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<http://www.ssa.gov/OACT/TRSUM/trsummary.html#wp35982>

<b>Table 1. KEY DATES FOR THE TRUST FUNDS</b>				
	<b>OASI</b>	<b>DI</b>	<b>OASDI</b>	<b>HI</b>
First year outgo exceeds income excluding interest	2018	2008	2018	2013
First year outgo exceeds income including interest	2030	2018	2028	2018
Year trust fund assets are exhausted	2044	2028	2042	2026

Source: U. S. Social Security Administration. 2003. *Status of the Social Security and Medicare Programs: A SUMMARY OF THE 2003 ANNUAL REPORTS*.  
<http://www.ssa.gov/OACT/TRSUM/trsummary.html#wp35982>

**Table 2. ACTUARIAL DEFICIT OF THE OASI, DI, AND HI TRUST FUNDS**  
*(As a percentage of taxable payroll--total does not add due to rounding)*

	<b>OASI</b>	<b>DI</b>	<b>OASDI</b>	<b>HI</b>
Actuarial Deficit	1.56	0.35	1.92	2.40

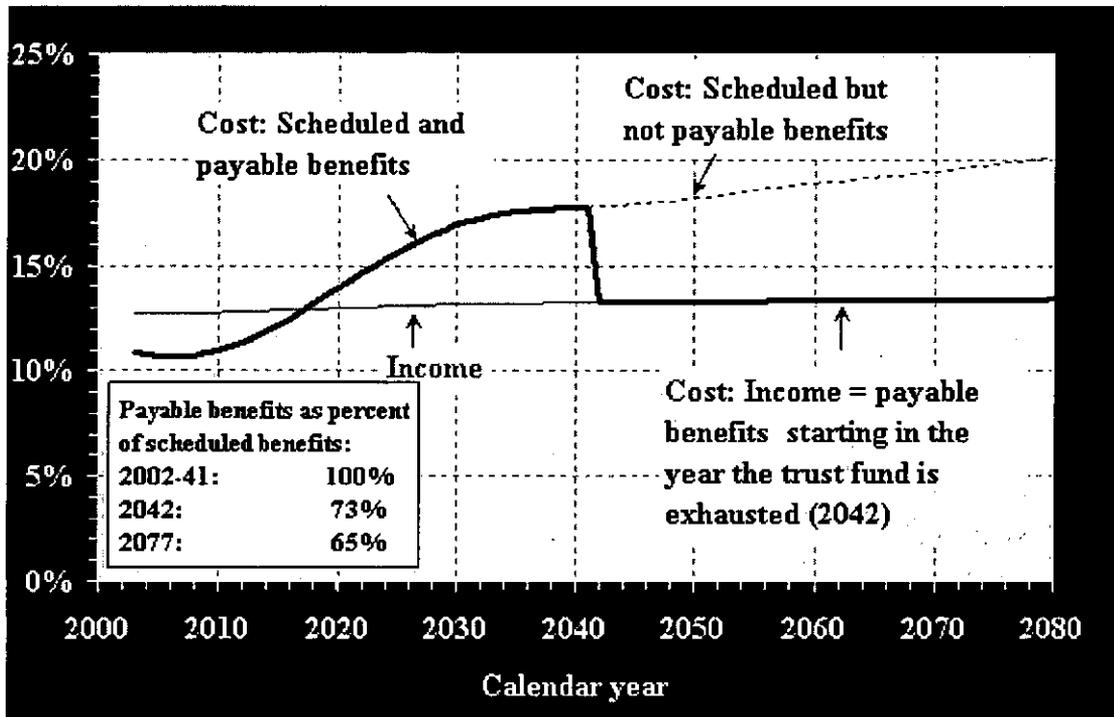
Source: U. S. Social Security Administration. 2003. *Status of the Social Security and Medicare Programs: A SUMMARY OF THE 2003 ANNUAL REPORTS*.  
<http://www.ssa.gov/OACT/TRSUM/trsummary.html#wp35982>

Table 3. Employer costs per hour worked for employee compensation and costs as a percent of total compensation: Civilian workers, June 2003

<u>Compensation Component</u>	<u>Hourly costs</u>	<u>Percent of total compensation</u>
Total compensation	\$24.19	100.0
Wages and salaries	\$17.25	71.7
Total benefits	\$ 6.84	28.3
Retirement & savings	0.86	3.6
Health & insurance	1.81	7.5
Paid leave	1.63	6.7
Supplemental pay	0.59	2.4
OASDI	1.11	4.6
Medicare	0.28	1.2
Other legally required	0.54	2.2
Other benefits	0.04	0.2

Source: U.S. Bureau of Labor Statistics, "Employer costs for Employee Compensation - June 2003," *United States Department of Labor News*, August 26, 2003.

**Figure I. OASDI Income and Cost Rates Under Intermediate Assumptions**



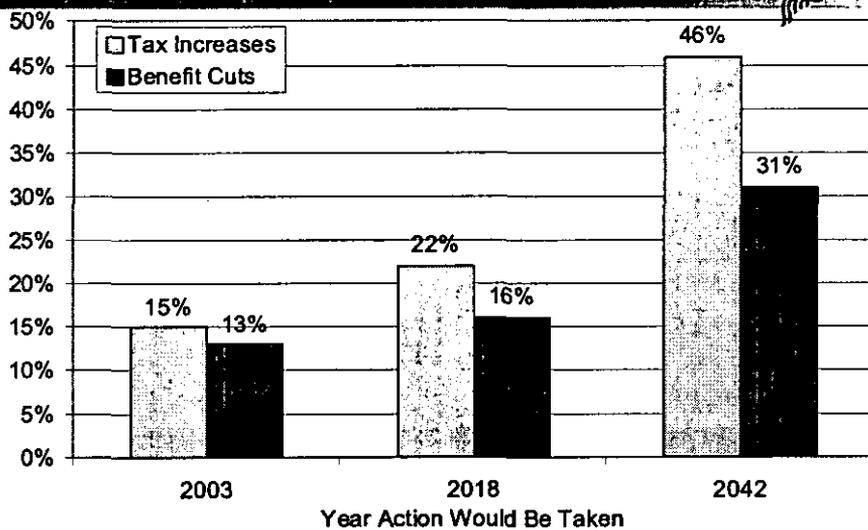
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Source: Board of Trustees, Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, *The 2003 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*. Washington: USGPO, 2003, Figure II.D2, page 8.

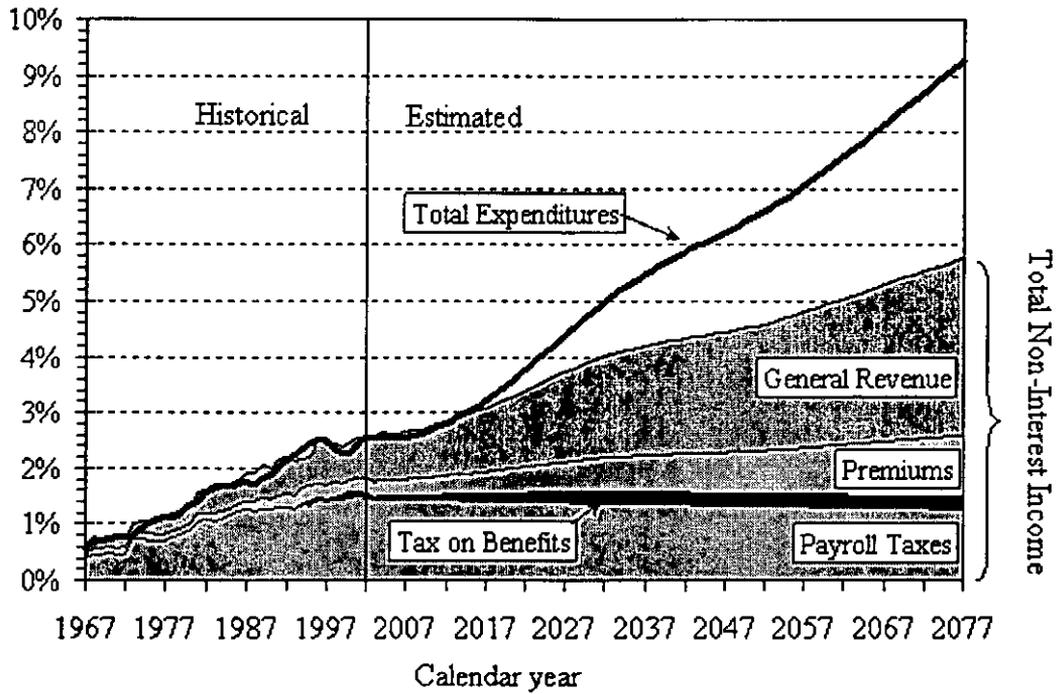
Figure 2



## Tax Increase or Benefit Reduction to Reach Solvency Through 2077

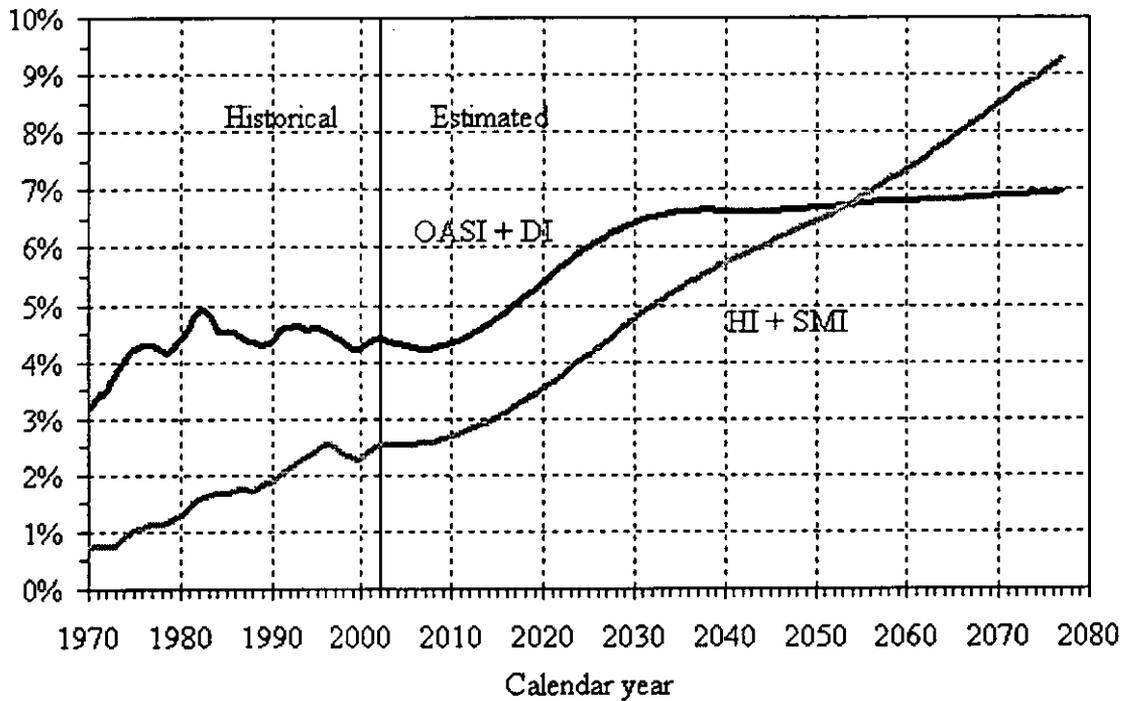


**Figure 3. Medicare Expenditures and Non-Interest Income by Source as a Percent of GDP**



Source: U. S. Social Security Administration. 2003. *Status of the Social Security and Medicare Programs: A SUMMARY OF THE 2003 ANNUAL REPORTS*.  
<http://www.ssa.gov/OACT/TRSUM/trsummary.html#wp35982>

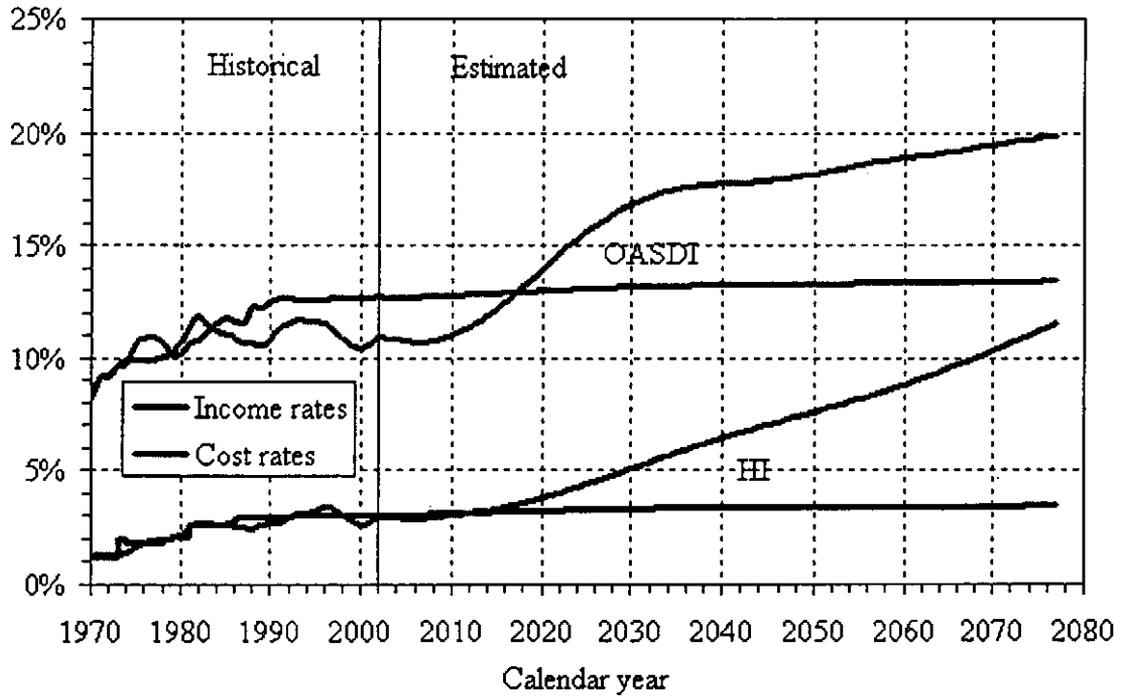
**Figure 4. Social Security and Medicare Cost as a Percentage of GDP**



[D]

Source: U. S. Social Security Administration. 2003. *Status of the Social Security and Medicare Programs: A SUMMARY OF THE 2003 ANNUAL REPORTS*.  
<http://www.ssa.gov/OACT/TRSUM/trsummary.html#wp35982>

**Figure 5. Income and Cost Rates**  
*[Percentage of taxable payroll]*



[D]

## ENDNOTES

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<sup>1</sup> Even many illegal aliens end up paying the payroll tax and ultimately receiving benefits. To project future revenues and expenditures, the Trustees of the Social Security Trust Funds estimate that half of all illegal immigrants will both pay taxes and receive benefits, one quarter will pay taxes and not receive any benefits, and one quarter will work totally outside the system.

<sup>2</sup> These statistics are taken from *The 2003 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, issued on March 17, 2003. See Table II.B1. The Report is available at <http://www.ssa.gov/OACT/TR/TR03/tr03.pdf>.

<sup>3</sup> Payroll tax revenues accounted for \$533 billion or 85 percent of total income while interest from the Trust Fund was \$80 billion and revenues from income tax payments on Social Security benefits totaled \$14 billion.

<sup>4</sup> In their 2003 report, the Trustees of OASDI provided an estimate of the infinite time horizon actuarial status of Social Security. The projected deficit on the on-going program into the future is \$10.5 trillion. This projection indicates that annual deficits continue for years beyond 2080.

<sup>5</sup> Clark (2003) reviews a series of reform proposals and considers their impact on future taxes, benefits, individual accounts, and funding. The only proposal considered in this paper that provided for some additional advanced funding was the Clinton plan in which the government would have repurchased outstanding debt and transferred these government securities to the Trust Fund.

<sup>6</sup> A more detailed discussion of these issues is provided in Burkhauser, et al (2003, forthcoming).

<sup>7</sup> Fairness from an actuarial point of view may not be considered fair from a social point of view. In the 1980s, the United States Supreme Court in a series of rulings (*Los Angeles vs. Manhart* 1978; *Arizona vs. Norris* 1983; etc.) required all private retirement plans to be gender neutral, based on their interpretation of Title VII of the Civil Rights Act of 1964. However, the McCarren-Ferguson Act specifically exempts the private insurance industry from Title VII.

<sup>8</sup> Modified adjusted gross income is equal to adjusted gross income plus tax-exempt interest, with the following deductions and exclusions added back: exclusion for foreign income; and exclusion for Puerto Rican income for residents of Puerto Rico.

## 2. 8 Japanese Public Pension Reform from International Perspectives

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### 1. Introduction

Population aging due to low fertility and increased longevity has a strong impact on public pension programs in Japan. The entire working population has been covered by the public pension system since 1961. Historically, employees and non-employees, such as self-employed or farmers, are treated differently in the social insurance system in Japan, and the latter are supported through favorable government subsidies. Most employees in private sector are covered by the Employees' Pension Insurance (EPI), and non-employees are covered by the National Pension. Expenditure on public pension was 7 percent of GDP. According to a national households survey, the share of public pension benefit in the income of elderly households (elderly singles or couples aged 65 and over) was 66 percent in 2000.

Japanese public pension system is statutory required to review its financial stability at least in every 5 years, and public pension reforms have been done together with these financial reviews. Basic Pension was introduced in 1985 reform, and an increase in normal pension age from 60 to 65 years old (gradual implementation) as well as a reduction in pension benefits of earnings related part for the EPI were decided in 1994 and 2000 reforms. The latest German pension reform passed in 2000 and partly implemented in 2001 and 2002.

Japanese pension system is still forced to reestablish its long-term financial stability and public supports. Based on the latest population projection in January 2002, the Japanese Ministry of Health, Labor and Welfare published a reform proposal in December 2002 and submitted a reform bill to the Diet in March 2004, for the next scheduled overhaul of the Japanese public pension system in FY 2004. The contribution rate of the EPI will increase from present 13.6 percent to 23 percent in 2025 without further reform, assuming that the government subsidy will be increased from the present one-third to one-half of the Basic Pension expenditure. According to the bill, the future contribution rate to the EPI should not exceed 18.3 percent, and pension benefits

need to be lowered accordingly but model replacement rate (Note 1) should not fall below 50 percent. The contribution rate will be increased gradually but be fixed at 18.3 percent in 2022 and afterwards, and the model replacement rate will decrease from the present 59 percent to 50 percent in 2025. Ceiling on the contribution hike as well as lower benefit increase through “macro economy slide” (Note 2) are necessary to keep contribution rate acceptable to the working population in future years.

This paper is to reveal the characteristics and actual roles of Japanese public pension system, although mainly focusing on the EPI, from international perspectives and to discuss various options useful for Japanese public pension reform. Japanese public pension system was reviewed in comparison with the systems in France, Germany, Sweden, UK and USA. We analyzed public pension systems in 6 countries from the points of view of financial sustainability and performed functions, and discussed Japanese reform options from international perspectives.

## 2. Public pension systems in 6 Countries

Developed countries are experiencing aging of the population, and birthrate is especially low in Japan and Germany. Japan enjoys the highest life expectancy at birth among 6 countries shown in Table 1, and life expectancy at age 65 in Japan is higher by 3 years than that in Germany, for example. Fig.1 shows labor force participation rate of those aged 50+ by sex and age group. Early retirement is prevailed in France and Germany, and less than 20 percent of those who are beyond 60 years old remain in the labor market in France.

Table 1, Fig.1

Public pension spending is 7.1 percent of GDP in Japan, which is higher than that in the US (6.8 percent), but considerably lower than the 12.0 percent in Germany and 13.1 percent in France (Table 2). Concerning old age benefits, the UK and the US are lower than Japan, but Japanese disability benefits are quite low. Moreover, Japanese public pension expenditure is expected to increase rapidly in future. The ways to re-evaluate previous earnings as well as to adjust benefit after retirement are shown in Table 2, which are also important factors to decide the size of public pension expenditures. In many cases, the former is in line with wage increase (gross or net), and the

latter is in line with consumer price increase. There is a program with flat rate benefit in Japan and the UK, and the Japanese Employees' Pension Insurance (EPI) has a flat rate benefit part. The contribution rate is lower in the US and Japan, and the highest in France. In the US, there are no tax revenues allocated in the pension system. The contribution rate in Sweden is 18.5 percent of pensionable earnings (earnings minus employee contribution), which means that actual contribution rate is 17.21 percent (Note 3).

Part-timers are covered by program for employees except for Japan. Where pension benefits are closely linked to premium payments during working life, women receive on average much lower old-age pensions than men, because of interrupted working careers due to child-rearing periods. Therefore, the level of survivors' pension is closely linked with the issue of the improvement of individual pension entitlements of women. In Germany and Sweden, it is planned to reduce and eventually eliminate widow's pensions. The German pension system places more weight on supporting child care and long-term care, and it suffers more from early retirement and high unemployment than the Japanese system (OECD, 1999; Schmähl, 2002a). The share of public pension benefits among all pension benefits is high in France and Germany, and the share of corporate pension is high in Sweden, the UK and the US.

Table 2

### 3. Detailed comparison among Germany, Japan and the United States

Main characteristics of the Japanese Employees' Pension Insurance (EPI) are summarized as follows: a) earned benefits depending on former contributions; b) combination of flat rate benefit (Basic Pension) and earnings related benefit; c) income redistribution based on lifetime earnings; d) Pay-As-You-Go financing method with accumulated fund payable for pension benefits for 5 years; and e) protection against inflation through adjusting benefits in line with price increase.

The EPI covers only about half of the working populations because part-timers and self-employed are excluded from the EPI. To the contrary, a single OASDI system covers virtually all working population in the US.

One-third of the Basic Pension expenditure is financed by the government subsidy

in Japan. About one sixth of the EPI revenue comes from the interest on the accumulated fund which is payable for pension benefits for 5 years. In Germany, the share of national subsidy including tax revenue earmarked for the pension system was enlarged in order to avoid an increase in the contribution rate. Income redistribution is considered in Germany to be done not by contributions but by tax revenues, and the share of national subsidy has increased accordingly.

The contribution rate now is about 19 percent, and upper ceiling of contribution is set at 20 percent until 2020 and 22 percent until 2030 in Germany. However, if tax revenues allocated to the pension system were also covered by contribution, this effective contribution rate is about 26 percent now and will eventually be 31 percent in Germany. The situation is the same in Japan. The planned final contribution rate is 18.3 percent, which means that the effective contribution rate would be 22 percent in Japan, compared to 12.4 percent in the US where no tax revenues are allocated to the pension system.

The most serious problems in the Japanese Employees' Pension Insurance (EPI) before the 2000 Reform were 1) the height of eventual contribution rate in order to maintain the planned benefit level, and 2) the degree of inter-generational inequality in the contribution-benefit relation due to the PAYG financing system (Fukawa and Yamamoto, 2003). In order to control the premium increase, it is necessary to reduce the rate at which pension benefits accrue. As the weight of the Basic Pension is half of the benefit (40 percent for single beneficiary and 55 percent for beneficiary with dependent spouse, on average), the benefit accrual rate for earnings-related part of the EPI is almost half of the German system (Note 4).

### Table 3

Fig. 2 shows the gross replacement rate of pension benefit according to the lifetime wage level. Old age pension in Germany provides rather a flat replacement rate regardless of lifetime wage level. On the other hand, the OSADI and the EPI clearly treat low income persons favorably, and the replacement rate of those with dependent spouse is quite higher than single beneficiaries of same lifetime wage level in both systems. It is worthwhile to note here that the replacement rate is proportional to the contribution periods in Germany and Japan, whereas benefit amount is based on the wages of

highest 35 years.

Fig.2

#### 4. Three indices for comparison

##### (1) Role of public pension benefits viewed from income quintile of the elderly

The public pension benefits are important as retirement income in all developed countries, and they are especially dominant for the low income elderly households. Table 4 shows the share of different income sources of the elderly households aged 65 and above by income quintile. In France and Germany, the share of corporate / individual pensions is lower than that in the UK and the USA, and the public pension benefits are dominant for the most elderly households (Scharze and Frick, 2000). Whereas in the UK, private corporate pensions became the norm in most regular reasonably paid jobs (Glennerster, 2000).

In Japan, for the bottom 80 percent of the elderly, the share of public pension benefits is more than 80 percent, and the top quintile received 40 percent of their income from public retirement benefits. Earnings and public pension benefits are two dominant sources of income for the elderly in Japan, and corporate pensions or income from assets have not yet played a major role in terms of benefits.

Table 4

##### (2) Scale of public pension benefits

Fig. 3 shows the relation between a) the share of public pension benefits in the income of the elderly households of the top income quintile and b) the public pension expenditure as percent of GDP. The public pension expenditure as percent of GDP is quite different country by country. The public pension expenditure is financed by contributions, public fund or interest on accumulated pension fund if any. Both Japan and the US use about 7 percent of GDP for public pension. However, the distribution of them is not the same in two countries.

Fig. 3

### (3) Cost of public programs for the elderly (65+)

Social expenditure in Japan and the US is quite low compared to France, Germany, Sweden and the UK (Table 5). If we count the employer-sponsored health insurance into social expenditure, the US figure will be around 20 percent. Japanese social expenditure is low mainly because old age and survivors benefit is low. If we assume that Japanese pension benefit is similar to German level, then Japanese figure will also be around 20 percent. Japanese public pension system was introduced relatively late, and the system is not yet fully matured. A structural benefit level of the EPI, which is the benefit level promised by the law, is viewed still high, and real benefit cut is an actual agenda in Japanese pension reform.

Table 5 also shows the cost of the public programs on pension, health and long-term care for the elderly (65+). The cost is low now in Japan and the US, but the cost in Japan is expected to reach the present level of Continental European countries in a decade (Fukawa, 2001a).

Table 5

## 5. Discussion

### (1) Paradigm shift: sustainability of the system

The contribution rate for the US pension system has been 12.4 percent, and it is fixed to 18.5 percent of the pensionable earnings (namely 17.21 percent of the earnings) in Sweden. Recently in Germany, the paradigm has been shifted from a system where contributions have been adjusted to finance an agreed-upon level of benefits to a system where benefits will be adjusted so that a maximum premium level of 22 percent of gross income will not be exceeded until 2030 (Conrad and Fukawa, 2003).

A similar paradigm shift from benefit-first to contribution-first is occurring also in Japan. Driving forces behind this shift are the concern about long-term sustainability of the public pension system and general distrust in the pension system. Low expectations about future pension benefits leads to an increasing unwillingness to pay contributions to the public pension system in Japan.

### (2) Consistency between benefits and contributions

Establishing or at least improving “generational equity” has become a major concern of policy makers in Germany. Quite contrary to former reforms (where benefit levels were at the center of the public debate), the contribution rate has now become the central issue of recent German pension policies (Conrad and Fukawa, 2003). Via changes in the adjustment formula, the replacement rate of the standard pension in Germany (45 earnings points) was lowered from about 70 percent to 64 percent in 2030.

Generational equity is also a big concern in Japan. There are several ways to improve contribution-benefit relation. The Japanese Ministry has chosen the way of adjusting benefit more slowly through “macro economy slide” and placing the upper ceiling on the contribution rate, although the contribution rate to the EPI will increase from present 13.6 percent to 18.3 percent for about 20 years. Previous earnings will be re-valued in line with total net wages of all insured, instead of present average net wage increase, and benefit after retirement will be adjusted less than price increase, in order to take the reduction of working population into consideration. However, it is more transparent to reduce the accrual rate directly, keeping the price indexation as it is.

### (3) Incentives to work and to retire later

Reform discussions should take into account the consistency of pension program with work incentives. The public pension system would become more sustainable if the labor force participation of the elderly were to increase. The normal pension age was decided to delay from 65 to 67 in 1983 reform and actual implementation has begun since 2003 in the US, and it is completely up to individual in Sweden when to start receiving public pension after 61 years of age. Although there are several ways to control expenditure, a further increase in the normal pension age has not been seriously discussed yet in Japan. The public pension benefits are so dominant in the retirement income in Germany that more radical reform would be quite difficult. Nevertheless, the issue of increasing the normal pension age from 65 to 67 years of age has already been raised.

### (4) Gender-neutral pension system

There is a growing recognition that pension programs need to reflect the profound changes which have occurred in society such as higher labor force participation of women, smaller family size and so on. The social security system would become more

sustainable if the labor force participation of women and the elderly were to increase and if the birth rate were to rise (OECD, 1997). To accomplish this, social policy should be more oriented to helping families and reducing the cost to women of working and having families (OECD, 1997). Child-rearing periods will usually result in higher future pension entitlements in order to improve old-age provisions for women.

Reforming women's pensions has become a major issue in most industrialized countries over the last 10 to 20 years. Creating a gender-neutral pension system is much harder to achieve than increasing pensions for women. How to deal with the widows' pension is an example. In Germany, pension entitlements of married couples are split evenly in case of divorce. A next step towards splitting pension entitlements would be a system, where contributions of the working spouse are split every year, regardless of whether a marriage continues or not (Conrad and Fukawa, 2003).

After improving intergenerational equity and financial stability in the Japanese public pension system, the next important issue is the responsiveness of the system to the needs of individuals. This implies taking more explicitly into account a life-cycle perspective which will permit people to opt more readily for non-traditional work patterns, for family care periods, for lifelong learning and for gradual retirement (Hoskins, 1998). Dependent spouses of employees are entitled to the Basic Pension benefit without paying contributions in Japan, which is viewed that the system is favoring single-income family. It is interesting to note in this regard, that dependent spouses are entitled to 50 percent of old age benefit of the insured in the US, and there are no benefits for them in the German system. It is surely a big issue, relating to value system and perceptions of the family, whether to individualize public pension rights or not.

#### (5) Coordination between public and private arrangements

The latest German pension reform measures highlight a shift in strategy with regard to the evolving public-private pension mix. The core reform element is the partial substitution of public pensions by personal and corporate pension provisions. The introduction of subsidies/tax privileges-granted private pension in Germany presents a uniform incentive system for additional private provisions.

Corporate pension reforms in 2001 and 2002 greatly increased the options of Japanese companies to restructure their pension systems. It is hoped that the reduction in public pensions will be compensated by an increase in corporate or individual provi-

sions. However, the current tax environment in Japan does not exactly favor such additional pension provisions. Moreover, lower income earners who work predominately in smaller and middle-sized companies cannot easily compensate the reductions in public pension by additional private provisions, because corporate pension provisions in these companies are usually less favorable compared to larger companies.

## 6. Final remarks

The latest public pension reforms in Japan and Germany have the same aim: to establish mid- and long-term stability of the system against aging of the population. In Germany, the financing basis has been actively extended, and the 2000 / 2001 pension reform invented a new formula to offset the reduction of public pension benefits by introducing a tax-supported voluntary corporate/private funded pension program. In Japan, trying to redefine the role of the public pension system and making the system less vulnerable to economic and demographic changes, the public pension reform in March 2000 and subsequent reforms in the corporate pension area employed such measures as 1) to expand the financing basis; 2) to reduce the benefit level; and 3) to rely more on private arrangements. Despite recent reforms, however, another round of reforms are being discussed in both countries.

Benefit reduction in various forms as well as the improvement in efficiency and fairness of the system has been the main focus of the recent reforms. A reform package including a reduction of the benefit accrual factor was passed in March 2000 in order to maintain contribution levels acceptable to working population in future years (Fukawa, 2000b).

Financing of the welfare state is still one of the key issues in Japan, and currently new options are being reviewed, including new ways of approaching the issues of the elderly, broadening the financing basis of social benefits, and greater reliance on private arrangements. In considering a new approach, it is worth keeping in mind that cutting social expenditures will not necessarily lead to a reduction in the total resources which a society devotes to such ends, though it will change the distribution of burden (OECD, 1997b).

The most important factors for the sustainability of the public pension system are fairness of the system and public trust to the system. It is important to provide meaningful benefits to the elderly within an affordable level of contribution for the working population. Japan is already undertaking such efforts as 1) expanding the financing basis and 2) reducing the benefit expenditure through lower post-retirement indexation and lower benefit accrual rate. The issue here is an optimum scale of the EPI for the Japanese working population in order to provide meaningful retirement income within an affordable level of contribution (Fukawa and Yamamoto, 2003). Intergenerational inequality is perceived as a serious problem and effects of population ageing are quite serious in Japan. We summarize the following 5 points, among others, as lessons we can learn from reform effects in other countries:

- Generational equity is an important factor for the public pension system in every country, and it is often used for this purpose to fix contribution rate for many years. In order to mitigate intergenerational inequality caused by PAYG financing method, a personal retirement account approach has been introduced or discussed in Germany, Sweden and the United States. However, the share of such approach is around 10 to 30 percent of total public pension benefits.
- Fairness of the system is the prerequisite for the public trust to the system, and it is clearly useful to treat employees and self-employed equally. In fact, a single OASDI system covers virtually all working population in the US.
- It is widely supported to make public pension benefits related to contributions, although not necessary in direct proportion. The main function of public pension systems in France, Germany, Sweden and the US is to cope with the loss of earnings after retirement, and there is a broad consensus in these countries that public pension has an income-smoothing function. In this respect, it is interesting to note that the third model of the Bush Commission proposed to reduce replacement rate of higher income above second bend point.
- The share of public pension benefits in retirement income reflects the shape of each country. The public pension benefits have a commanding share in France and Germany, whereas the UK government is trying to further reduce the role of public