



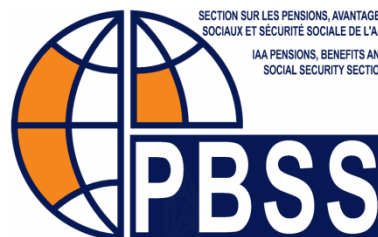
Joint Colloquium of the IACA, PBSS and IAAHS Sections of the International Actuarial Association

Westin Copley Place Hotel, Boston, U.S.A. – 4-7 May 2008

Roles of the Social Security Pension Schemes and the Minimum Benefit Level under the Automatic Balancing Mechanism

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Automatic Balancing Mechanism

- **Automatic balancing mechanism**
 - a built-in mechanism that automatically reduces the benefit level relative to the salary level
- **Italy, Sweden, Germany, Japan, etc. have adopted it in one form or another.**
- **Factors for introducing the mechanism:**
 - incessant greater decline of birth rate and greater improvement of mortality rate than projected in the latest actuarial valuation
 - repeated political battles over pension reforms that got the nation nowhere

Anxieties

- **Anxiety about the future contribution level**
 - stemmed from repeated raising of contribution rate
 - Several countries have responded to this anxiety by stipulating the future contribution programme or the maximum limit of the contribution rate.
 - This measure is paired by the automatic balancing mechanism.
- **Another anxiety about the future benefit level**
 - Japan has responded to this anxiety by stipulating the minimum benefit level, taking account of the roles played by the social security pension schemes

Agenda

- Roles of the social security pension schemes
- Automatic balancing mechanism in Sweden, Germany and Japan
- Minimum benefit level provision in Japan
- Periodic actuarial review and automatic balancing mechanism
- Conclusion

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Human Life and Economic Risks

- **Risks that make it difficult for us to earn:**
 - old-age (retirement)
 - long-lasting disease or disablement
 - death of the breadwinner
 - unemployment

- **Risks that require extra spending of us:**
 - disease
 - maternity
 - child rearing
 - long-term care

Objectives of Social Security Pension Schemes

- To prevent people who have encountered the following economic risks in life from being impoverished
 - old-age (retirement)
 - long-lasting disease or disablement
 - death of the breadwinner
- The only way we know at the moment to realize this objective is to support them by the society as a whole.
 - compulsory coverage
- Adequacy of the benefits is required.
 - indexation
 - life annuity
- Social security pension schemes form a main part of compulsory income transfer from the active people to the people having encountered the economic risks in life.

Historical Development

- **Industrial revolution**
 - human move from rural areas to urban areas
 - increase of nuclear families and decrease of extended families
 - exposed to risks in life
- **Big social problem: poverty in urban areas**
 - social unrest: labour disputes and socialism
- **Savings, private insurance, friendly societies could not solve the problem.**
- **The Poor Law could not solve the problem, either.**
 - Even discrimination was produced. = 'stigma'
 - Civil rights were deprived.
 - It contributed to forming the idea that the society as a whole should be involved in this problem.
- **Bismarck's invention (in the latter half of the 19th Century)**

Adequacy: One of the Indispensable Elements

- Without adequacy of benefits, the social security pension schemes would not be able to prevent those who have encountered economic risks in life from being impoverished.
- They, therefore, lose their reasons for existence if they fail to provide adequate benefits.

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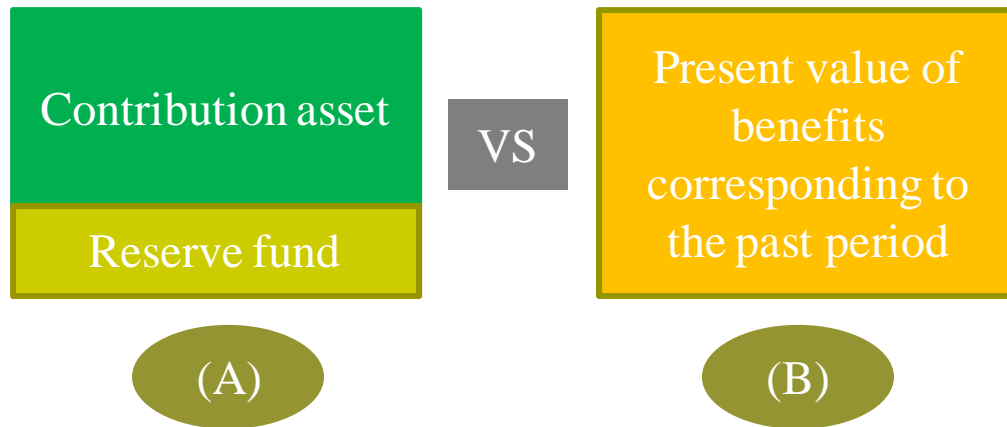
Automatic Balancing Mechanism in Sweden (1)

- **Social security pension scheme in Sweden only provides old-age pension.**
 - disability and survivor's pensions are provided from the general account
 - NDC system · · · interest is the increase rate of salary
- **Contribution rate is fixed at 16%**
- **Benefit amount at age 65:**

$$= \frac{(\text{sum of contributions and interest on them})}{\ddot{a}_{65}^{(\text{frequency of payment per year})}}$$

Automatic Balancing Mechanism in Sweden (2)

- Automatic balancing



- Contribution asset: (contribution revenue of the year) X (turnover duration)
- Turnover duration: (average age of beneficiaries weighed by benefit amount) – (average age of active participants weighed by salary)

- If $(A) < (B)$, interest rate and indexation is reduced by multiplying $(A)/(B)$.

Automatic Balancing Mechanism in Sweden (3)

- **Difference between Japan and Sweden**
 - overall benefit design
 - TFR
 - immigration
- **Even if the automatic balancing mechanism in the Swedish sense is activated, that does not necessarily mean that the scheme has attained financial equilibrium.**

Sustainability Factor in Germany

- **German modifier:**

$\alpha \left(\frac{MR_{t-1}}{MR_{t-2}} - 1 \right)$ where MR_t means $\frac{\text{(the number of beneficiaries)}}{\text{(the number of active participants)}}$ of the year t .

α represents the degree to what extent the increase rate of MR is reflected in the modifier ($0 \leq \alpha \leq 1$).

- **Sustainability factor: 1- (German modifier)**

- (indexation) = (normal indexation) X (sustainability factor)

- **German modifier:**

= $\alpha \{ (\text{increase rate of beneficiaries}) + (\text{decrease rate of the number of active participants}) \}$

= $\alpha \{ (\text{increase rate of the number of newly awarded people}) + (\text{increase rate of life expectancy at age 65}) + (\text{decrease rate of the number of active participants}) \}$

- **What a coincidence!**

Japan's Modified Indexation

- **Fixing the contribution programme**
 - Future contribution rates are all stipulated in the law.
- **Actuarial review every five years**
 - If the financial equilibrium is not attained, indexation is to be modified for the time being.
 - The financial equilibrium is measured for the next 95-year term with the reserve fund at the end of the term equal to one-year expenditure.
- **Modifier**
 - sum of the following two rates
 - *decrease rate of the number of active participants in the social security pension schemes
 - *increase rate of the life expectancy at age 65 (fixed at 0.3%)
- **Modified indexation: (normal indexation) – (modifier)**
 - If the modified index becomes negative, it is replaced by 0.

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Replacement Rate

- **Replacement rate as the measurement of benefit level**
 - a household: a working husband and a non-working dependent wife of the same age as her husband's
 - The husband was covered by the EPI scheme, that is for private employees, from 20 to 59 always with average salary.
 - The wife was always a non-working dependent housewife from 20 to 59.

$$(\text{replacement rate}) = \frac{(\text{the total benefit amount of the household at age 65})}{(\text{the average disposable income of active workers when the couple reach 65})}$$

Minimum Benefit Level Provision

- **Minimum benefit level provision**
 - If the benefit level threatens to fall below the prescribed level before the next actuarial valuation, the modifying of the indexation is to be stopped and the schemes are to be drastically reviewed.
 - response to the second anxiety
 - Drastic review may include review of pensionable age, of contribution programme, etc.

Minimum Benefit Level

- Prescribed minimum benefit level expressed by replacement rate:
50%
- Current replacement rate:
59.3% (2004)
59.7% (2006) . . . increased due to salary decrease

Confirmation of Adequacy (Employees)

- The amount of benefit for a couple of the following features: JPY 236,000 in FY 2004
 - composed of a husband aged 65 of 40-year service with the career average of his revalued salary equal to the average salary of the current active male employees and a wife aged 65 of 40-year dependency
- Average expenditure of a couple of a husband aged 65 and over and a wife aged 60 and over: JPY 261,000
 - National Survey of Family Income and Expenditure in 2004
(Statistics Bureau, Ministry of Internal Affairs and Communications)
 - including expenditure for cultural events and entertainments of JPY 32,000 and expenditure for reunions and funerals of JPY 34,000
- We can judge that the benefit level for employees will be adequate even after the modified indexation as long as the minimum benefit level provision is applied.

Confirmation of Adequacy (the Self-employed)

- **Monthly amount (FY 2006): JPY66,000**
 - old-age basic pensions
 - 40 years of contribution
 - JPY 132,000 for a couple
- **Basic expenditure of aged household: JPY 118,000**
 - National Survey of Family Income and Expenditure in 2004
(Statistics Bureau, Ministry of Internal Affairs and Communications)
 - aged household: household composed of a husband aged 65 and over and a wife aged 60 and over
 - basic expenditure:
(monthly, in JPY)
- **Should be monitored**
 - modified indexation

Food	61,313
Housing	19,697
Fuel, light and water charges	16,831
Furniture and household utensils	9,477
Clothes and footwear	10,556
total	117,874

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Actuarial Valuations under the Automatic Balancing Mechanism

- Actuarial valuations are not accompanied by review of the contribution programme under the automatic balancing mechanism.
- They monitor the prospect of the benefit level.
- This framework has enabled us to get rid of sterile political battle for the time being until the benefit level threatens to go below the minimum benefit level by the next actuarial valuation.
- We have to make best use of the time to cope with more fundamental issues like declining birth rate or improving longevity.

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Conclusion

- The minimum benefit level provision is indispensable under the automatic balancing mechanism.
 - It keeps adequacy of benefits social security pension schemes provide.
 - It removes people's anxiety that the benefits will be indefinitely reduced.
- It also gives us time to cope with more fundamental issues like declining birth rate and improving longevity.
 - We have to bear in mind that the window of opportunity will quickly close.
- Political parties that utilize pension matters as balls of political football should lose. Sweden, Australia, etc. have shown us good examples.

*Thank you very much
for your attention!*