Social Security Pension Systems under Rapid Ageing of Society in Japan

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Purpose of the presentation

- To describe how Japan's social security pension systems have coped with the rapid ageing of the population, focusing on the modified indexation as a sort of automatic balancing mechanism
- International comparison
- Remaining issues

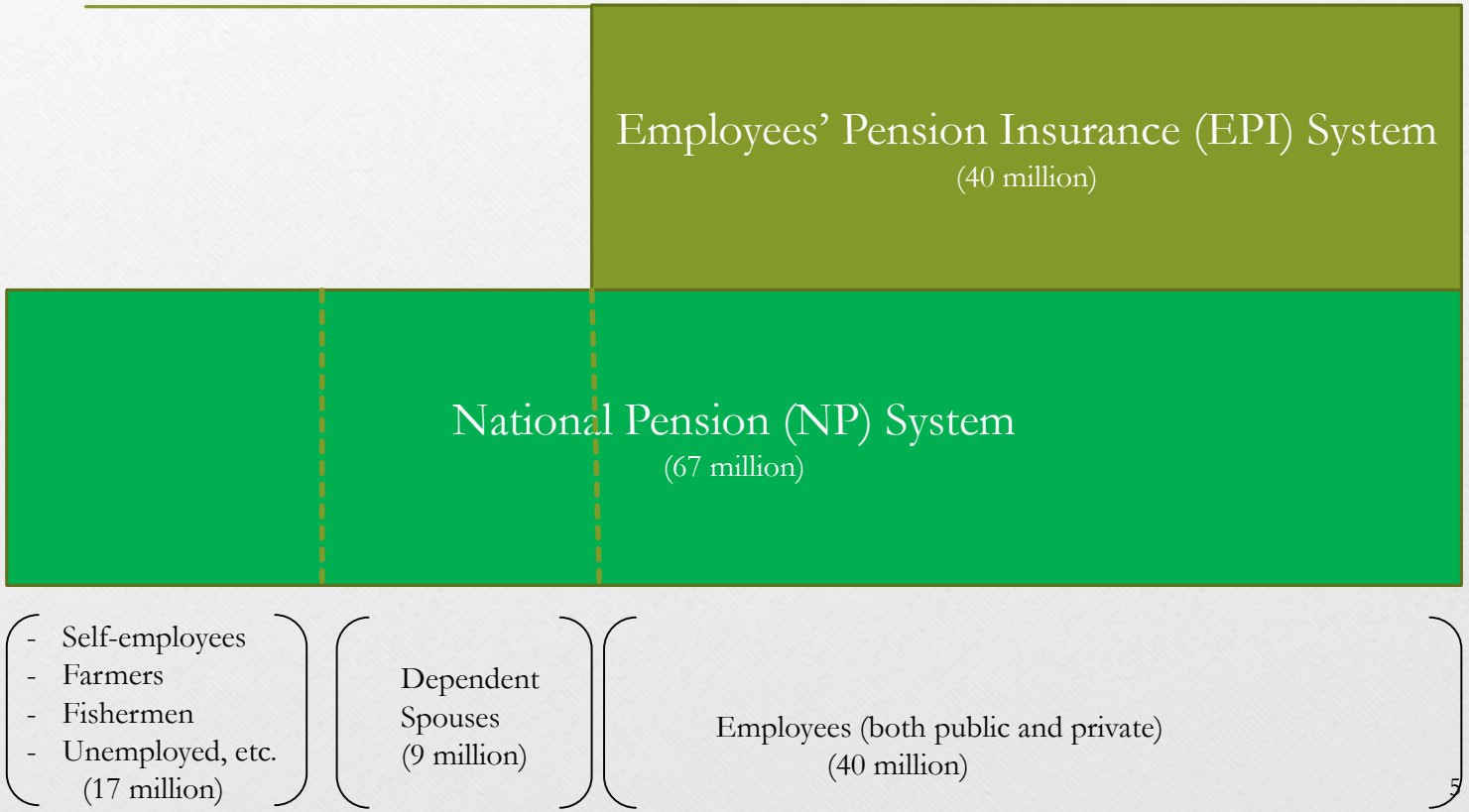
Contents

- Social security pension systems in Japan
- Rapid population ageing and political situation
- Modified indexation
- Adequacy requirement
- International comparison
- Issues to be addressed

Social security pension systems in Japan

Social security pension systems in japan

(Figures are as of the end of March 2015)



National Pension (NP) System

- covers the whole nation
- provides flat-rate basic pensions for old-age, disability and survivorship
- Employees do not pay their contributions to the NP System but to the EPI System and the EPI System transfers designated amount of money to the NPI System
- Contributions of non-employees are flat-rate (many of the non-regular workers are deemed to be non-employees)
- Dependent spouses do not have to pay contributions to the NP System. The EPI System pays them for them
- A half of the basic pension benefits is subsidized by the general revenue

Employees' pension insurance (EPI) system

- covers the whole employees except for most part of non-regular employees
- covers both private employees and public employees
  > started on 1 October 2015
  > Before that there were three Mutual Aid Association Systems other than the EPI System. They were merged with the EPI System on 1 October 2015
- provides earnings-related benefit for old-age, disability and survivorship (based on career average wages)
- Contributions are proportionate to earnings
- Income redistribution function among employees

Actuarial valuations

- It is stipulated in the law that the actuarial valuation must be carried out at least every five years
- Every time the longevity more than projected on the previous valuation and the fertility lower than projected on the previous valuation were assumed since 1994
- It lead to repeated tough reforms

Rapid population ageing and political situation

The share of the elderly

(% of 65+ in the total population)

Year	Spain	Japan	Italy	US	Canada	UK	Germany	France
1950	7.2	4.9	8.1	8.3	7.7	10.8	9.6	11.4
1970	9.6	7.0	11.1	9.8	8.0	13.0	13.6	12.9
1990	13.4	11.9	14.9	12.5	11.2	15.7	15.0	14.1
2010	17.2	23.0	20.3	13.1	14.2	16.6	20.8	16.8
2030	25.7	30.7	26.8	20.1	22.7	21.7	28.2	23.2
2050	35.8	36.5	33.0	21.4	24.7	24.7	32.7	25.5
2070	33.2	36.3	31.2	23.3	25.7	25.9	32.9	26.7
2090	34.1	35.5	32.0	25.4	28.0	28.4	33.5	28.9

(Source) UN Population Division "World Population Prospects: the 2012 Revision"

Causes for the rapid population ageing

- Steady improvement of mortality
- Steady decline of fertility
- Our baby boomers consist of only five cohorts

- born in 1945-1949

Consecutive tough reforms (1)

- 1980

- officially noticed the improvement of longevity

- proposal to raise the pensionable age by the government, but the government party rejected it

- 1985

- reduction of earnings-related benefit by 25% (with transitional provisions)

- 1994

- officially noticed the decline of fertility rate

- change of indexation basis from gross income increase to disposable income increase

- raising the pensionable age of flat-rate part from 60 to 65

Consecutive tough reforms (2)

- 2000

- further advance of the longevity improvement and of the fertility decline
- raising the pensionable age of earnings-related part from 60 to 65
- reduction of earnings-related part by 5 %
- change of indexation basis from disposable income increase to price for those beneficiaries aged 65 and above

Fruitless Political Battle Repeated

- As the tough reforms were repeated, the opposition parties tried to make use of the pension matters to attack the government parties
- Diet deliberations were not on the issues given rise to by the population ageing but to give faulty image to the government parties, including the assertion that the decline of fertility was due to erroneous policy of the government parties
- In the 1994 and 2000 reform, voting was carried out while the opposition parties were opposing the vote

The 2004 reform (1)

- Another advance of longevity and decline of fertility more than projected in the 2000 reform
- It seemed impossible to carry out the reform to restore the financial equilibrium by following the past (authentic) reform process, that was to decide the benefit change first and then the contribution rates

The 2004 reform (2)

- People had anxiety that the contribution rate would go up endlessly.
- We studied the Swedish reform in the 1990's and learned that they fixed the contribution rate and introduced an automatic balancing mechanism
- We decided to fix the contribution programme and introduce an automatic balancing mechanism

Modified indexation

Financial framework of the 2004 reform

- Stipulating the future contribution programme in the law

- ease the people's anxiety that the contribution rate would go up endlessly

- Setting the period of financial equilibrium (PFE) of about 100 years

- When we discuss the financial equilibrium, we make financial projections of about 100 years

- We include the requirement that the reserve fund at the end of the PFE should be equal to one-year benefit expenditure of the last year of the PFE

- Modifying the indexation when the financial equilibrium is not attained by subtracting the modifier from the normal indexation

- When the financial equilibrium is attained under the normal indexation, the modified indexation is no longer applied

- Raising the national subsidy rate for the basic pension benefits from 1/3 to 1/2

Modified indexation

- Modifier is the sum of the following two rates:

- decrease rate of the number of active participants in the social security pension systems

- increase rate of the unisex life expectancy at age 65

- Modified indexation=(normal indexation)-(modifier)

- Normal indexation is based on disposable income increase by the age of 65 and on price increase after the age of 65

- The idea is to reduce the benefit level according to the extent to which the financial supporting power of the system has become weaker
- A sort of automatic balancing mechanism (ABM)

Increased sustainability

- Introduction of modified indexation is supposed greatly to increase financial sustainability of the social security pension systems

- Nowadays financial problem of the social security pension systems is less severe than that of the health insurance systems

Adequacy requirement

Anxiety about adequacy of benefit

- Although the introduction of modified indexation measures assures people that the contribution rate will not increase endlessly, it gave rise to another anxiety that the benefit level would be reduced endlessly and lose adequacy
- Stipulated the provision of floor of benefit

Floor of benefit

- A household for measuring adequacy (HMA) is as follows:

- a couple of the same age

- The husband works from the age of 20 to 60 for 40 years, covered by the EPI System with the salary always being equal to the average salary

- The wife is always dependent housewife from the age of 20 to 60 for 40 years

- The replacement ratio of a fiscal year of the EPI System is defined as the ratio of the total amount of benefits of the HMA reaching 65 in the fiscal year to the average disposable income of the active participants in the EPI System
- Applying the modified indexation is to be stopped and the benefit provisions and contribution rates are to be reviewed if the replacement ratio of the EPI System threatens to become less than 50% before the next actuarial valuation
- This is the provision to keep the adequacy of benefits

International comparison

Categorized reforms in the EU countries

(from "The ageing of the EU---implications for pensions"
by Actuarial Association of Europe)

- Reforms taking into account increased life expectancy at retirement---five categories
- Legislated increases in the pensionable age
- Formula-based review of the pensionable age

(Denmark, UK, Portugal Cyprus, Greece, Netherlands, Slovak Republic)

- Use of sustainable factors

(Finland, Spain, Germany)

- Adoption of NDC

(Sweden, Italy, Poland, Latvia, Norway)

- Increase of the number of years for full pension

(France)

Several types of ABM

- Swedish ABM
- German sustainability factor
- Canadian insufficient rate provisions
- Japanese modified indexation

Japanese modified indexation

- Similar to German system (sustainability factor)
- Reasons why we did not adopt the Swedish notional defined-contribution system with ABM

- Our population ageing is much faster than that of Sweden

- We chose to preserve the income re-distribution function of the EPI System

Issues to be addressed

Issues to be addressed

- The National Council for Social Security System Reform published a report in August 2013 and asked the government to evaluate the financial effects of their proposed reform options on the 2014 actuarial valuation
- Activation of the modified indexation even under the deflationary economy

- to keep the benefit level of the future generations as high as possible

- Prolongation of the period of paying the NP contributions from age period of 20-59 to 20-64 and delaying the start to receive the old-age pensions

- to keep the benefit level adequate

- Extension of the EPI coverage to non-regular workers

- the 2014 actuarial valuation shows that this measure also contributes to keeping a higher level of benefit

Activation of the modified indexation

- Current conditions to activate the modified indexation:

- If the disposable income increase or the price increase is negative, it must not be activated under the current law
- If the modifier is greater than the normal indexation, the modified indexation must be zero under the current law

- Modified indexation had not been activated for 10 years until the end of March 2015 after its introduction under the deflationary economy

- It was activated for FY 2015, but not again for FY 2016
- The longer the non-activation period, the lower the benefit level of future generations

2015 reform discussion

- If the normal indexation is negative or the modifier is greater than the normal indexation, the modified indexation is not activated at all or not fully activated
- The 2015 reform bill has been submitted to the Diet to provide that the part of the modifier that has not been activated in a year is to be carried over to the next year and added to the modifier
- A measure to keep the benefit level of the future generations high, but weak

Future measures

- Under the deflationary economy, the 2015 reform discussion is not enough to keep the benefit level of the future generations as high as possible
- It should be activated even under the deflationary economy
- Prolongation of the period of paying the NP contributions and delaying the start to receive old-age pensions, say to 67, should also be implemented as soon as possible

Some results of the 2014 Actuarial Valuation (1)

- Economic assumptions

- Eight cases (next slide)

- Demographic assumptions

- mortality: three cases

- fertility: three cases

Some results of the 2014 Actuarial Valuation (2)

(economic assumptions)

(%)

Case	CPI increase rate	wage increase rate		rate of investment return of the reserve fund		
		real	nominal	real	spread	nominal
A	2.0	2.3	4.3	3.4	1.1	5.4
B	1.8	2.1	3.9	3.3	1.2	5.1
C	1.6	1.8	3.4	3.2	1.4	4.8
D	1.4	1.6	3.0	3.1	1.5	4.5
E	1.2	1.3	2.5	3.0	1.7	4.2
F	1.2	1.3	2.5	2.8	1.5	4.0
G	0.9	1.0	1.9	2.2	1.2	3.1
H	0.6	0.7	1.3	1.7	1.0	2.3

(Note) Spread means the differnce between the nominal rate of investment return and the nominal wage increase rate.

Some results of the 2014 Actuarial Valuation (3)
(projected benefit level)

- Current benefit level: 62.7% in FY 2014

- The benefit level is expressed as the replacement rate

- Future benefit level

- demographic assumptions: intermediate for both mortality and fertility

- A: 50.9% (in FY 2044)
- B: 50.9% (in FY 2043)
- C: 51.0% (in FY 2043)
- D: 50.8% (in FY 2043)
- E: 50.6% (in FY 2043)
- F: 45.7% (in FY 2050) ---neglecting the benefit floor provision
- G: 42.0% (in FY 2058) ---neglecting the benefit floor provision
- H: If we neglect the benefit floor provision and continue the modified indexation, the reserve fund is projected to be depleted in FY 2055 and the benefits are to be financed on PAYGO basis. Then the benefit level will be 35% - 37%

Some results of the 2014 Actuarial Valuation (4)

(effects of partial activation of modified indexation (1))

- Another set of cases where the CPI increase rate and the wage increase rate vary from year to year

- to look into the effects of partial activation of the modified indexation

- ±1.2% and four-year cycle

- the followings are the CPI increase rates; the wage increase rates follow these variations with the real wage increase rate remaining the same

- Case C': o.4% (FY 2026) >>> 1.6% (FY 2027) >>>2.8% (FY 2028) >>> 1.6% 'FY 2029) >>> repeated afterwards
- Case E': 0.0% (FY 2026) >>> 1.2% (FY 2027) >>> 2.4% (FY 2028) >>> 1.2% 'FY 2029) >>> repeated afterwards
- Case G': -0.3% (FY 2026) >>> 0.9% (FY 2027) >>> 2.1% (FY 2028) >>> 0.9% (FY 2029) >>> repeated afterwards
- Case H': -0.6% (FY 2026) >>> 0.6% (FY 2027) >>> 1.8% 'FY 2028) >>> 0.6% (FY 2029) >>> repeated afterwards

Some results of the 2014 Actuarial Valuation (5)

(effects of partial activation of modified indexation (2))

- Case C': 50.8% (FY 2043) (cf) case C: 51.0% (FY 2043)
- Case E': 50.2% (FY 2044) (cf) case E: 50.6% (FY 2043)
- Case G': 39.5 (FY 2072) (cf) case G: 42.0% (FY 2058)
- Case H': depletion of the reserve fund in FY 2051

(In the case of H, the depletion takes place in FY 2055)

Some results of the 2014 Actuarial Valuation (6)

(financial effects of the reform options (1))

- Full activation of modified indexation

- assuming the varying economic assumptions

  - C': 50.8% (in FY 2043) >>> 51. 2% (in 2043)
  - E': 50.2% (in FY 2044) >>> 51.0% (in FY 2042)
  - G': 39.5% (in FY 2072) >>> 44.5% (in FY 2050)
  - H': depletion of the reserve fund >>> 41.9% (in FY 2054)

- Extension of EPI coverage to non-regular workers

- to be extended to those working for no less than 20 hours a week and earning non less than JPY 58,000 per month

- 2.2 million non-regular employees will be covered in FY 2025

  - C: 51.0% (in FY 2043) >>> 51.5% (in FY 2042)
  - E: 50.6% (in FY 2043) >>> 51.1% (in FY 2042)
  - G: 42.0% (in FY 2058) >>> 42.5% (in FY 2056)
  - H': 41.9% (in FY 2054) >>> 42.2% (in FY 2054)

Some results of the 2014 Actuarial Valuation (7)

(financial effects of the reform options (2))

- Prolongation of the period of paying the contributions from age period of 20-59 to 20-64 for the basic pension benefits

- the basic pension benefit level is also to be increased proportionately

- the pensionable age is assumed to be age 65 here

- if the person starts to receive at a age older than 65, he/she will get it increased by 0.7% for each delayed month (42% if delayed to age 70)

- C: 51.0% (in FY 2043) >>> 57.6% (in FY 2042)
- E: 50.6% (in FY 2043) >>> 57.1% (in FY 2042)
- G: 42.0% (in FY 2058) >>> 48.4% (in FY 2053)
- H': 41.9% (in FY 2054) >>> 47.9% (in FY 2051)

Concluding remarks

- We cannot afford to waste time to delay the introduction of measures the National Council for Social Security System Review proposed
- However we are optimistic of the future sustainability and adequacy of the social security pension systems since we know what to do

Thank you very much for your attention!