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2 - 5 April

2019

Cape Town
South Africa

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Good and bad of the Automatic
Balancing Mechanism
of Japan's Public Pension Plans

2019/4/03

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Automatic Balancing Mechanism in Japan (so-called Macro-Economic Indexation)

Indexation Adjustment Rate (IAR)

= decrement rate of total active participants (3 year average) + 0.3%

For a new pensioner: *Benefit Adjustment Rate = Salary Increment Rate – IAR*

For an existing pensioner: *Benefit Adjustment Rate = CPI Increment Rate – IAR*

Sustainability test: $n = 95$ years, with the same premium rate (EPI) and amount (NP)

for the Employees Pension Insurance: $F^{EP}_{n-1} \geq 1 \times O^{EP}_n = 1 \times (PB^{EP}_n + CB^{EP}_n)$

for the National Pension: $F^{NP}_{n-1} \geq 1 \times O^{NP}_n = 1 \times (PB^{NP}_n + CB^{NP}_n)$

(Note) If IAR becomes negative due to increase in number of total active participants,

IAR is replaced by 0%.

Adequacy restriction imposed on the ABM in Japan

Income Replacement Rate (IRR) for a model household $\geq 50\%$

$$IRR = \frac{\text{amount of old age pension of a model beneficiary of the EPI}}{\text{average income of an active male participant of the EPI}}$$

(Note) “Amount of model old-age pension for a model beneficiary of the EPI”:

The sum of the old-age pension for a male beneficiary of the Employees Pension Insurance (EPI) newly ruled at age 65 in the case that he has worked for 40 years with the average salary every year and the Basic Pension (BP) of his wife aged 65 in the case that she has been a full time homemaker for the 40 years

“Average income of an active male participant of the EPI:

bonuses are included but contributions to be paid to the EPI are excluded.

No adequacy restriction imposed for the National Pension (the plan for the self-employed)

- The same adjustment mechanism is applied to both the EPI and the NP.
- There is no concept of replacement rate in the case of the NP. Therefore, it is impossible to consider the issue of adequacy without using the word “adequacy” or similar words in the case of the NP.
- If the word “adequacy” or similar words do not appear sufficient times in the minutes of the Pensions Subcommittee (PS), we can say that the issue of adequacy was not paid proper consideration in the meeting of the PS.

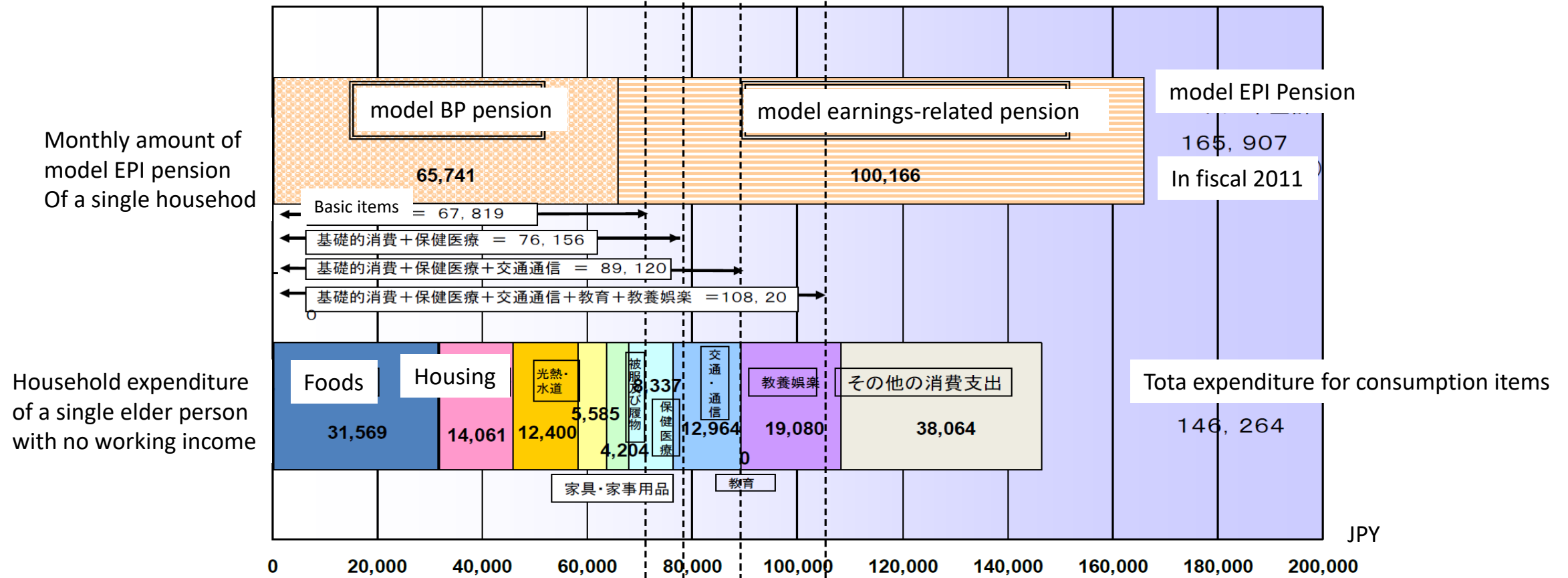
(Note) The PS is a subcommittee of the Social Security Council and is the standing body of paying official consideration on the pension systems in Japan, corresponding to the inquiry of the Ministry of Health, Labour and Welfare.

Analysis of the discussions in the PS meetings held after the 2004 Pension Reform

- The results of the 2009 Valuation, next to the 2004 Valuation, were made public in 2009/2/23. In the minutes of the PS meeting held that day, the word “benefit level” appears 11 times and the word “replacement rate” appears 28 times. But the word “adequacy” or similar words appear zero time.
- The results of the 2014 Valuation, next to the 2009 Valuation, were made public in 2014/6/04. The 2014 Valuation revealed the very alarming situation of the BP, namely the benefit level of the BP will continue decreasing for the next 30 or more years due to the ABM.
- In the minutes of the PS meeting held that day, the word “benefit level” appears 20 times and the word “replacement rate,” which only concerns the EPI, appears 65 times. But the word “adequacy” or similar words appear zero time.

The only material on the adequacy of the BP submitted to the PS meetings after the 2009 Reform (2011/11/11)

The amount of the BP pension (JPY 66,000) is just below the level of covering the expenditure needed to cover the basic consumption items of a household of a single non-working person



(Source) Survey on Household Expenditure (Fiscal 2010)

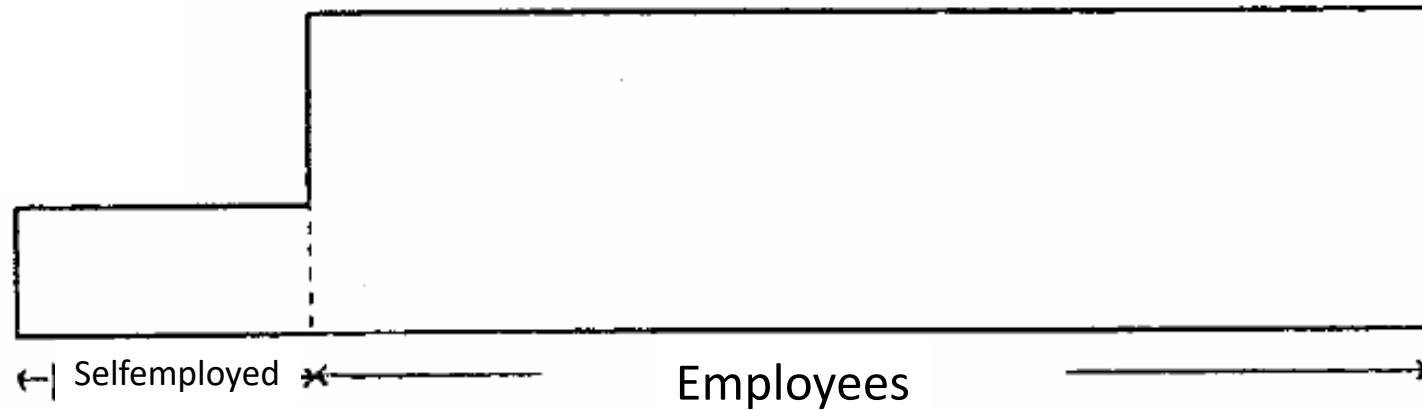
Close relationship between the EPI and the NP

- The EPI and the NP are closely related via the financing mechanism of the BP. The cost of paying out the BP benefits in a year is shared by the NP and the EPI (and the government subsidy) in proportion to the number of their active participants of the year aged between 20 and 60.
- Future level of the BP benefits depends on when the activation of the ABM can be stopped for the NP, irrespective of the financial status of the EPI.
- Future level of the EPI benefits cannot be projected without that information. In other words, future level of the benefits provided by the EPI depends on the prospect of the long-term financial balance of the NP.
- Thus, we cannot pay consideration to the issue of adequacy of the EPI benefits without proper consideration on the adequacy of the NP benefits.

source : Subcommittee on Actuarial Matters on Pensions (2015), "Report on the financial status of public pension plans in 2013

The sharing of the expenditures of the BP to be covered by the contributions of the EPI and the NP

The BP is the common part of the EPI and the NP and is financed by the contributions of the EPI and the NI, and government subsidies.



$$CB^{NP}_t = TCB_t \times \frac{N1^{NP}_t}{N1^{NP}_t + \sum_{k=1}^4 (N2^{Ek}_t + N3^{Ek}_t)}$$

$$CB^{Ej}_t = TCB_t \times \frac{N2^{Ej}_t + N3^{Ej}_t}{N1^{NP}_t + \sum_{k=1}^4 (N2^{Ek}_t + N3^{Ek}_t)}$$

Blief history of the revisions of the BP benefits

- 1) From the introduction of the BP in the 1980 Reform, several ad-hoc upward revisions of the BP were implemented until the 1994 Reform, taking account of the expenditure for the basic consumption items of retired single persons aged 65 and over.
- 2) At the 1994 Reform, the BP benefits were increased, taking account of the trends of the expenditures for the basic consumption items of all the households, not of those of retired single persons.
- 3) From the 2000 Reform, the BP benefits were revised upward, based on the rate of consumer price inflation.
- 4) In the 2004 Reform, the mechanism of automatic revision of the BP benefits was introduced, based on the salary increment rate for the beneficiaries newly ruled and the rate of consumer price inflation for the existing beneficiaries (and at the same time the ABM was incorporated).

Report of the National Congress on Reforming Social Security Systems (August 2013) (1/3)

The following argument stated in the NC report exercised a profound influence to the discussions in the PS on the issue of adequacy.

- “There is no need to raise the Statutory Pensionable Age (SPA) beyond 65 for ensuring the financial sustainability of the public pension plans”.*
- “It is because the total expenditure of the public pension plans in Japan is controlled by the MEI (the ABM introduced in Japan), and the total expenditure would be same even if the SPA were raised”.*

Note: Currently, there is no schedule stated in the law of raising the SPA beyond 65 in Japan, while the life expectancy of Japanese is one of the highest among the world.

Report of the National Congress on Reforming Social Security Systems (August 2013) (2/3)

- *“The issue of the SPA is*
 - (1) not an issue of financing the public pension plans,*
 - (2) but an issue of how to balance the working period and the retirement period of individual persons on the micro-basis, and*
 - (3) how to balance the working population and the non-working population on the macro-basis,*

under the circumstance that the Japanese society is gradually ageing as a whole”.

Report of the National Congress on Reforming Social Security Systems (August 2013) (3/3)

- *“We should consider the appropriate combination of working in elder ages and when and how to receive old-age pension benefits,
– taking account of the aims and the contents of the pension reforms implemented in many developed countries”.*
- *“Efforts should be made to enlarge the opportunities of working in elder ages and consideration should be given to how much flexibilities should be given to the manner of receiving old-age pension benefits”.*
- *“Consideration should be given to the flexibilities in the pension system to deal with divergent work styles in elder ages and smooth transition to retirement, while thinking together on the mechanism of reducing old-age pensions for those still working”.*

What is wrong in the NC Report (1/2)

- The argument of the NC Report stands only on condition that the benefit level will be kept adequate even after the ABM adjustments is ceased.
- The ABM adjustments have to be stopped only when it is estimated to be difficult to keep the model replacement rate not less than 50% for the EPI (sum of the earnings-related pension and the BP).
- There is no criterion on the minimum adequacy level of the BP to be protected against the ABM adjustments.

What is wrong in the NC Report (2/2)

- It is highly inappropriate not to mention at all the issue of adequacy when considering how the SPA should be, even if some ABM is incorporated.
- The issue of the SPA is a really serious issue: How to enhance the pension benefits and not to let them fall below the minimum adequacy level
 - by individually delaying the ruling,
 - while keeping his/her salary relatively low, not to be subject of the mechanism of reducing old-age pensions for still-working beneficiaries.

(Note) People have to endure the period from 65 to the age when he/she starts receiving benefits, keeping his/her annual salary under about JPY 3.6 million.

Policy directions in the EU (1/3)

Since the first Annual Growth Survey of 2011, the European Commission has been recommending Member States to neutralise the impact of rising longevity on pension costs by linking the standard pensionable age (SPA) to developments in life expectancy (LE).

Linking the Statutory Pensionable Age to life expectancy is the preferable way to allow pension system to neutralise the costs of structural longevity growth. It allows countries to maintain both the adequacy and sustainability of pensions by clearly signalling the need to work longer. By contrast linking benefit levels to life expectancy is far less transparent and can pose a threat to adequacy over time as people fail to react to financial incentives to delay pension take-up in line with developments in life expectancy.

Policy directions in the EU (2/3)

However, such automatic adjustment mechanisms cannot address all the behavioural challenges relating to pension reforms. While national decisions to increase the pensionable age, in line with life expectancy, can be seen to be equivalent to the establishment of the new norm that ‘as we live longer we work longer’, the passing of such legislation does not, in itself, guarantee that people will work more or longer in order to compensate for reductions in their pension entitlements.

Moreover, some may question ‘linking’, because it treats workers with different working and career paths in the same way. Some groups of workers will be much more able to work to higher pensionable ages than others. Low-skilled workers in the manufacturing sector are likely to have much larger difficulties in adapting to rising pensionable ages than high skilled workers in the services.

Policy direction in the EU (3/3)

- Improving pension sustainability, mostly by means of adjusting the *pension duration to life expectancy*, continued to be among the key focuses of pension reforms during the reference period.
- The main levers of these reforms were the introduction of higher pensionable ages, tighter eligibility conditions and reductions in early-retirement opportunities.
- The underlying long-term policy rationale has been to extend working life in line with increasing life expectancy.
- In the last 3 years some Member States (Belgium, Bulgaria, Greece, Finland, the Netherlands, UK) have adopted new increases in the pensionable age (or have brought forward those previously planned), including by linking it to life expectancy.

General issues to be addressed on the ABMs

- 1) intergenerational fairness and/or justice,
- 2) relationship with ensuring the adequacy of benefits,
- 3) effectiveness of the ABM concerned,
- 4) various technical issues of the ABM concerned,
- 5) how the actuarial valuation of the plan equipped with some ABM should be,
- 6) how the disclosure of the financial status of the plan should be, and
- 7) how the adequacy level of the benefits to be informed to individual participants.

Relationship with ensuring the adequacy of benefits

- The NC report implicitly ignored that possibility.
- The pension law says nothing except that overall consideration should be paid when the activation of the ABM has to be stopped.
- Everybody knows that a financially unsustainable plan cannot be maintained.
- People consider that eventually the benefit level would be diminished inevitably.
- It is said that one of the backgrounds of the persistent deflationary economic environment in Japan is this anxiety of the general public about their own elder ages.

Technical issues of the ABM concerned

- The ABM introduced in Japan is technically incomplete.
 1. Works only for the direction of reducing the benefit level.
 2. Generally assuming that salary growth rate will be greater than the price inflation rate.
 3. Various restrictions were imposed on the mechanism, for obtaining wide support.
- More than ten years after the 2004 Pension Reform, we are now in the process of stripping those restrictions one by one.
- It might be a relatively easy task for a capable actuary to devise a technically complete ABM.
- However, obtaining enough political support is completely a different matter.

How the actuarial valuation and the disclosure of a plan equipped with some ABM should be

- The meaning of actuarial valuations will be shifted from verifying the sustainability to projecting how long the ABM will be activated and how much the benefits will be reduced.
- Sometimes required to show the expected time when the activation of the ABM will be stopped.
- Should also consider how to put priority on each set of demographic and economic assumptions.
- Determining the stopping year based on the pessimistic or optimistic assumption sets would be inappropriate.
- It might also be problematic to say which scenario is the main one, when we think about the limitation of human understandings about the long-distant future.

Issues specific to the ABM in Japan

- The same ABM is applied to both the EPI and the NP.
- As mentioned earlier, the activation period of the ABM to the BP is solely determined by the financial status of the NP.
- The expected periods of the ABM's being activated to the EPI will be different in due course, because the financial situations are different.
- When the period of the NP becomes longer than that of the EPI, the proportion of the BP in the benefit of the EPI will be diminished.
- The role of the intra-generational redistribution equipped in the EPI will inevitably shrink.

What kind of roles social security actuaries should play, answering the expectation from the public?

- We have been depending on the single measure of adequacy, namely the replacement rate for the stylised hypothetical couple where the bread-earner continues earning the average salary during his entire period of employment.
- However, with lengthening of the working period, such an artificial model would lose its ground. Instead, it would be needed to show the possible distribution of the benefit levels using decimals, etc.
- SS actuaries should continue steady efforts like that and accumulate the documentary evidences on what they have done from the professional viewpoints.