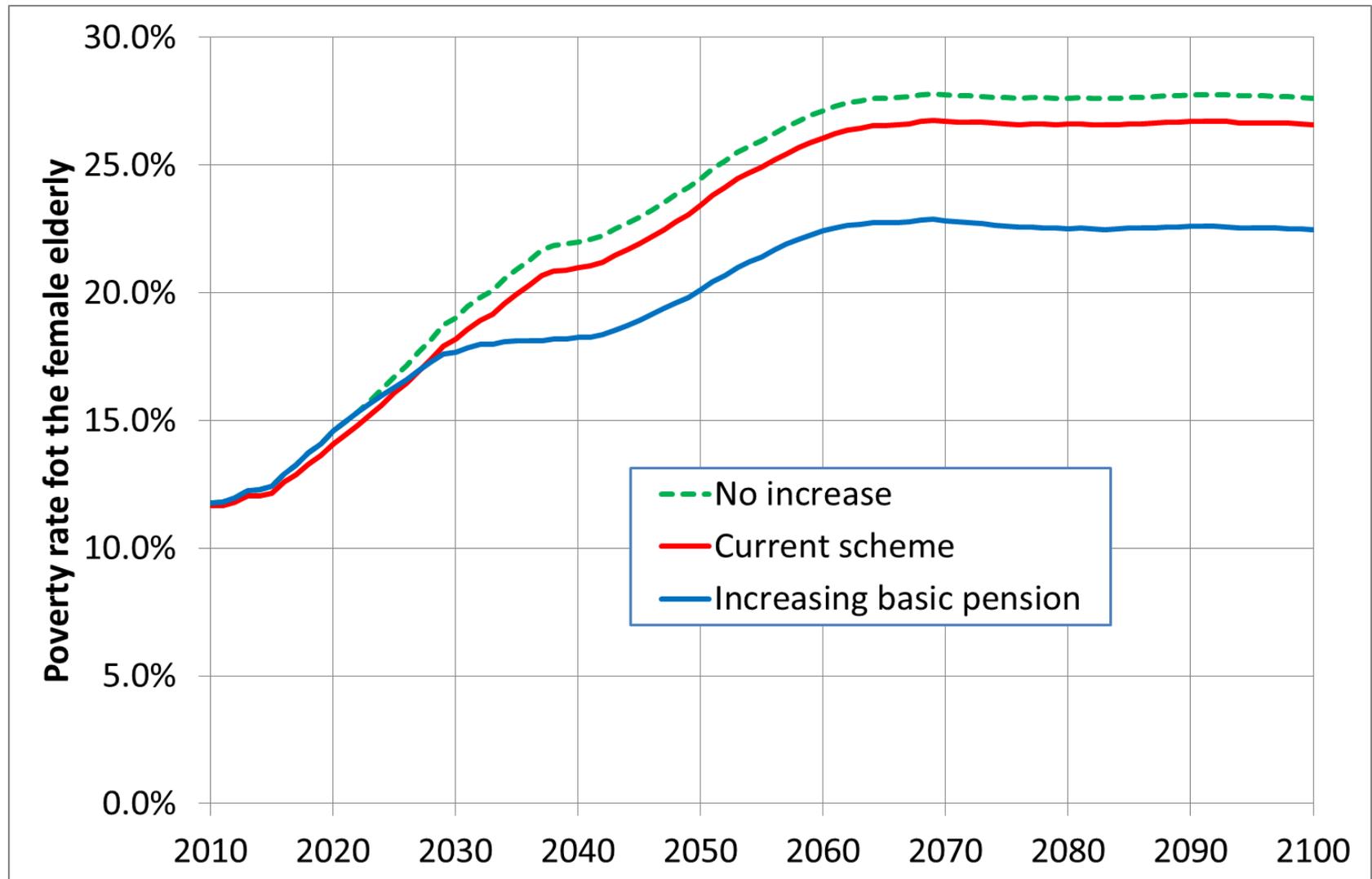
▶ *How to increase the basic pension*

- ▶ Under the current scheme, the macroeconomic slide system (about -1% per year) would be applied to the basic pension until 2038 or accumulated reduction rate of 26.9%.
- ▶ If the contribution of Category 3 subscribers were mandatory, the macroeconomic slide system could end by 2023 and the accumulated reduction rate would be 10.9%.

Distribution of pension amount in 2050 (Females)



Trends in poverty rates for females



Conclusions

- ▶ *It might have negative effects on adequacy.*
 - ▶ All homemakers (dependent wives) would not receive the full amount of the basic pension.
 - ▶ However, the surplus from the new contribution could be devoted to increasing pension benefits for all beneficiaries.
 - ▶ Simulation results show that it would lower the poverty rate.
- ▶ *Argument about Category 3 contribution*
 - ▶ Philosophical disputation is important but it should be based on scientific evidence.
 - ▶ Japan's public pension system might be financially sustainable but we should pay attention to its adequacy.
 - ▶ Mandatory Category 3 contributions is one of the countermeasures of improving its adequacy.

THANK YOU FOR YOUR ATTENTION

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