Role of the Actuary in the Process of Unifying the Social Security Pension Schemes in Japan

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1. Introduction

In Japan, the bill to unify all of the social security pension schemes for employees was submitted to the Diet on 13 April 2007.

The unification has two main objectives. One is to stabilize the financial basis of the schemes. By unifying them, we can make them less vulnerable to changes in industrial structure or in employment structure. We have experienced several cases in which schemes became unsustainable due to the decrease of the active participants. The other purpose is to make their benefits and contributions equitable. It has long been argued that the benefit provisions of the schemes for civil servants are much more generous than those of the schemes for private employees. The difference was greatly minimized in the 1985 pension reform, but the discussion continued. When the bill passes the Diet, the civil servants will be covered by the same scheme as for private employees and will receive the same benefits as the private retirees will receive.

In this paper the author would like to describe how the schemes have evolved, how the discussion of unification started and what are the main points of the current unification proposals. He would also like to describe the roles performed by the actuaries in the government in the unification process. They have played the supervisory role for sound financial management of each scheme as well as an advisory role to formulate the financial framework on scheme mergers.

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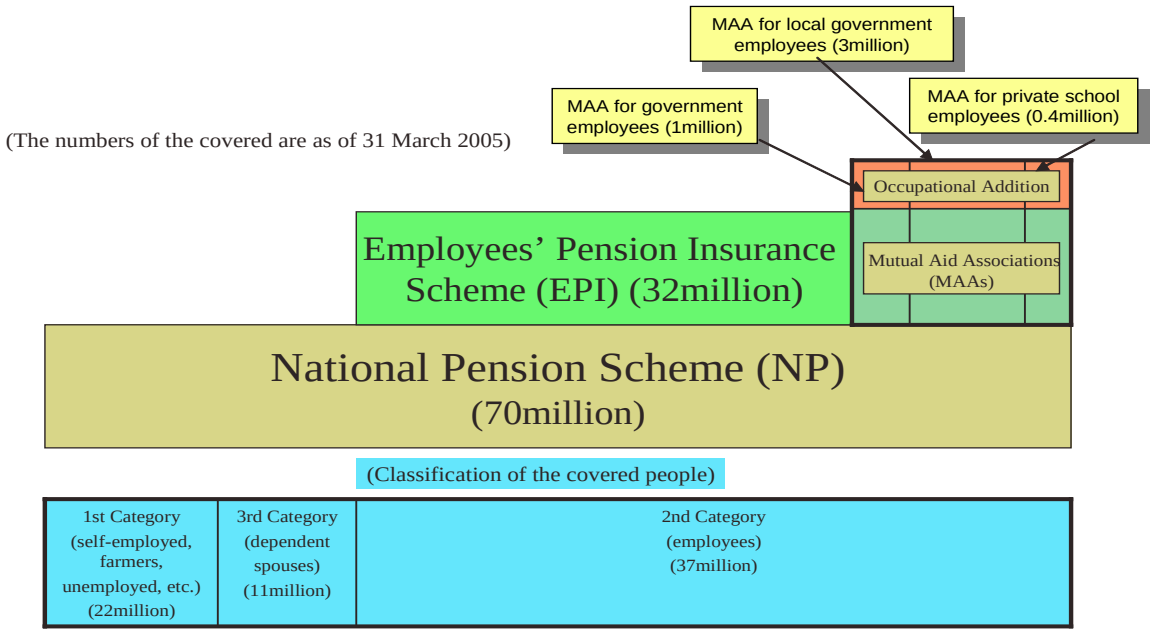
2. The current framework of social security pension schemes in Japan

Before we start describing the unification process, we would like to describe briefly the current social security pension schemes in Japan to give a proper framework for discussion.

(1) Coverage

Every resident of Japan aged between 20 and 59 is compulsorily covered by the National Pension (NP) scheme. If he/she is an employee in the private sector, he/she is covered by the Employees' Pension Insurance (EPI) scheme as well. This coverage is also compulsory. If he/she is an employee in the public sector like the national government, the local governments, etc., he/she is compulsorily covered by one of the mutual aid associations (MAA's)[2]. There are three MAA's: MAA for government employees, MAA for local government employees, and MAA for private school employees[3]. **Fig. 2-1** shows the structure of coverage of the social security pension schemes in Japan.

(Fig. 2-1) Social Security Pension Schemes in Japan



The active people covered by the NP scheme are classified into three categories. Self-employed people, farmers, fishermen, etc. belong to the first category. Their dependent spouses

[2] An MAA is also referred to as an MAA scheme.

[3] When we wish to refer collectively to the MAA scheme for Government Employees and to the MAA scheme for Local Government Employees, we use a phrase such as the MAA schemes for civil servants.

are also included in this group. Those covered by the EPI or one of the MAA's are classified as in the second category. Their dependent spouses form the third category.

(2) Benefits

The NP scheme provides flat-rate basic pensions; the annual amount of benefit is proportionate to the ratio of the number of covered months to 480 months (1 at the maximum), irrespective of what his/her income has been. The current annual amount for a beneficiary with 480 months of contributions is JPY 778,600 as of 1 April 2006[4].

The EPI and MAA schemes provide earnings-related pensions; the annual amount of old-age benefit that the EPI scheme provides is 5.481‰ of the average of the pensionable remunerations during the covered period multiplied by the number of covered months. The average of the pensionable remunerations is defined to be the sum of the average of the monthly pensionable remunerations and the average of pensionable bonuses. The average of the pensionable bonuses is the sum of the pensionable bonuses divided by the number of the covered months. **Fig. 2-2** shows the formula to calculate the benefit amount of the old-age earnings-related pension benefit of the EPI scheme.

(Fig. 2-2) Benefit Formula for Earnings-related Part

$$\boxed{\text{The annual amount of benefit (Earnings-related pensions)}} = \boxed{\text{The average of the pensionable remunerations (Revalued)}} \times \frac{5.481}{1000} \times \boxed{\text{The number of covered months}}$$

The annual amount of old-age benefit[5] that the MAA schemes provide is 1.2 times as much as the amount calculated by the formula shown in **Fig. 2-2**. In other words the beneficiaries of MAA schemes receive 20% more than those of the EPI scheme do. This part of the 20% increment is called the occupational addition of MAA schemes. It is indicated in **Fig. 2-1**. The reason why such occupational addition exists is that the benefits of the MAA schemes have the nature of social security pension benefits as well as of civil service remunerations[6] that compensate for the economic

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[4] Strictly speaking, it is provisionally JPY 792,100 because, for FY 1999, FY 2000 and FY 2001, the amount was not indexed in spite of the deflation of 1.7%, but this amount is not to be indexed until the CPI increases by more than 1.7% from the 2004 average level. (If deflation happens again, this amount is to be indexed downward.)

[5] Reflecting the nature as occupational pension schemes, it is actually called retirement annuity in the laws. In this paper, however, we call it the old-age pension benefit of MAA schemes.

[6] Private school employees are not civil servants, but they claimed, when the MAA for Private School Employees was established in 1954, that their jobs were the same as the employees in the schools run by the national government or by the local governments and that they should be treated in the same way as civil servants. After the introduction of the scheme, they have followed almost the same reforms as those of the MAA schemes for civil servants.

loss due to the constraints imposed upon civil servants. The occupational addition has been one of the main causes of the claim that there is inequality between the EPI scheme and the MAA schemes. Later in this paper we will see that it has been proposed in the bill that the occupational addition be abolished.

The monthly pensionable remunerations and the pensionable bonuses are revalued according to the increase of disposable income of the active workers so that the benefit is indexed to the improvement of the active workers' disposable income level up until the beneficiary reaches the age of 65. After the age of 65, the benefit is indexed to the increase of the Consumer Price Index (CPI).

The social security pension schemes in Japan are thus composed of two layers for employees, providing flat-rate benefits and earnings-related benefits respectively. Self-employed people are, on the other hand, provided with only flat-rate benefits.

The benefit level the social security pension schemes are providing now may be measured in various ways. One measurement the MHLW has often utilized is a replacing rate[7] for a household where the husband has been covered by the EPI scheme from the age of 20 to the age of 59 and the wife is the same age as her husband and has been dependent their entire life. The replacing rate is the ratio of the sum of the annual amount of the old-age benefits the couple is to receive at the age of 65 to the amount of the career average disposable income[8] of the husband. For this calculation, it is assumed that the gross annual income is twelve times monthly pensionable remunerations plus 3.6 times monthly pensionable remunerations (the latter is the average level of bonuses) and that the annual disposable income is 84% of the gross annual income. For a household where the husband has earned the average salary his entire life[9], the current benefit amount at age 65 is about JPY 233,000 per month and the replacing rate is 59.3%[10]. For a household where the husband's career average of revalued monthly pensionable remunerations is JPY 200,000, the benefit amount at age 65 is about JPY 188,000 per month and the replacing rate is 86.3%. For a household where the husband's career average of revalued monthly pensionable remunerations is JPY 600,000, the benefit amount at age 65 is about JPY 301,000 per month and the replacing rate is 45.9%. The more you have earned, the less the replacing rate will be even though the benefit amount is larger. This is due

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[7] We define a more specific replacing rate and we call it the replacement ratio in this paper. It is a replacing rate of a household where the husband has earned the average salary his entire life. Furthermore the denominator of the replacement ratio is the average annual disposable income of active male workers and is different from that of the replacing rate though it happens to be equivalent to that of the replacing rate since the husband has earned the average salary his entire life.

[8] The disposable income is the amount of gross income minus tax and social security contributions.

[9] In this case the career average of revalued monthly pensionable remunerations is about JPY 360,000.

[10] It is based on the 2004 actuarial valuation.

to the redistributive nature of the flat-rate basic pension benefits. The replacing rates shown so far are those in the EPI scheme. The replacing rates of the MAA schemes are somewhat different because of the occupational addition. For example, for a household whose husband has been in the civil service and earned the same salary as the average salary in the private sector his entire life, the replacing rate is 63.9% while that of the EPI scheme is 59.3%.

The pensionable age is now 60 for the earnings-related part of the schemes for employees whereas it is 65 for the old-age basic pension benefit. It is, however, to be raised gradually to 65 for the earnings-related part by the year 2025 for men and 2030 for women in the case of the EPI scheme. In the case of the MAA schemes it is to be raised gradually to 65 by the year 2025 for both men and women.

(3) Pensionable remunerations

An employee's monthly pensionable remuneration is the average of his/her monthly salary or wages paid in April, May and June. It is applied from September until August of the next year. If his/her monthly salary or wages change sharply, then his/her monthly pensionable remuneration is also changed. There is a lower limit and an upper limit for the monthly pensionable remunerations. They are JPY 98,000 and JPY 620,000 respectively. The pensionable bonus is the amount of bonus with the upper limit of JPY 1,500,000.

(4) Contributions

The insured people of the first category pay flat-rate contributions to the NP scheme. The contribution rate for the FY 2006[11] for this group is ¥13,860 per month. The insured people of the first category with low income or no income at all may be partially or totally exempted from paying their contributions with benefits for such periods reduced according to the degree of exemption. Those who are beneficiaries of social assistance or of disability pensions are totally exempted. Even if one has been totally exempted the entire period, one's benefit is equal to one third of the amount for those beneficiaries who have contributed their entire career.

The insured people of the second category pay contributions proportionate to their pensionable remunerations to either the EPI scheme or one of the MAA schemes. The present contribution rates of these schemes are indicated in **Table 2-1**. The contributions are paid half and half by the employees and the employer(s). The contribution rates of the MAA schemes include the

[11] In Japan the fiscal year (FY) starts on 1 April and ends on 31 March next year.

portion for the occupational addition. Taking account of the fact that the occupational addition accounts for a little bit less than 10% of the total benefit for a household that we mentioned when we defined the replacement ratio in (2)[12] including the basic pension, we can see that the contribution rates of the MAA schemes for civil servants are a bit lighter than that of the EPI scheme and the contribution rate of the MAA for Private School Employees is much lighter than any other schemes for employees. It is partly due to the fact that professors of private universities usually retire at age 70 or so, making it unnecessary to pay the earnings-related old-age benefits to them.

(Table 2-1) Contribution Rates of the Schemes for Employees

(as of January 2007)

scheme	contribution rate (%)
the EPI scheme	14.642
the MAA for Government Employees	14.767
the MAA for Local Government Employees	14.092
the MAA for Private School Employees	11.168

The insured people of the third category, namely dependent spouses of employees, do not have to pay contributions though each insured month as a category 3 person is considered to be a month in which he/she has paid the contribution to the NP scheme. Accordingly a person with 40 years coverage by the NP scheme totally as category 3 can receive his/her old-age basic pension benefit in the full amount though he/she has never paid contributions. As seen in the following paragraph, the contributions are effectively made for them by the schemes which cover their spouses.

(5) Financing the basic pension expenditure

The benefit expenditure of the basic pensions is managed by the Basic Pension Sub-account of the National Pension Special Account. It is financed by transferring the designated amount of money from each of the schemes to the Sub-account. **Fig. 2-3** shows the flow of the financial resources for the basic pension expenditure. The designated amount of money for a scheme is the total amount of annual expenditure of the basic pensions multiplied by the ratio of the number of the active people aged between 20 and 59 covered by the scheme plus the number of their dependent spouses aged between 20 and 59 to the total number of active people aged between 20 and 59 throughout the schemes plus the number of their dependent spouses aged between 20 and 59. In other words, the total amount of annual expenditure of basic pensions is shared by each of the schemes proportionately to the number of active people aged between 20 and 59 covered by the

[12] See footnote 7.

scheme and their dependent spouses aged between 20 and 59.

In calculating the designated amount of money, the insured people of the first category are deemed to form one group and the National Pension Sub-account of the National Pension Special Account transfers the designated amount of money to the Basic Pension Sub-account. The National Pension Sub-account collects contributions from the insured people of the first category.

In this way, the financing of the basic pension benefits is immune to changes in the industrial structure though it is still dependent on the demographic structure. When the designated amount of money is transferred from each scheme to the basic pension account, the portion of the amount is subsidized from the general revenue for each scheme[13]. This is shown in **Fig. 2-3** as each scheme has the national subsidy from the general revenues as well as the contributions from employers and employees. As a result, the portion of the benefit expenditure of basic pensions is subsidized by the general budget.

(Fig. 2-3) Financing the Basic Pension Benefits

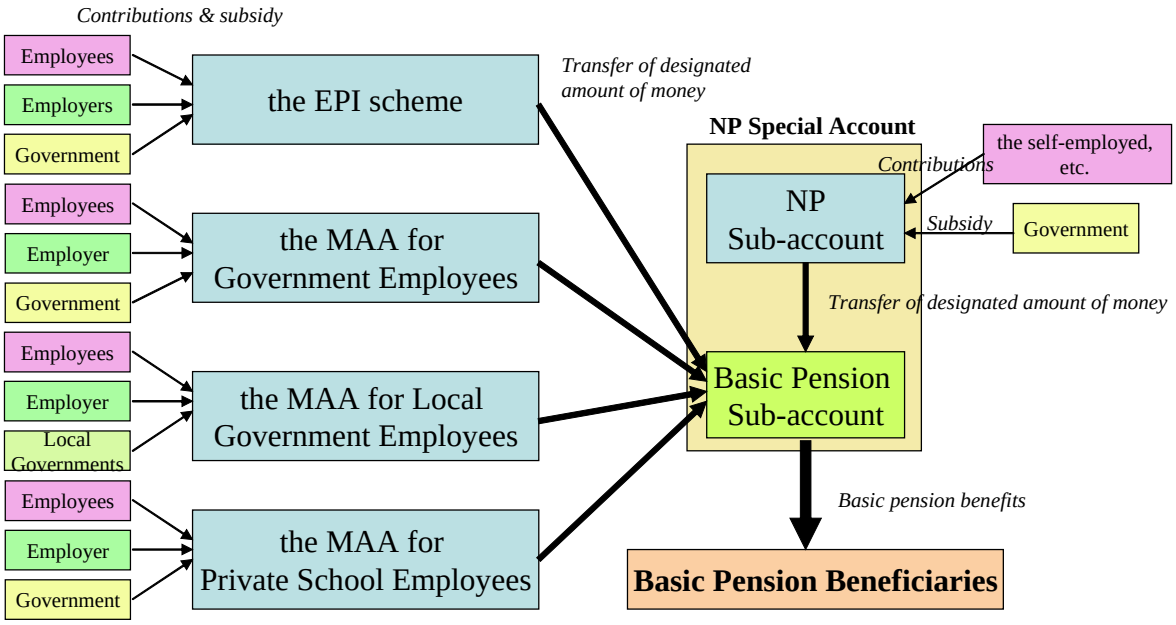

Table 2-2 shows the actual amount of money transferred from each scheme to the Basic Pension Sub-account as financial resources for basic pension benefits.

[13] The rate was 1/3 until FY 2005 but is now being raised. It is 1/3+25/1000 for FY 2006 and is planned to be 1/3+32/1000 for FY 2007. It should be 1/2 by FY 2009 by law although the financial resources necessary for the rise is not clarified yet.

(Table2-2) Amount of Money Actually Transferred

(FY 2004; JPY in trillion)

Scheme	Amount transferred
Total	16.01
the EPI scheme	10.79
MAA for Government Employees	0.42
MAA for Local Government Employees	1.12
MAA for Private School Teachers	0.14
NP scheme (NP Sub-account)	3.54

To end this chapter we summarize the basic statistics of the schemes for employees in Table 2-3.

(Table 2-3) Basic Statistics of the Schemes for Employees

(at the end of FY 2004)

scheme	number of active participants (1) (in ten thousand)	number of old-age beneficiaries (2) (in ten thousand)	(1)/(2)	average monthly amount of old-age benefits (JPY in thousand)	size of reserve fund (JPY in trillion)	Fund ratio
the EPI scheme	3,249	1,117	2.91	169	138.2	4.5
MAA for Government Employees	109	63	1.73	224	8.9	4.6
MAA for Local Government Employees	311	155	2.00	232	38.8	7.5
MAA for Private School Employees	44	9	5.14	218	3.3	9.1
Total	3,713	1,343	2.76	179	189.2	4.9

(Note1) The average monthly amount of old-age benefits includes the beneficiairies' basic pension amount, but does not include their spouses' basic pension amount.

(Note2) Fund ratio means the ratio of the size of reserve fund to the annual benefit expenditure of the scheme.

3. Brief history of the social security pension schemes in Japan

We have seen, in section **2**, the current structure of the social security pension schemes in Japan. One may ask why such a rather complicated structure has appeared. In this chapter we will see how such structure was formed. This history tells the story and it also tells how the discussion of unification has evolved.

(1) The time before the introduction of the EPI scheme

Social insurance is a system that compulsorily covers a group of people for their preparedness for contingencies that cannot be attributable to their own responsibilities but will force them to leave gainful activities or to spend extra money. The scope of coverage is more or less universal and not limited to a particular group of people. The first social insurance system in the

field of pensions, namely to protect people from the contingencies like old-age, disability and survivorship, was the EPI scheme and was introduced in 1942. Before the introduction, only a limited group of people had a system that protected them from these contingencies. They were members of the armed forces, civil servants and seamen.

After the Meiji restoration in 1868, the new government that took over the Tokugawa Shogunate regime tried to construct an industrial country. They tried to consolidate the government by establishing a personnel system to recruit competent persons for various administrative organs and by organizing the armed forces. It was in this context that the superannuation systems for civil servants and members of the armed forces were introduced. The government introduced the superannuation system for the navy in 1875 and then for the army in 1876. It also introduced the superannuation system for civil servants in 1884. It studied the systems of Germany, France, the UK, etc. It was based on the concept that the civil servants were the people whose lives were bought by the nation. It reflected the German concept, but at the same time it was a concept that the general public at that time could easily accept because of the tradition under the Tokugawa Shogunate regime whereby the lords required lifetime loyalty of their servants and gave them a lifetime salary in return. In this sense the superannuation was more like a salary than pensions. The superannuation systems were unified into a single system in 1923.

Apart from the civil servants, there were other public employees in the government mainly involved in the day-to-day operations. In 1905 the mutual aid association for employees of the Yawata Iron Manufacturing Public Corporation was introduced. It started with providing compensation for work injury, but later added medical insurance and pension benefits for old-age, disability and survivorship. Then the mutual aid associations for employees of other organizations like the Imperial Railway Agency[14] were introduced later.

In 1930's, the war loomed and the importance of maritime transportation rapidly increased. Seamen's jobs were, however, very tough and they had to retire very early. Few people wanted to be seamen. Furthermore, when a vessel carrying soldiers and arms was sunk by an attack, the survivors of seamen were not compensated while those of the members of the armed forces were compensated. Complaints grew bigger among the seamen. So the government decided to introduce the Seamen's Insurance in order to make the occupation attractive and keep the necessary number of seamen. This was in 1940. The Seamen's Insurance provided not only pension benefits but also medical insurance. The pensionable age of the old-age benefit was 50 years old.

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[14] It was in 1907 that the mutual aid association for employees of the Imperial Railway Agency was introduced.

(2) Introduction of the EPI scheme in 1942

As the industry grew, labour disputes frequently happened. The government tried to work out measures to give workers economic certainty about their future. For this purpose it studied the social insurance system enacted in Germany under Bismarck and finally introduced a health insurance system in 1922. At the same time, the government continued to study the pension insurance system. There was not, however, conspicuous advance toward enactment of pension insurance as one of the social insurance systems.

Inspired by the enactment of the Seamen's Insurance in 1940, demand for the introduction of pension insurance for workers on land intensified. With the help of the accumulated study on the German pension insurance system, the government finalized the bill and the Employees' Pension Insurance (EPI) scheme was introduced in 1942. It was already wartime and the military group opposed the idea, but finally the government succeeded in persuading them.

The EPI scheme first covered male blue-collar workers employed by enterprises with 10 or more employees. Later it extended the coverage to male and female employees including white-collar employees[15]. Industrial enterprises were also limited, at first, to manufacturing and mining industry. Later it was extended to all kinds of industry except for servicing industry[16]. The lower limit of the size of the covered enterprises was also lowered to 5 from 10 later[17] and further to 1 in the case of legal entities[18].

(3) 1950's

World War II ended in 1945 and Japan suffered from economic turmoil after the war. Prices rocketed and the government was forced to change drastically the framework to rule the country. As one of the changes, the civil service system was changed and the distinction between civil servants and public employees was abolished. As a natural consequence, the superannuation system and the mutual aid association system were unified into a single new mutual aid association system.

Such unification was first realized, on 1 July 1956, in three government-owned corporations being the Japan National Railway (JR) Company, the Japan Tobacco (JT) Company and

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[15] This was in 1944.
[16] This was in 1954.
[17] This was in 1954.
[18] This was in 1985.

the Nippon Telephone and Telecommunications (NTT) Company[19]. Then the new mutual aid association (MAA) for government employees was created on 1 October 1959. Finally the new mutual aid association (MAA) for local government employees was established on 1 December 1962.

The benefit design of the new mutual aid association was a final-salary scheme. 10% of the contribution was subsidized by the government and the remaining 90% was shared half and half by the employer and the employees. In other words those government employees who used to be civil servants started to pay contributions for the system[20]. The cost of the benefits corresponding to the period before the merger of the superannuation system and the old mutual aid association system was financed by the general budget.

In the private sector, too, there continued a reform discussion of the EPI scheme because, due to hyperinflation shortly after the war, its benefit level became too humble to protect those who encountered the covered contingencies such as old age from being impoverished. In 1954 a big reform was carried out and the coverage of the EPI scheme was extended to employees of enterprises of almost all kind of industries[21]. The benefit formula was also changed from the one comprising of only an earnings-related part to the one comprising a flat-rate portion and an earnings-related portion. The proposal to increase the benefit to a more adequate level was, however, rejected by strong opposition by employers. Seeing that the benefit level was not going to be or had not been made adequate, three occupational groups decided to withdraw from or not to participate in the extended coverage of the EPI scheme. The first group was private schools. They established their own mutual aid association, neglecting the extension of coverage of the EPI scheme to private educational organizations[22]. The second group was the public employees of municipalities. They had been covered by the EPI scheme, but they decided to withdraw from it and to establish their own mutual aid association in 1955. Later, in 1962, when the new MAA for Local Government Employees was established, it was absorbed by the new MAA. The third group was the employees of agricultural cooperatives and fishery cooperatives. They had been covered by the EPI scheme but they argued that their jobs were like those of the local government employees and that their

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[19] Strictly speaking these abbreviations should be used only after these corporations were privatized around 1985. For brevity, however, we will use them from now onwards.

[20] The civil servants before the civil service reform used to pay 2% of their salary to the superannuation system. The rate was fixed at 2% and it was considered not to be the contribution to the system but to be a token of gratitude to the country.

[21] The exception was a servicing industry in the secondary classification of industry.

[22] Some universities decided not to participate in the MAA for Private School Employees but to be covered by the EPI scheme because they judged that their health insurance contributions would be heavier if they had joined the MAA for Private School Employees. Here it should be noted that most of the MAA schemes provided health insurance benefits for the participants as well.

independence of the EPI scheme and establishing their own scheme should be allowed. Thus the Mutual Aid Association for Agricultural, Fishery and Forestry Cooperative Employees was established in 1959[23].

(4) Introduction of the National Pension scheme in 1961

In the late 1950's, as the economy was recovering, the government intensively discussed the extension of coverage of the health insurance programme to the whole nation to enable everyone to receive medical services equitably when he/she needed them. Stimulated by this move and as the demand by farmers and the self-employed to establish social security pension schemes grew, the government also started to discuss the possibilities of coverage of the whole nation by social security pension schemes.

In the process, they discussed the extension of coverage of the EPI scheme to those who were not covered by any one of the MAA schemes or by the EPI scheme. They, however, concluded that it would be impossible to do so because they judged that the precise and equitable attachment to income of self-employed and farmers would be impossible. Without precise and equitable attachment to income, the employees would certainly have complaints since almost 100% of the income of the employees was attached and the EPI benefits consisted of the flat-rate part and the earnings-related part, thus playing a redistributive function.

Eventually a new scheme called the National Pension (NP) scheme was introduced on 1 April 1961. It covered self-employed, farmers, non-employed people, and employees of small enterprises with less than 5 employees. Both its benefits and contributions were flat rate. It was equipped with the provision of exempting those with low income or no income at all from paying contributions.

As we have already seen in **Fig. 2-1**, the current NP scheme covers the whole nation, but before the 1985 reform, it covered only the self-employed, farmers, etc. It was nevertheless the largest scheme at that time. It covered 20.0 million people at the end of FY 1965 while the EPI scheme covered 18.7 million people then.

Thus in the 1960's there were ten separate social security pension schemes, covering the whole nation as shown in **Table 3-1**. In the 1960's, this state of separated coverage did not

[23] Unlike other MAA schemes, the MAA for Agricultural, Fishery and Forestry Cooperative Employees did not provide health insurance benefits for the participants. Instead they were covered by a health insurance society that was a contracted-out insurer of the Health Insurance scheme provided by the government.

apparently give rise to problems. In 1970's, however, the problems caused by this separation gradually became conspicuous as we will see in the following sections.

(Table 3-1) Social Security Pension Schemes in 1960's in Japan

the EPI scheme
the Seamen's Insurance
the NP scheme
MAA for Government Employees
MAA for JR Employees
MAA for JT Employees
MAA for NTT Employees
MAA for Local Government Employees
MAA for Private School Employees
MAA for Agricultural, Fishery and Forestry Coperative Employees

(5) Pension jealousy and the long-term financial problems

In the 1960's, Japan experienced economic growth and the benefit level of the EPI scheme and the NP scheme were greatly improved after 1965. Eventually the automatic indexation provision of benefits was introduced in 1973[24]. This attracted people's attention to the social security pension schemes. At the same time some people started to complain about the disparities between the benefit level of the EPI scheme and that of the MAA schemes. For example, the pensionable age was being raised to 60 in the case of the EPI scheme while it was 55 in the case of the MAA schemes. Another example was the benefit formula. The EPI benefit was proportionate to the career average salary plus a flat-rate portion while the MAA benefit was, generally speaking, proportionate to the final salary.

Such feelings of disparity were intensified by the misunderstanding of the much higher actual average retirement (old-age) benefit amount of the MAA schemes than that of the EPI scheme. It was largely attributable to the fact that the average length of the covered period was also much longer in the case of the MAA schemes than in the case of the EPI scheme.

In any case, demand that the disparities be corrected became strong around 1975. This was a form of pension jealousy or pension tension. The government swiftly reacted to it with regard to the pensionable age and raised it in the 1979 reform to 60 with a transitional provision. With regard to other issues such as the benefit level, the 1979 reform did not refer to them but the discussion

[24] In 1973 the oil crisis attacked the country and the price of daily goods soared by 11.7% in 1973, 23.2 in 1974 and 11.7% in 1975. These inflation rates were reflected in the benefit amount according to the automatic indexation provision and people were relieved by it.

continued.

In the 1970's, there appeared schemes whose financial prospects were very gloomy and threatened to be hardly sustainable in the future due to changes in the industrial structure or employment structure. They were the NP scheme, the Seamen's Insurance and the MAA for JR Employees.

It is a worldwide phenomenon that the rural population decreases and the urban population increases as the industrialization advances. In other words the number of people engaged in farming decreases while the number of urban/industrial employees increases as the country is industrialized. This had already started in Japan long before the World War II, but happened intensively during the period of great economic growth in the 1960's and 1970's. This demographic shift resulted in the 1980 actuarial valuation of the NP scheme that showed a projected decrease of the active participants in the near future and that future contribution rates were hardly sustainable.

In the case of the Seamen's Insurance, it actually experienced a decrease in the active participants after 1970. By that time, shipbuilding technology had made great progress, reducing the number of sailors necessary to operate on any ship. At the same time, Japan's maritime transportation industry had lost its international competitiveness because of its high cost, producing considerable redundancies. Furthermore the restrictions imposed on the economic activities outside the 200 sea mile zones contributed to the decrease. It resulted in raising the contribution rates almost every year after 1973. The financial prospects of the Seamen's Insurance were far from sustainable.

The MAA for JR Employees also started to be hit by changes in industrial structure in the 1970's. In those days, the motorways came to connect many cities of economic activity in Japan and general roads had also been improved for the use of lorries. So the transportation on land shifted from railways to lorries. This produced redundancies in the JR Company. The number of active participants in the MAA for JR Employees started to decrease in the 1970's and accelerated in the 1980's. **Table 3-2** shows the decline in the number of active participants in the MAA for JR Employees.

The steep decrease of the active participants in the MAA for JR Employees gave rise to the gravest financial problem in the history of social security pension schemes in Japan. They started to receive help from other schemes in 1984, and finally they were absorbed by the EPI scheme in 1997. We will see the details later.

(Table 3-2) Number of Active Participants of the MAA for JR Employees

(at the end of FY; in thousand)

FY	number of active participants
1965	478
1970	468
1975	436
1980	419
1985	282
1990	196
1995	196

(6) The 1985 reform

In order to cope with the financial problems caused by changes in the industrial structure or employment structure, and to respond to the pension jealousy discussion and other problems, the 1985 pension reform was carried out. The first major part of the reform was the extension of coverage of the NP scheme to the whole nation and the NP scheme was restructured to provide the flat-rate basic pensions to the whole nation while schemes for employees including the EPI scheme and the MAA schemes were rearranged to provide only the earnings-related benefits. The flat-rate portion was replaced by the basic pensions. The government installed the Basic Pension Sub-account in the National Pension Special Account, and the financing framework for basic pension benefits was established. This was described in **Fig. 2-3**. Thus the current arrangement of the NP scheme was born by the 1985 reform. The framework is no longer affected by changes in industrial structure because, even if many farmers further become employees, they continue to support the basic pension beneficiaries as the active contributors to the Basic Pension Sub-account of the NP Special Account.

The second major part of the 1985 reform was the change in the benefit formula for the MAA benefits. It was changed from the final salary formula to a career average salary formula in the same way as the EPI benefits were calculated. The principal part of the benefits the MAA schemes provided came to be the same as the EPI scheme formula shown in **Fig. 2-2**.

It should be noted, however, that it was also stipulated that an amount equal to 20%[25] of the amount calculated by the formula in **Fig. 2-2** was added to the principal part in the case of MAA beneficiaries. This was called the occupational addition. The reason why such an occupational

[25] If the number of covered years was less than 20, then it was 10%, and if it was less than 1, then there was no occupational addition.

addition was added to the benefits the MAA beneficiaries received was that government employees or local government employees were from time to time forced to abandon the opportunities of increasing their savings due to the code of conduct imposed upon them as public servants. The occupational addition was to compensate for such loss of opportunities. The on-going discussion claims that the occupational addition is not fair and the reform bill includes the provision that it should be abolished as from FY 2010. The occupational addition has been one of the main causes of the pension jealousy discussion.

The third major part of the 1985 reform was the merger of the Seamen's Insurance with the EPI scheme[26]. As we have seen in (5), the Seamen's Insurance was suffering from a decrease in active participants and its financial conditions were worsening. Fortunately the benefit provisions including the benefit formula of the Seamen's Insurance, were the same as those for mine workers covered by the EPI scheme, and it was rather easy to merge it with the EPI scheme. The reserve fund corresponding to the amount that would have been accumulated to the same degree as the mine workers would have accumulated in the EPI scheme was transferred to the EPI scheme.

The 1985 reform, therefore, partially solved the problems faced by the NP scheme and the Seamen's Insurance. The financial problems faced by the MAA for JR Employees were, however, left unsolved though the financial conditions were relieved to a certain extent by the introduction of the basic pension benefits. The problems with the MAA for JR Employees were grave because of the steep decrease of the active participants shown in **Table 3-2**.

The 1985 reform also addressed the pension jealousy discussion and by and large the disparities were minimized, but still the differences like the occupational addition and some other benefit provisions or contribution rates were left. When the reform bill passes the Diet, it eliminates them entirely.

(7) The MAA for JR Employees

As we have seen in (5), the MAA for JR Employees faced a steep decrease in active participants in the 1980's due to the shift of transportation on land from railway to lorry. This had a great impact on the financial basis of the MAA scheme and forced it to raise its contribution rates every year from 10.24% in 1980 to 16.99% in 1984.

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[26] Strictly speaking, the pension provisions of the Seamen's Insurance were merged with the EPI scheme, and the rest of the provisions like health insurance provisions, work injury provisions have been left in the Seamen's Insurance.

The financial prospect, however, showed that a further increase in the contribution rate would be necessary in the near future. The government, therefore, decided to make the MAA schemes for Government Employees, JT Employees and NTT Employees provide financial help for the MAA for JR Employees. It started in 1984.

This financial help from the three MAA schemes was not enough to moderate the financial problem of the MAA for JR Employees and the government introduced another provisional measure, in 1990, of providing financial help from all the schemes for employees including the EPI scheme for the MAA for JR Employees. Seeing that this measure would stabilize the financial problem for the time being, the government set up, in 1994[27], a working group consisting of scholars and representatives from the social security pension schemes to work out measures to merge the MAA for JR Employees with the EPI scheme with the ultimate goal being the unification of the social security pension schemes for employees.

By 1990 when the financial help for the MAA for JR Employees from all the schemes for employees was started, the MAA for JT Employees had also been in financial difficulties because the number of active participants steeply decreased from 38,000 in 1980 to 25,000 in 1990. The main reason for the decrease was the invention of automatic tobacco-rolling machine that produced redundancies. The MAA for JT Employees was also provided with financial help by the 1990 framework.

The working group published its report in July 1995, suggesting that the three MAA schemes for JR, JT and NTT Employees should be merged with the EPI scheme at the beginning of FY 1997 and that the remaining schemes for employees should also be gradually unified as they mature in the 21st century. Here one may ask why the MAA for NTT Employees was proposed to merge with the EPI scheme. The MAA for NTT Employees was not in financial difficulty at that time, but the NTT Company had been privatized in 1985 and so the working group suggested that it should also be merged with the EPI scheme. Incidentally the JR Company was privatized in 1987 and the JT Company in 1985.

Following the report of the working group, the government finalized the bill to merge the three MAA schemes with the EPI scheme and submitted it to the Diet in March 1996. The bill passed the Diet in August 1996 and the three MAA schemes were merged with the EPI scheme on 1

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[27] Just before the bill for the 1985 reform was submitted to the Diet, the Cabinet published the Cabinet Decision in February 1984 that set the deadline of completing the unification of the social security pension schemes in Japan. It was the end of FY 1995. The setting up pf the working group in 1994 was based on the Cabinet Decision as well. As we will see later, the deadline was not observed.

April 1997. Thus the financial problems faced by the MAA for JR Employees were solved[28], lagging behind the NP scheme and the Seamen's Insurance for more than a decade.

(8) Financial framework on merging the three MAA schemes with the EPI scheme

When the working group decided to merge the three MAA schemes with the EPI scheme, they proposed a financial framework that would avoid imposing a whole new burden on the EPI scheme and distribute it among the remaining schemes for employees. Without such a framework all of the financial imbalance would have gone for compensation solely by the EPI scheme. The working group suggested that it should be compensated for by all the remaining schemes for employees.

The financial framework proposed by the working group consisted of the following three principles:

(i) The benefits corresponding to the period after the merger are supported by all active participants of the EPI scheme.

(ii) The three MAA schemes should transfer the bulk of the reserve fund to the EPI scheme. The amount is so calculated as to secure the benefits promised when contributions were paid. In other words, it is roughly the reserve based on the unit credit method.

(iii) The benefits corresponding to the period before the merger are to be financed by the reserve fund transferred from each of the three MAA schemes, the national subsidy and the contributions[29] paid by the active participants of JR, JT and NTT Companies. If these financial resources are not enough to finance the benefits, then the difference is compensated by all the schemes for employees.

Fig. 3-1 is the conceptual chart of the above-mentioned financial framework as to the merger of the three MAA schemes with the EPI scheme. In the case of the MAA for JR Employees, the transferred reserve fund, the national subsidy and the contributions were not enough to pay the benefits so that the difference has been supported by the remaining schemes for employees. In the case of the MAA for JT Employees, the situation was the same and the shortfall of the benefit expenditure has been compensated for by the remaining schemes for employees. In the case of the

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[28] It goes without saying that, every time they obtained financial help from other schemes, the MAA schemes for JR and JT Employees made every effort to reduce the benefit cost including benefit cuts like abolishing the occupational addition of the newly awarded and paying higher contributions than other active participants even after the merger.

[29] Strictly speaking, they are the contributions left after the amount to be transferred to the Basic Pension Sub-account and the amount corresponding to the increased accrued liabilities during the year measured in the unit credit cost method are deducted. See **Fig. 3-1**. The contributions left are split into two parts to finance the benefits corresponding to the period before and after the merger in proportion to the benefit amount of each part.

MAA for NTT Employees, these financial resources were enough to pay the benefits so there have been no further aids from the remaining schemes for employees.

(Fig. 3-1) Conceptual Chart of Financial Framework on Merging the MAA for JR or JT Employees with the EPI Scheme

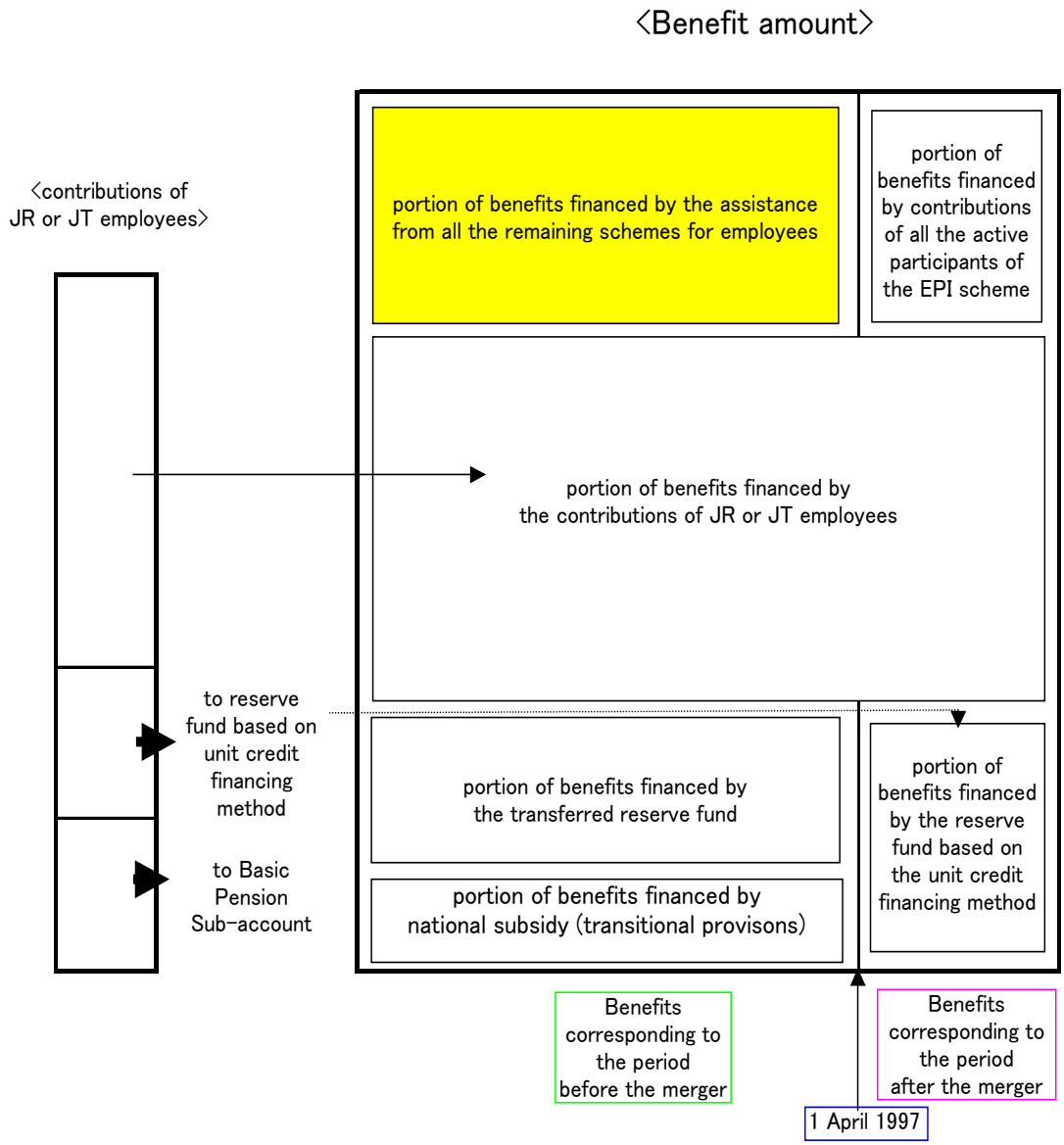

Table 3-3 shows the amount of the reserve fund transferred to the EPI scheme from each of the three MAA schemes on the merger under the financial framework proposed by the working group.

(Table 3-3) Amount of Reserve Fund Transferred to the EPI Scheme on the Merger

(in trillion JPY)

scheme	amount transferred
MAA for JR Employees	1.21
MAA for JT Employees	0.11
MAA for NTT Employees	1.19

The actual reserve fund the MAA for JR Employees had on the merger was only JPY 0.3 trillion and the clearing corporation that was set up by the government to clear the long-term debts when the JR Company was privatized is paying the difference through 20-year instalments.

The shortfall of the benefit expenditure in the case of MAA schemes for JR and JT Employees has been compensated for by the remaining schemes for employees. The amount is levelled based on the financial projections and the yearly size is about JPY 0.13 trillion in terms of the FY 2005 value. It is indexed to the rate of increase of the total amount of the monthly pensionable remunerations of active participants of the schemes for employees. It is shared by the remaining schemes for employees. How to decide the share of each scheme is rather complicated and we do not refer to it here.

(9) The MAA for Agricultural, Fishery and Forestry Cooperative Employees

In late 1990's, the Agricultural Cooperatives were forced to restructure their businesses, especially in the field of financial businesses due to globalization and deregulation. The number of active participants of the MAA for Agricultural, Fishery and Forestry Cooperative Employees started to decrease from 511,000 in FY 1994 to 475,000 in FY 1999. The trend created a discussion with respect to merging the MAA with the EPI scheme to start in 2000. In the end it was merged with the EPI scheme on 1 April 2002. The financial framework for the merger was by and large the same as the one stipulated for the merger of the MAA schemes for JR, JT and NTT Employees. The MAA for Agricultural, Fishery and Forestry Cooperative Employees transferred the reserve fund of JPY 1.6 trillion to the EPI scheme. The transferred reserve fund, the national subsidy and the contributions of the active employees of the cooperatives were enough to finance the benefits corresponding to the period before the merger, so there was no need for support from the remaining schemes for employees.

Above is a brief history of the social security pension schemes in Japan. We have seen that the ten schemes that existed in the 1960's as shown in **Table 3-1** have decreased to five schemes as

shown in **Fig. 2-1** with the NP scheme extending its coverage to the whole nation.

4. The current discussion of unifying the schemes for employees

We repeat that there are four social security pension schemes for employees in Japan as shown in **Fig. 3-1**. They are the EPI scheme, the MAA for Government Employees, the MAA for Local Government Employees and the MAA for Private School Employees. Now the reform bill to unify these four schemes into a single scheme has been submitted to the Diet.

Just before the bill to merge the MAA for Agricultural, Fishery and Forestry Cooperative Employees with the EPI scheme was submitted to the Diet in March 2001, the Cabinet published its decision that stated that the discussion should be hastened to work out measures to expand the financial basis of and to promote equity of contributions among the schemes for employees and that it should reach conclusions in the early 2000's as the schemes for employees mature. In other words the Cabinet Decision in March 2001 urged that the discussion of unifying the schemes for employees should be continued after the MAA for Agricultural, Fishery and Forestry Cooperative Employees was merged with the EPI scheme.

It should be noted here that the Cabinet Decision also urged the MAA for Government Employees and the MAA for Local Government Employees to unify their financial bases into a single one. Following that, the two MAA schemes unified their financial bases in the 2004 pension reform and they are going to equalize the contribution rate between them in 2009.

(1) Until the Cabinet Decision on 28 April 2006

After the MAA for Agricultural, Fishery and Forestry Cooperative Employees was merged with the EPI scheme on 1 April 2002, the pension reform discussion started to focus on how to restore the financial balance caused by the updated population projections that showed further improvement of mortality and further decline of fertility than the previous projections. It lead to the 2004 pension reform that introduced the automatic balancing mechanism through modified indexation.

In November 2003, just before the Diet deliberations of the pension reform bill were to start in April 2004, the Lower House election took place. The largest opposition party, the Democratic Party, insisted, in its campaign for the election, that everyone should be covered by a

single social security pension scheme irrespective of whether one is employed or self-employed. A pension reform without such unification would be quite far from the drastic reform needed, they insisted. In July 2004, just after the reform bill passed the Diet, the Upper House election took place. The Democratic Party again insisted the same thing. During the election campaign and also during the Diet deliberations of the reform bill, the government parties insisted that covering the whole nation under a single social security pension scheme would be the ultimate goal if we could precisely attach to the income of everyone but that we should first unify the schemes for employees when we had no effective framework to attach to the income of everyone. Under such circumstances, the Pension Reform Council of the government parties published a statement, in December 2006, that they would work out the directions of unifying the schemes for employees by the end of 2005.

There was no conspicuous move in the first half of 2005, but shortly after the landslide victory of the ruling Liberal Democratic Party in the Lower House election[30] in September 2005, the Prime Minister ordered the Chief Secretary of the Cabinet to work out measures to unify the schemes for employees as soon as possible. Following this order, the government set up a formal meeting of the ministries[31] concerned with the schemes for employees to spell out the problems to be solved when the schemes were to be unified. It published a report in December 2005 referring to the differences of contribution rates, the differences of benefit provisions, how to decide, invest and manage the portion of the reserve fund of the MAA schemes that should be provided for the common financial resources after the unification, what to do with the occupational addition, treatment of the benefits of public employees corresponding to the period before the merger of the superannuation system with the mutual aid associations, etc. Around the same time the Pension Reform Council of the government parties published a report that showed some possible directions in unifying the schemes for employees referring to equalizing the contribution rate among the schemes for employees, abolishing the differences of benefit provisions, abolishing the occupational addition, etc.

In January 2006, the government ministries concerned and the Pension Reform Council of the government parties started a joint meeting to work out the measures to unify the schemes for employees. The Chief Secretary of the Cabinet stated, at the first joint meeting, that he wished to publish the Cabinet Decision of the principal directions of the unification of schemes for employees by the end of April 2006. The joint meeting was frequently held and the Cabinet Decision was

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[30] This time the Prime Minister dissolved the Lower House when the bill to privatize Japan Post was rejected in the Upper House.

[31] They are the Cabinet Secretariat, the Ministry of Internal Affairs and Communications, the Ministry of Finance, the Ministry of Education, Culture, Sports, Science and Technology and the Ministry of Health, Labour and Welfare.

published on 28 April 2006 as was the wish of the Chief Secretary of the Cabinet.

(2) The Cabinet Decision on 28 April 2006

As we have seen in the history of social security pension schemes in Japan, the main purposes of unifying the social security pension schemes are to make their financial basis immune to changes in industrial or employment structure and to make them equitable since they are compulsory social insurance schemes. The Cabinet Decision on 28 April 2006 states that it also bases the unification on the same principles:

(i) to improve the stability of the schemes by expanding the financial basis, and

(ii) to secure equality among employees by imposing the same contributions and providing the same benefits for the same salary.

Then it elaborates the principal directions, as follows.

(i) Equalizing the contribution rate of the schemes for employees

The Cabinet Decision first proposes to equalize the contribution rate of the schemes for employees. As we will see later, it proposes to make the benefit provisions the same throughout the schemes for employees including the abolition of the occupational addition of the MAA schemes. Thus the same contribution and the same benefit for the same salary are to be realized by this measure. It also proposes to raise the contribution rates of the MAA schemes by the same rate as the EPI scheme stipulates, that is 0.354% every year, to avoid steep increases in the contribution rates. **Table 4-1** summarizes what the Cabinet Decision proposes[32].

According to **Table 4-1**, the contribution rate for the public servants is to reach the ultimate contribution rate of 18.3% in FY 2018, a year later than that of the EPI scheme and the contribution rate for private school employees is to reach it in FY 2027, ten years later than that of the EPI scheme. The Cabinet Decision states the years when these contribution rates are to reach the ultimate level of 18.3%.

[32] The Cabinet Decision does not so clearly state the plan of raising the contribution rates as the **Table 4-1**. We have made the table based on what we can project from the statement of the Cabinet Decision.

(Table 4-1) Contribution Plans of Each Scheme for Employees (Image)

(%)

FY	MAA for Government Employees	MAA for Local Government Employees	MAA for Private School Employees	EPI scheme
just before the 2004 actuarial valuation	14.38	13.03	10.46	13.58
2004	14.509	13.384	10.46(*)	13.934
2005	14.638	13.738	10.814	14.288
2006	14.767	14.092	11.168	14.642
2007	14.896	14.446	11.522	14.996
2008	15.025	14.800	11.876	15.350
2009	15.154		12.230	15.704
2010	15.508		12.584	16.058
↓	↓		↓	↓
2017				18.3
2018	18.3			
↓				
2027			18.3	

(*) The initial date of the latest actuarial valuation of the MAA for Private School Employees is the 1 April 2005.

(ii) The reserve fund to be shared

The Cabinet Decision orders the MAA schemes to segregate a portion of their reserve funds to be shared by all employees. The underlying idea is that the schemes for employees are united into one single financial unit and the segregated reserve fund should be deemed to belong to this unit. It is not clear yet whether the segregation is just notional or physical[33].

The amount of the reserve fund each MAA scheme should segregate for the financial unit is to be calculated so as to make equal the ratio of the segregated reserve fund to the annul amount of benefit expenditure of each MAA scheme on unification to the ratio of the EPI scheme on unification. Currently the ratio of the EPI scheme is about 5 times as much as its annual benefit expenditure. Given the current size of the reserve funds of the MAA schemes, there will certainly remain some reserve funds in their hands after the segregation. They are to make financial resources for the occupational addition corresponding to the period before its abolition, and if some money is still left, it is to be used to relieve the raising of the contribution rates or to make financial resources for the schemes to replace the occupational addition as we will see later.

(iii) The benefits corresponding to the period before introducing the current MAA schemes

As we have seen in **3.** (3), the superannuation system for civil servants was merged with the mutual aid association for public employees and the new MAA scheme was introduced on 1

[33] The reform bill only states the segregation and leaves the details to the regulations that will not be published until shortly before the effective date of the law when the bill passes the Diet.

October 1959 for government employees and on 1 December 1962 for local government employees. The new MAA schemes have taken over the benefit obligations corresponding to the period before the introduction of new MAA schemes for those who were covered by both[34] the new MAA schemes and the superannuation system or the old mutual aid association system. The financial resources for these benefits have been the general budget of either the national government or the local governments. These beneficiaries form a closed group and are very old, so the annual expenditure for these benefits is decreasing. It was JPY 470 billion in FY 2005 in the case of government employees and JPY 1.2 trillion in FY 2005 in the case of local government employees.

The Cabinet Decision orders that these benefits be cut by 27% in order to reduce the tax burden[35]. There is, however, alleviating provisions that the reduction rate of the total benefit should not exceed 10% and that the annual benefit amount after the reduction should not go below JPY 2.5 million.

(iv) The occupational addition

The Cabinet Decision orders that the occupational addition should be abolished in 2010. It also orders the National Personnel Authority to conduct surveys into civil service pension schemes in foreign countries and into retirement benefit plans in the private sector. It states that the new scheme incorporated in the civil service system should be introduced to replace the occupational addition and that its plan design should be based on the surveys conducted by the National Personnel Authority.

In the case of private school employees, the Cabinet Decision states they should also work out a new pension scheme replacing the occupational addition.

(v) Benefit provisions

The Cabinet Decision states that the differences of benefit provisions between the EPI scheme and the MAA schemes should be removed[36].

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[34] If one retired before the introduction of the new MAA schemes, one's benefits have been provided directly by the national government or local governments and the new MAA schemes do not have the obligations to provide them.

[35] The rate 27% was decided in the following way. When the new MAA for Government Employees was introduced in October 1959, the contribution rate was 8.8% shared half and half by the employer and the employees. So the government employees' share was 4.4%. For the superannuation system, on the other hand, the civil servants had paid the 2% of their salary as a token of gratitude to the country (see footnote 19). This was interpreted as having been short of the full contribution rate by 2.4% during the time of the superannuation system. Consequently the benefits were decided to be cut by 2.4/8.8 or roughly 27%.

[36] There are several small differences in the benefit provisions between the EPI scheme and the MAA schemes. For

There are several other statements with regards to management and investment of the reserve funds shared by the schemes for employees and administrative organs in the Cabinet Decision, but they are not so concrete, so we skip them here.

(3) Move after the Cabinet Decision

Following the Cabinet Decision on 28 April 2006, the government and the Pension Reform Council of the government parties intensively discussed the details for unification. They published, on 19 December 2006, a note referring to some of the details of the issues raised by the Cabinet Decision.

The most important point that the note refers to is the proposal that public servants and private school employees should be covered by the EPI scheme. It also proposes that the existing systems for administration of the MAA schemes should be restructured as the branches of the EPI scheme that collect contributions, manage and invest the reserve fund and pay the benefits for the EPI scheme.

It also states that the effective date of the unification should be in FY 2010, that the effective date of the reduction of benefits corresponding to the period before the introduction of the new MAA schemes should be in FY 2008 and that the effective date of the new scheme that replaces the occupational addition should be in FY 2010.

The bill to unify the schemes for employees includes provisions in line with the Cabinet Decision on 28 April 2006 and the note issued on 19 December 2006.

(4) The new scheme replacing the occupational addition

The details of the new scheme incorporated in the civil service system replacing the occupational addition are not published yet. The submission of the bill to the Diet has been delayed. Instead the reform bill to unify the schemes for employees stipulates that the details of the new scheme should be discussed in 2007 and another bill should be submitted to the Diet afterwards so that they should be effective when the occupational addition is abolished. One of the reasons for the delay is that there is an Upper House election in July 2007 and the government parties do not want to

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example, the survivors' pension can be taken over by the remaining survivors in the MAA schemes while it cannot be taken over by other survivors in the case of the EPI scheme.

look like they are supporting the public servants.

We can, nevertheless, project what the Ministry of Finance is going to propose from the reference materials that were submitted to the Pension Reform Council of the government parties in February. What we expect are as follows[37]:

- They are going to propose to reduce the benefit level by 37% on the basis of the survey into the retirement benefits in the private sector conducted by the National Personnel Authority. It is because the level of contributions by employees is much lower in the private sector than the public sector[38]. The share of the contributions by employer and employees might be 50:13 accordingly.
- The scheme may be defined-benefit. It is because there are always some public servants who would be deemed to have insider information if we adopted a DC plan. Another reason is that the benefit level could not be compared with that of the private sector if a DC plan were adopted.
- The financing method might be advance-funding like DB corporate pension plans.
- There will be no indexation provisions in the new scheme.

5. Roles played by the actuaries in the government in the unifying process

We have seen the unifying process of the social security pension schemes in Japan in the preceding chapters. It has come to the final stage since the bill to unify all the schemes for employees is about to be submitted to the Diet.

In the process of the unification that formally started in the 1985 reform[39], the actuaries in the government have played significant roles that we will summarize in this chapter. They can be classified into two roles. One is the supervisory role and the other is the advisory role.

(1) Supervisory role

As we have seen in **3.** (5), there appeared in the 1970's a pension jealousy discussion and also some real financial problems faced by some schemes. The Minister of Health and Welfare set up,

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[37] Please note that they are what we imagine.

[38] If we compare the benefit level that corresponds to the employer's contributions, the level of the private sector is higher than that of the public sector. The government parties imply that this difference should be neglected.

[39] It informally started earlier than this. For example, the MAA for Government Employees raised the pensionable age from 55 to 60 in 1979. This was done based on the pension jealousy discussion. It may also have been one of the measures taken in the unification process.

in 1976, a working group composed of scholars and representatives of employers and trade unions to address these issues and to show the future perspectives. It discussed the problems for three years and published a report in 1979 containing, for example, several methods to address the financial problems faced by the old NP scheme. The idea of extending the coverage of the NP scheme to the whole nation and providing basic pension benefits to them was mentioned in the report.

The report of the working group also contained a proposal to set up an actuarial committee that was to supervise the financial planning of each of the social security pension schemes. This came from the perception that some schemes were not paying enough attention to their financial conditions irrespective of whether they were suffering from financial difficulties or not and that the financial conditions should be monitored by a single neutral supervisor based on common standards.

The proposal was at first very strong, giving the committee the power to recommend measures to be taken by the schemes. There were, however, strong opinions that the autonomy and independence of the schemes should not be harmed expressed mainly by the MAA for Local Government Employees and for Private School Employees. In the end, the proposal emerged in a weakened form. The Actuarial Subcommittee consisting of three pension experts and one actuary was established in the Social Security Council of the Prime Minister's Office in 1980. Some actuaries were dispatched from the Ministry of Health and Welfare to its secretariat.

After the inception, the Actuarial Subcommittee intensively collected the basic data from all of the social security pension schemes and analyzed their financial conditions. It started to produce a report of comparative actuarial analysis of the schemes. The first one was published in 1984. Each scheme was thus enabled to understand its financial conditions in comparison with other schemes. The second and the third reports were published in 1988 and in 1992 respectively.

In order to collect the basic data, the Subcommittee annually held hearings from each of the schemes. Although the power to make recommendations to schemes was not given, the discussions during the hearings may have had the effects similar to recommendations.

As time went on, the supervisory role of the Actuarial Subcommittee came to be widely recognized and eventually the Cabinet Decision on 8 March 1996 (that was published just before the bill to merge the MAA for JR Employees, etc. with the EPI scheme was submitted to the Diet) asked the Subcommittee to monitor the financial stability of each scheme and the equity among the schemes every time the actuarial valuations were carried out. The Subcommittee responded to this requirement and published a report in 2000 analyzing the 1999 actuarial valuation of each scheme.

When the government restructuring took place in January 2001, the Social Security Council of the Prime Minister's Office was abolished. The Actuarial Subcommittee was, however, moved to the Ministry of Health, Labour and Welfare and became the Actuarial Subcommittee of the Social Security Council[40] that was established within the new Ministry of Health, Labour and Welfare[41] as an advisory voice for the Minister of Health, Labour and Welfare.

The Subcommittee has continued its supervisory role since then. In fact, the Cabinet Decision on 16 March 2001, that was published just before the bill to merge the MAA for Agricultural, Fishery and Forestry Cooperative Employees with the EPI scheme was submitted to the Diet, required the Subcommittee to monitor the stability of each scheme for employees and the equity among the schemes for employees on actuarial valuations as well as on an annual basis.

The monitoring is continuing and every year the Subcommittee publishes an annual report that analyzes the financial conditions of each scheme and compares them overall. It has enabled the authorities to discuss unifying the social security pension schemes for employees on a firm basis.

As we have seen in the history of the social security pension schemes in Japan, several mergers took place in the past. Mergers of schemes always entails some resentment among the people concerned that may develop into strong opposition against the merger. It can, however, be said that it has not happened so far though, of course, there have been some people who argued with strong sentiment. They have always been a minority. Monitoring of the schemes by the Actuarial Subcommittee has helped people concerned understand the situation, increased the credibility of the merger discussions and contributed to rational deliberations. That was one of the most significant contributions that the supervisory roles of actuaries have made.

(2) Advisory role

The actuaries in the government have also contributed to the discussion of unifying of social security pension schemes by providing ideas that form financial frameworks for mergers. We have seen the 1985 reform that extended the coverage of the NP scheme to the whole nation. This idea was originated in the report of the working group that was set up by the Minister of Health and

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[40] It is different from the Social Security Council of the Prime Minister's Office that was abolished by the government restructuring in 2001. Actually their names in Japanese are slightly different but their English names are the same.

[41] The ministry of Health and Welfare and the Ministry of Labour were merged on 6 January 2001 and became the Ministry of Health, Labour and Welfare as one of the government restructurings.

Welfare in 1976. In the process of completing the report, the actuaries in the Actuarial Affairs Division, Pension Bureau, Ministry of Health and Welfare provided actuarial advice to the people concerned and contributed to establishing the reform. The 1985 reform also merged the pension provisions of the Seamen's Insurance with the EPI scheme. When it was merged, it transferred a certain amount of the reserve fund to the EPI scheme. The idea of how to decide the amount to be transferred was provided by the actuaries in the government and the actual calculation of the amount was done by them as well.

The merger of the MAA for JR Employees with the EPI scheme was, in a sense, the most difficult one that we have experienced. The conducts of JR trade unions had caused strong resentment among the public before the merger discussion started in 1980's. They were prohibited from striking because they were public servants. What they did was slow their driving of commuter trains. By doing so, they demanded salary hikes in the 1970's. The trade union thought it would be effective. In fact, it affected a great many commuters and since it lasted a long time, it provoked anger among the public. They were also blamed for an insincere attitude towards their jobs. Some conductors were seen reading newspapers on the train while on duty. Others took a bath during their job time. They got promotion just before retirement and obtained larger pension benefits than would have been paid without such irregular promotion. The JR employees, especially the trade union, lost the faith of the public in the 1970's[42].

Under such circumstances, it was not easy to merge the MAA with the EPI scheme. The public could not be persuaded. First the government had to obtain correct understandings from the public of the true reasons[43] why the MAA for JR Employees was in financial difficulty. At the same time the MAA had to reduce the benefits that were based on the irregular promotions just before retirement. They did actually reduce them. Then the government had to work out a financial framework for the merger that would not develop political arguments. The amount of the reserve fund to be transferred had to be so solid that there would be no room for political interference. After the merger, the deficits had to be shared equally among the remaining schemes for employees. The actuaries in the government, especially those in the Actuarial Affairs Division of the Pension Bureau, Ministry of Health Labour and Welfare, contributed to working out the measures satisfying these conditions. The final framework they worked out was what we have seen in **3.** (8).

When the merger of the MAA for Agricultural, Fishery and Forestry Cooperative Employees with the EPI scheme was being discussed in 2000 and 2001, the actuaries in the

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[42] We admit that these problems have been solved through privatization. Now many people say that the services the JR companies provide are quite satisfactory.

[43] The number of active employees decreased due to the shift of transportation on land from railway to lorry.

government again provided actuarial advice to form the financial framework. It was, in principle, based on the same framework as the case of the MAA for JR Employees.

In the current discussion of unifying schemes for employees, actuaries in the government are providing actuarial advice to various issues being addressed. They provided advice to the National Personnel Authority when they conducted a survey into the retirement benefits in the private sector. They are providing advice on designing the new scheme for public servants. They are also providing advice on how to manage the account of each MAA segregated for the EPI-equivalent benefits.

Summing up, the unification of social security pension schemes necessitates actuarial solutions in its essential parts like how much of a reserve fund should be transferred or how the additional burden brought about by the merger should be distributed equally among the schemes. The actuaries in the government have contributed to forming the practical framework of unification by providing solutions to the problems for policy makers.

6. Concluding remarks

When the author was a young actuary in the government in 1970's, he felt that actuaries were not well recognized in Japan. He thought that very few people knew the existence of actuaries. He is not sure whether it was the reality then or his misunderstanding. However, now he can say, at least, that it is not important whether actuaries are well recognized or not. Problems necessitate actuaries.

Fortunately social security pension schemes have become an essential part of society and people have come to have great interest in them. At the same time they are facing problems. Problems caused by ageing populations and changes in the industrial structure. As the problems become recognized, the roles of actuaries are also recognized. We have to be prepared for the time when actuaries become necessities. We do not have to worry about too little recognition.