The 2000/2001 Pension Reform in Germany - Implications and Possible Lessons for Japan

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1. Introduction

The German pension system has undergone major changes in recent years. In fact, latest reform measures (passed in 2000 and partly implemented in 2001 and 2002) 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 occupational pension provisions.

Population aging due to low fertility and increased longevity has a strong impact on public pension programs in Germany and Japan. 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.

The purpose of this paper is to give an overview of the 2000/2001 pension reform in Germany and discuss its implications and possible lessons for future pension reform in Japan.

2. Structure of the German Pension System

The German pension system consists of three tiers, namely the mandatory public schemes (first tier), the supplementary occupational schemes (second tier) and additional voluntary personal old-age provisions (third tier).

2.1 First tier

Within the first tier the most important scheme is the statutory social pension insurance, which covers all white- and blue-collar workers as well as some groups of the self-employed and is run by state-controlled institutions. This social pension insurance consists of three branches for blue-collar workers, white-collar workers and miners. The former two branches are identical in terms of pension calculation and financing and there are fiscal equalization rules between the two branches. Miners' pensions differ from the other two branches in terms of benefits (a mixture of first and second tier elements) and contribution rates. In terms of covered workers and expenditure, the statutory social pension insurance is by far the largest scheme of the first tier. Besides this scheme, there are special schemes for farmers and civil servants. All of these schemes are basically financed on a pay-as-you-go (PAYG) basis. However, there are also schemes for members of professional associations, such as doctors, lawyers, architects, tax consultants and pharmacists, which are capital funded.[1]

Benefits are paid in case of old age, disability and to survivors. With the exception of the schemes for members of professional associations, all of the above-named schemes pay benefits of the defined benefit type.

The calculation of benefits for the insured of the social pension insurance is based on the relative gross earnings (i.e. individual gross earnings compared to average gross earnings of all employees) for all years of the earning career, and pension claims are accumulated in individual accounts. The benefits are financed on a PAYG basis by contributions of employees and employers from gross earnings up to a ceiling of about 200 percent (190 percent in 2001) of average earnings. General tax revenues

cover about 26 percent of the pension expenditure for blue- and white-collar workers but 59 percent for miners (Table 1).

Civil servant pensions are paid out of public budgets on a PAYG basis and are a combination of first and second tier benefits. The percentage of last (gross) earnings (at a maximum of 75 percent) depends on the number of years in service. Also farmers' pensions are mainly financed by general tax revenues.

2.2 Second tier

There are occupational pension schemes in the private and public sector. In the public sector, basically all workers are covered by collective agreements. These defined benefit schemes were until recently integrated with social pension insurance in such way that they would pay a certain percentage of last earnings. In the private sector, occupational pension schemes are mostly voluntary. The percentage of covered workers varies widely depending on the sector and the size of companies. During the 1990s, coverage of occupational pensions has continuously declined. In the manufacturing industry of West Germany, the ratio of employees belonging to an occupational pension plan to the total workforce dipped from 72 percent to 64 percent between 1987 and 1999. In the wholesale and retail trade, this ratio stagnated at a low level of 28 percent. In East Germany, coverage was below 20 percent in all sectors (Deutsche Bundesbank, 2001: 52). Unfavorable tax regulations and high costs as part of labor costs are often mentioned to explain the diminishing role of occupational pensions in Germany. Another reason is that until pension funds of the defined contribution type were first introduced in 2001, most occupational pension schemes in the private sector (with the exception of direct insurances) were defined benefit schemes and many companies eschewed the unpredictability of pension liabilities.

Book reserve funds (Direktzusagen), which hold more than half of all accumulated assets in occupational schemes (Table 2), are of special importance, because they function as an instrument of (self-)financing of companies. Company and pension institution do not have a separate legal identity. The employer guarantees to pay the employee a retirement pension. Pension insurance funds (Pensionskassen) are legally independent institutions in the form of mutual insurance associations. Financing is by employers, but employees can also contribute. Employees have a legal claim on the fund and contributions must be fixed in such a way that the fund is able to form the necessary cover funds. Support funds (Unterstützungskassen) are also legally independent pension institutions, set up by one company or a group of companies in the form of registered associations. Financing is only by the employer. Formally, the employee has no legal entitlement to the benefits promised by the support fund. In fact, since contributions by the employer are recognized as deductible operating expenses to a limited extent only, these funds are unable to fully fund pension commitments. In the case of direct insurances (Direktversicherungen), the employer takes out an individual or group policy with a life insurance company on behalf of the employee. Usually, the employer shoulders the costs of these schemes.

2.3 Income of the elderly

There exist no comprehensive statistical data on personal savings and insurance for old age in Germany. However, data from the German Socio-Economic Panel show that capital income contributes 12.4 percent to total income of the elderly, much less than that in the United States (Table 3). Looking at income shares of total disposable income by quintiles, we see that persons belonging to the lowest quintile in Germany receive 87.1 percent of their income from the public pension system, compared to 70

Table 1. Financing sources of public pension insurance schemes in Germany : 2002

(in Billion Euro)

Pension schemes	Pension Expenditure	Contribution payments	Subsidies from the general budget	Other income (including capital income)	Payments from other schemes (fiscal equalization)
Blue-collar workers	100.0	67.5	40.2	0.5	8.2
White-collar workers	89.7	96.9	9.1	1.0	0.1
Miners	12.6	1.1	7.4	0.0	6.1
Total	202.4	165.5	56.7	1.5	—

Source: VDR Internet Database at http://www.vdr.de

percent in the United States. When we look at the highest quintile, bigger differences between the two countries become apparent. Whereas the highest quintile in the United States receives almost 42 percent of their total disposable income from capital and only 20 percent from public pensions, Germans belonging to the same quintile still receive almost 62 percent of their disposable income from public pensions and only 20 percent from capital income. These data show that public pensions are by far the dominating income source of the elderly in Germany. Thus, it is not surprising that latest pension reforms enacted in 2001 have stirred much public discussion, because public benefits were curtailed substantially whereas private (personal and occupational) provisions are supposed to close the emerging benefit gap.

3. The 2000/2001 Reform Measures in Germany

The various measures of the latest pension reform in Germany can be grouped into six areas of action:

1. Reduction of the replacement rate via changes in the pension formula;
2. Introduction of subsidies/tax privileges-granted private pension;
3. Changes to occupational pensions;
4. Introduction of means-tested transfer payments for people over 65 and disabled persons;
5. Changes in widow(er)s' pensions and pensions for women; and
6. Changes in disability pensions.

Before we discuss these changes in more detail, we need to introduce the German pension formula. Germany's social pension insurance scheme is characterized by a relatively close link between individual contributions and later benefits, which is only modified by several measures of interpersonal income redistribution (e.g., by crediting years spent without gainful employment and without paying contributions during periods of schooling, illness, or child care). There is no general minimum pension. However, the 2000/2001 pension reform has introduced means-tested transfer payments for people over 65 and disabled persons, who have insufficient income (see Sec.3.3).

The German pension formula is a product of three factors:

Pension = PEP x RAF x ARW

PEP = Individual earnings points (Persönliche Entgeltpunkte)

RAF = Pension factor (Rentenartfaktor)

ARW = Current pension value (Aktueller Rentenwert)

PEP is calculated for all years of participation in the pen-

Table 2. Assets held under occupational pension schemes in Germany : 2000

Pension scheme	Assets in billion Euro	Share (%)
Book reserve funds	194.6	59
Pension insurance funds	71.0	21
Direct insurances	42.8	13
Support funds	22.9	7
Total	331.3	100

Source: Deutsche Bank Research (2003)

Table 3. Income component as a share of total income of the elderly in West-Germany 1996 and the United States 1993 by equivalent income quintiles

Income Component	Average		Lowest Quintile		Middle Quintile		Highest Quintile	
	Germany	USA	Germany	USA	Germany	USA	Germany	USA
Old Age Pension	78.7	45.7	87.1	69.5	74.3	40.3	61.8	20.0
Private Transfers	3.6	14.8	3.1	6.0	3.1	16.2	9.5	21.6
Public Transfers	0.7	2.4	1.9	7.0	0.6	1.3	0.2	0.9
Employment	8.6	14.8	2.1	4.0	10.9	15.8	20.7	33.1
Capital Income	12.4	27.6	6.0	13.8	14.8	30.4	19.6	41.8
Taxes	-4.0	-5.3	-0.2	-0.3	-3.4	-4.0	-11.8	-17.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Schwarze and Frick (2000: Table 4 and 5) (original data from the German Socio-Economic Panel and Panel Study of Income Dynamics)

sion system. It is the sum of ratios of individual earnings (up to a limit) to average earnings in each year. Some points are credited for periods of schooling, illness or childcare. The sum is afterwards multiplied by a factor (Zugangsfaktor), which adjusts the sum to the age of retirement, i.e. if a person retires before 65 the pension is decreased. RAF is 1 in the case of an old-age pension, 0.6 in the case of a survivor's pension and 0.6667 in the case of disability. ARW represents the value of one's earnings point in a specific year. ARW is the dynamic factor of the German pension formula, because it changes every year according to the growth rate of average earnings of the working population. The rate of change of ARW is the central factor for adjusting all pensions calculated in former years. From the 1992 pension reform up to 2001, ARW was linked to the development of average net earnings instead of average gross earnings as was the case since the 1957 pension reform.

3.1 Reduction of the replacement rate via changes in the pension formula

The central objective of the latest pension reform was to limit the increase in the contribution rate. It was decided that up to the year 2020, the contribution rate to statutory pension insurance should not be higher than 20 percent, and not exceed 22 percent until 2030. Before the reform, official calculations assumed the contribution rate to reach 24 percent in 2030. There was a broad consensus that such a high increase in labor costs could not be tolerated. In order to limit future increases of the contribution rate, the replacement rate of the standard pensioner (45 earnings points) was lowered from 70 to 64 percent of average net earnings in 2030 via adjustments in the pension formula. The resulting income gap is supposed to be filled by subsidized voluntary private pension up to four percent of earnings. In the pension adjustment formula, the link to net average earnings of the working population was abolished. Instead, there is now something called a "modified gross wage indexation".

The new calculation formula for ARW in the years 2002 to 2010 is:

$$\frac{ARW_{(T)}}{ARW_{(T-1)}} = \frac{L_{(T-1)} \times \left(1 - b_{(T-1)} - v_{(T-1)}\right)}{L_{(T-2)} \times \left(1 - b_{(T-2)} - v_{(T-2)}\right)}$$

L = average gross earnings

b = employer and employee's contribution rate to statutory pension insurance

v = contribution rate to certified forms of private pension

The change in the indexation mode was introduced because direct taxes in Germany are to be reduced in return for increases in indirect taxes. Lower direct taxes would, however, result in higher pension adjustments based on net earnings development. For this reason, it was decided to return to an adjustment mode following the development of gross wages. Changes in average gross wages are, however, not directly translated into changes of ARW. Instead, the contribution rate to statutory pension insurance and the contribution rate to certified private pension are integrated in the new formula in such a way that increasing contributions reduces the adjustment rate. Beginning in 2002, voluntary contributions (starting at 0.5 percent of the employee's gross income and rising progressively to 4 percent in 2008 and afterwards) are eligible for tax deductions or direct subsidies. These voluntary contributions are taken into account in the new pension formula regardless whether the individual employee really puts his/her money into the new certified forms of private pension. Thus there is a sort of virtual factor in the new pension formula.

In order to control the projected contribution rate, which is not allowed to rise above a level of 22 percent, the pension formula will be changed again in 2011. At this point a so-called ad-hoc factor of 0.9 will be introduced solely to limit future increases in the contribution rate. The calculation formula of ARW from 2011 onwards will be as follows (Ebert, 2001):

$$\frac{ARW_{(T)}}{ARW_{(T-1)}} = \frac{L_{(T-1)} \times \left(0.9 - b_{(T-1)} - v_{(2009)}\right)}{L_{(T-2)} \times \left(0.9 - b_{(T-2)} - v_{(2009)}\right)}$$

3.2 Introduction of subsidies/tax privileges-granted private pension

The described reduction of state pensions is supposed to be compensated through supplementary pension schemes, which operate outside the mandatory state system. Employees who voluntarily save in private supplementary pension schemes, which meet certain criteria, are granted either subsidies or tax deductions in their personal income tax. Basically, lower income groups are to receive a subsidy whereas middle and higher income groups can reduce their income tax burden via tax deductions. In each individual case, the tax authorities check automatically which alternative is in the best interest of employees. In order to qualify for the maximum subsidies/tax privileges, employees have to save an increasing percentage of their

monthly gross income (Table 4). If they save less, subsidies/tax privileges will be cut accordingly.

Figure 1 shows that the new subsidy/tax privilege system is especially favorable to married couples and higher income groups. Although low-income groups can receive subsidies to build up their private pension savings, one may criticize that the new system favors especially those groups who are least affected by the benefit cuts of public pensions.

In order to qualify for subsidies/tax privileges, the savings products have to fulfill several criteria (most important points only):

û0Pensions cannot be claimed before reaching 60 years of age or before claiming a disability pension.

û0The nominal value of employees' savings after deduction of administrative costs has to be guarantied, i.e. the nominal rate of return on savings has to be at least zero.

û0The accumulated savings must be paid out as a lifelong pension or as planned withdrawal up to the age of 85 and thereafter as a lifelong pension. At retirement age, a maximum of 20 percent of assets may be received as lump sum.

The new subsidy/tax privilege system is in fact highly complicated because it applies to both personal pension products and occupational pension schemes with the exception of book reserve funds and support funds. In fact, there are now three more alternative ways of personal pension provision through occupational schemes:

1. Employees are entitled to allocate part of their earnings up to 4 percent of the contribution ceiling in social pension insurance into three types of occupational pension schemes (Entgeltumwandlung): pension insurance fund, direct insurance and the newly introduced pension plans (see below). In this case, they can make use of the subsidy/tax privilege system, or
2. they save from gross earnings, while these savings are exempted from income tax and social insurance contributions up to the year 2008, or

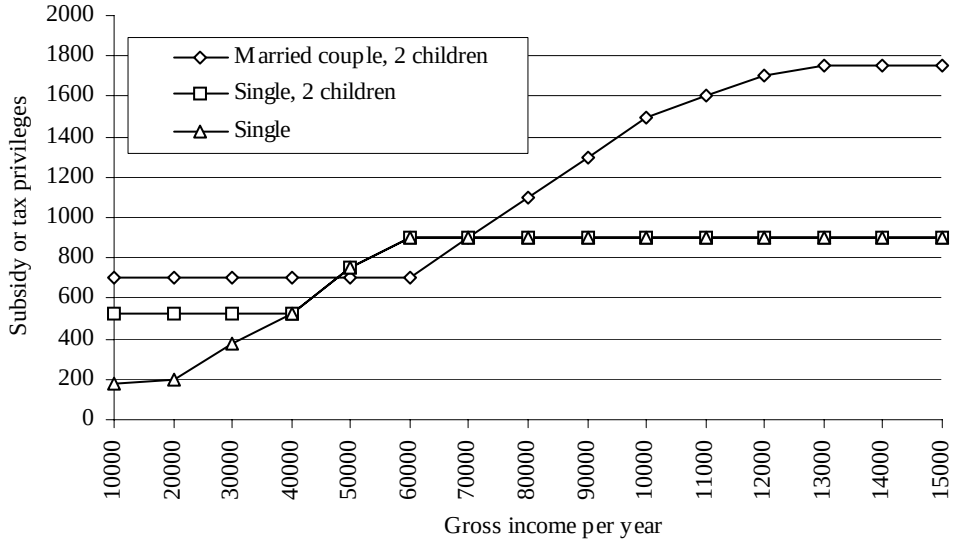
Table 4. Subsidies/tax privileges granted private pension

(in Euro per year)

Year	Percent of Pension contribution ceiling	Basic subsidy per individual spouse	Child subsidy per child	Maximum income tax deduction
2002-2003	1	38	46	525
2004-2005	2	76	92	1050
2006-2007	3	114	138	1575
From 2008	4	154	185	2100

Source: Viebrock and Schmähl (2001)

Figure 1: State subsidy and tax privileges in dependence of gross income and household type (in Euro)



Source: Ebert 2001: 185

3. they save in direct insurance with a flat tax rate of 20 percent (instead of individual tax) and without paying social insurance contributions on these savings (up to 2008 and only in the case that earnings conversion is not by regular earnings but holiday or Christmas money).

The new subsidy/tax privilege system has not only been criticized for its very restrictive criteria which the investment products have to meet in order to qualify, but also for the complex and difficult choices which have to be made by employees and employers. The best way for creating additional private pension provisions in Germany depends very much on individual circumstances (income, tax bracket, number of children, etc.). In general, lower income earners are likely to make use of the subsidies/ tax privileges granted for private pension savings, whereas most middle and high income earners will find it more attractive to make use of the right to convert parts of their gross income into occupational pension schemes while these savings are exempted from income tax and social insurance premiums. Since the introduction of the new pension legislation, coverage of occupational pensions has increased from 29 percent (April 2001) in the private sector to almost 42 percent in March 2003, with almost 9.6 million insured employees (Bundesministerium für Gesundheit und Soziale Sicherung, 2003). An important factor which led to this sharp increase in coverage was the fact that many labor unions made country-wide deals with employers' associations to make systematic use of the right of employees to convert parts of their gross income into occupational pension schemes.

3.3 The other measures

In addition to the existing four types of occupational pension schemes, the latest reform added pension funds as a fifth type of employment-based pensions. There were and are various rules and caps on investing money in the existing schemes. However, pension funds can invest up to 100 percent in equities. This new option is supposed to give pension and financial markets in Germany new momentum. However, since employees are likely to favor pension products that qualify for the new subsidies/tax privileges, even pension funds will be forced to follow rather conservative investment policies in order to ensure that the nominal value of savings does not decrease. Employees are entitled to allocate part of their earnings up to 4 percent of the contribution ceiling in social pension insurance into three types of occupational pension schemes as described above. The latest reform also reduced vesting periods for pension claims based on employer payments from 10 to 5 years. There are also various changes to the tax regulations of occupational pensions, which are likely to make these schemes more attractive.

There has been no general minimum pension in Germany. However, means-tested transfer payments have been introduced since 2003 for those people over 65 and disabled persons. These payments are calculated in the same way as means-tested social assistance. However, contrary to the regulations of social assistance where children are in principle obliged to pay back the whole sum or part of it, children are not under financial obligation if their annual income does not exceed 100,000 Euro. As in the case of social assistance, the municipalities will run this new safety net for which they will receive additional financial grants from the central government.

The above described reduction of old-age pensions via changes in the adjustment formula do apply to widow(er)s' and disability pensions. On top of that, widow(er)s' pensions were lowered from 60 to 55 percent of the insurance pension of the former spouse. The idea is that widow(er)s' pensions should be phased out in future in favor of own pension claims from earnings and additional credits for child care (2 Individual Earnings Points for the first child and 1 Individual Earnings Point for each additional child). Additionally, if a widow(er)'s pension exceeds a certain allowance, an income test takes place. This income test so far only included working income and the spouse's own pension; now it includes all kinds of income (e.g. interest and dividends and own pension).

As an alternative to the reformed widow(er)s' pension, an option of splitting pension entitlements was introduced during the latest reform. This option only applies to couples married after December 31, 2001. They can decide to split their pension entitlements when they both reach retirement age or when one partner dies. In these cases, the pension entitlement of the partner with the lower sum of Individual Earnings Points is raised by half of the difference to the partner with the higher sum of Individual Earnings Points (Table 5). In order for the couple to decide which option is better, i.e. whether to split pension entitlements or go for a widow(er)'s pension, they will have to consider a number of questions such as which partner is likely to live longer, whether

there is any additional income of the surviving spouse which might reduce a widow(er)'s pension, how high individual pension claims would be in case of splitting, and whether the widow(er) is likely to marry again.

Several criteria have to be met before such a pension splitting can take place. Most important is that both partners must have reached retirement age and that both have individually accumulated 25 years of qualifying time. In other words, the decision to split pension entitlements takes place at the time of retirement. At this point, the decision to split or not to split is influenced by factors such as assumptions about the life expectancy of the partners, additional income sources, the wish to remarry after one partner dies, etc. For example, if a couple decides to split pension entitlements, this will usually lead to a higher pension for the wife and a lower pension for the husband, because men have on average higher individual pension entitlements, as explained above. If the husband dies before his wife, the wife will continue to receive her individual pension, but will not receive a widow's pension. On the other hand, any additional working income is not subtracted from the wife's pension and she does not lose her pension entitlement, even if she chooses to remarry. If the couple decides not to split entitlements, the wife will receive a widow's pension after her husband's death, but her own pension and additional working income will be taken into account when the widow's pension is calculated. This new splitting option is a highly complicated issue and it remains to be seen how many couples will make use of it.

The most important change in disability pensions concerns the concept of "ability to work in a job according to occupational qualification". Before the reform, there were two kinds of disability pensions. The first one, *Berufsunfähigkeitsrente*, was paid to employees who because of disability could no longer work in their former job or a similar job requiring a similar degree of qualification. This kind of disability pension was lower than the second type, because there was the assumption that the person was still able to perform a job below his/her qualification to earn additional working income. The second type of disability pension, *Erwerbsunfähigkeitsrente*, was paid to persons who were not able to perform any kind of job, regardless of his/her qualifications. These two different types of disability pensions were replaced by a unified disability pension, which no longer considers the work qualification of the person concerned, but solely considers the number of hours the person is still able to work (six or three hours a day).

4. Some Implications and Possible Lessons for Japan

Both Japan and Germany are suffering from a low birthrate, and experiencing aging of the population. Both countries have a similar social security system and decided to introduce public long-term care insurance in the 1990s. Life expectancy at age 65 in Japan is higher by 3 years than that in Germany, and Japanese average pension age of employees is 3 years later than that of German counterparts (Table 6). 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 (OECD, 2003). However, Japanese public pension expenditure will increase quite rapidly in future. Another similarity in Germany and Japan is that the public pension benefits are dominant in the income of elderly households aged 65 and above.

The public pension systems for employees in the private sector in Japan and in Germany have much in common: pay-as-you-go financing method, earnings-related contributions and benefits, defined benefits, etc.

Table 5. Example for the effect of splitting pension entitlements

(In Euro)

	Husband	Wife	Both partners together
Pension entitlement for the period			
before the marriage	300	100	
during the marriage	900	400	
Pension entitlement without splitting	1200	500	1700
Pension entitlement for the period			
before the marriage	300	100	
during the marriage (after splitting)	650	650	
Pension entitlement after splitting	950	750	1700

However, there are some remarkable differences between the two countries. The Japanese Employees' Pension Insurance (EPI) has a flat rate benefit part, and a benefit accrual rate for earnings-related part of the EPI is almost half of the German system (Table 6). The EPI covers only about half of the working populations because part-timers and self-employed are excluded from the EPI. The share of national subsidy in the EPI is low partly because there is an 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. 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).

Based on the latest population projection in January 2002, the Japanese Ministry of Health, Labour and Welfare published a reform proposal in December 2002, for the next scheduled overhaul of the Japanese public pension system in 2004. The contribution rate of the EPI will increase from the 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 proposal, the future contribution rate to the EPI should not exceed 20 percent, and pension benefits need to be lowered accordingly. The contribution rate will be increased gradually but be fixed at 20 percent in 2022 and afterwards, and the model replacement rate will decrease from the present 59 percent to 52 percent in 2025. When there is a ceiling on the future contribution rate, the way to control expenditure becomes all the more important. Although there are several ways to control expenditure, a further increase in the normal pension age has not been seriously discussed yet. The proposal by the Ministry has chosen the way of adjusting benefit more slowly. Previous earnings will be revalued in line with total net wages of all insured, instead of the present average net wage increase. If we denote total net wage increase minus average net wage increase as D, pension benefit will be increased each year in line with price increase minus D, instead of the present price increase. The package of these adjustments is called "macro economy slide". Part-time workers will also be included in the EPI. Child-rearing periods will result in higher future pension entitlements in order to fight the decrease in the birthrate and to improve old-age provisions for women. 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).

Since most of the described measures will be

Table 6. Comparison of Public Pension System between Germany and Japan : around 2000

	Germany		Japan	
	Public Pension	GRV	Public Pension	EPI
Expenditure/GDP (%)	12.0	9.6	7.1	4.1
Coverage of the working population (%)		85		49
Coverage of part-timers		yes		no
self-employed		yes		no
Financing (%)		(2002)		
Contribution		74		71
National Subsidy		25		13
Others		1		16
Contribution rate (%)		19.5		13.6
		(2003)		
Type of benefit (F = Flat rate , LS = Lifetime Salary)		LS		F + LS
Benefit accrual rate for earnings-related part (%)		1.07		0.548
Average pension age	59			62
Life expectancy at age 65 (Both sexes)	17.4		20.0	
Share of public pension benefits in the income of average elderly households aged 65+	76 (1996)		64 (1997)	

phased in over a longer period of time, it is too early for a comprehensive evaluation of the latest pension reform in Germany at this point. However, in light of the next scheduled overhaul of the Japanese pension system in 2004, it is useful to point out some implications and possible lessons for Japan. The differences between the two countries as mentioned above already have significant implications for the Japanese reform. The following are among them (Fukawa, 2002):

1. The main function of the German public pension system is to cope with the loss of earnings after retirement, and there is a broad consensus on pension benefits that they should serve income-smoothing.
2. 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.
3. The upper ceiling of contribution is set at 20 percent until 2020 and 22 percent until 2030 in Germany. 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.

With these differences in mind, two important issues are discussed below.

4.1 Securing future pension provisions

Some of the ideas behind the Japanese reform proposals are, in fact, quite similar to the ones discussed in Germany. 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). Establishing or at least improving "generational equity" has also 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. Since the German public pension system is a classical pay-as-you-go system (with reserves covering only 0.8 months of expenditure) fixing a maximum premium level does naturally imply to reduce pension benefits in the future, if we assume that increases in the wage rate cannot counterbalance a decrease in the growth rate of the population. [2]

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. Several observers in Germany have argued that this reduction might cause problems in the future in so far as the difference to social assistance benefits is reduced, which in turn might have adverse incentive effects on the labor supply. Today, basic social assistance benefits for a couple without children are about 37 percent of average net earnings (Table 7). A worker with an average working income has to pay almost 24 years of contributions to receive a pension equal to social assistance benefits. Currently, around 8 percent of all male pensioners (old age and disability pensions) have less than 24 years of qualifying time and accordingly receive pensions below social assistance levels (Rentenversicherungsbericht, 2001: 40). Assuming that the standard pension is lowered to 64 percent of average net earnings and social assistance benefits are kept at current levels, paying contributions to the social pension insurance might become less attractive, even if the strong contribution-benefit link is maintained. From the German perspective, it seems likely that the planned decrease in the pension benefits could cause similar disincentive problems in Japan. General distrust in the pension system together with low expectations about future payouts leads to an increasing unwillingness to pay contributions to the public pension system in Japan.

Another missing piece of recent pension policies in Japan regarding benefit levels is the lack of an adequate incentive system for private or occupational pension provision. Although the occupational pension reforms from October 2001 and April 2002 greatly increased the options of Japanese companies to restructure their pension systems, many observers agree that the tax system limits the attractiveness of such schemes as the Japanese-style 401(k) plans. The Japanese government seems to hope that the reduction in public pensions will be compensated by an increase in occupational and private provisions. However, the current tax environment does not exactly favor such additional pension provisions. Also, lower income earners who work predominately in smaller and middle-sized companies - where occupational pension provisions have always been less generous than in the larger corporations - cannot easily compensate for the reductions in public pensions by additional private provisions. With regard to this problem, the latest pen-

Table 7. Indicators of Public Pension Insurance

	Germany 2000 (in Euro per month)			Japan 2000 (in 100 Yen per month)		
	Males	Females	Total	Males	Females	Total
Average net earnings [a)]			1,363	4,010		
Standard old-age pension [b)]			968	1,710		
West Germany			1,036	(2,380)		
Easy Germany			899			
Average old-age pension at 65 [c)]	836	359		2,050	1,130	1,770
Basic social assistance benefits (couple without children)			506			931 ～1,195

a) of all employees for Germany; of EPI insured for Japan
b) with 45 PEP for Germany; for those average earners who are insured in the EPI for 40 years for Japan (with dependent spouse in parenthesis)
c) West Germany only for Germany; EPI for Japan

sion reform in Germany might give some helpful hints for future reform initiatives in Japan.

The introduction of subsidies/tax privileges-granted private pension in Germany presents a uniform incentive system for additional private provisions. Although the system favors married couples and higher income groups and is thus not as neutral as one might like it to be, it includes at least some incentives for lower income earners to increase their private old-age provisions. From the viewpoint of employees, the advantage of the newly introduced right of employees to allocate part of their earnings into occupational pension schemes is that they have to pay neither income tax nor social insurance premiums on those parts of their gross income. Employers can also lower their labor costs, because they do not have to pay social insurance contributions on these parts of employees' income.

4.2 Towards a less gender-biased pension system

Reforming women's pensions has become a major issue in most industrialized countries over the last 10 to 20 years. In Germany, the topic of women's pensions is usually approached from two different angles. One angle is securing adequate pensions for women, and the other is achieving a gender-neutral pension system.

Since pension benefits in Germany 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. The average old-age pension for men in West Germany in 2003 was 832 Euro, whereas women received on average only 364 Euro (VDR, 2003). The latest pension reform introduced basically two measures to improve pensions of women who have raised children. First, women with below average contributions to the pension system receive additional Individual Earnings Points if they have raised children. Second, the reduction of widow's pensions is counterbalanced for women who have raised children. These measures aim at the improvement of individual pension entitlements of women.

Creating a gender-neutral pension system is much harder to achieve than increasing pensions for women. A pension system, which is largely neutral with regards to criteria such as marital status, number of income earners, number of children, etc., still remains an ideal in most countries. It is possible that, depending on the strictness of the applied criteria, the German system may still be regarded as highly gender-biased. For example, for some observers, the simple fact that married couples receive tax advantages such as spouse deductions in their income tax constitutes a form of gender bias because this system reflects traditional perceptions of roles such as the working husband outside the home and housekeeping, child-rearing, dependent wife. To give another example, from the perspective of single women, the institution of a widows' pension, for which no additional premiums were paid during the life course of the working spouse, constitutes an unfair advantage of married women over unmarried women. 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 the Individual Earnings Points of the working spouse are split every year, regardless of whether a marriage continues or not. The latest German pension reform stopped short of such a radical general solution and definitely lacks transparency, but it might be regarded as another step in the evolution of the German pension system towards a gender-neutral system.

5. Conclusion

The German pension system has undergone major changes in recent years. Especially noteworthy is the paradigmatic shift 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. The other significant feature of the latest reform is the introduction of subsidies/tax privileges-granted additional private pension.

A similar paradigm shift from benefit-first to contribution-first is occurring also in Japan. A driving force behind this shift is the concern about long-term sustainability of the public pension system. Pension policies in both countries will have to confront the incentive effects of lower pension benefits at a time when premium payments keep rising. From pension reform efforts in Germany, we pointed out two important implications for Japanese reform: coordination between public pension and occupational pension; and a gender-neutral pension system. A kind of legal right of employees to use occupational pension provision might be an effective way also in Japan to promote these plans and to achieve the aim of counterbalancing the public pension cuts. Since such a new option can create benefits not only for employees, but also for employers, it deserves more attention in Japan. Although Germany's pension policy is still grounded on a rather conservative value system and perceptions of the family, it seems to be less gender-biased compared to the Japanese system.

Notes

[1] About half of the self-employed are not mandatorily covered by any scheme, and there is scant empirical information on the volume and type of savings of those in this group (Fachinger and Oelschläger 2000).

[2] In a pay-as-you-go system the pension benefit per capita p depends on the growth rate of the working population n, their wage rate w and their contribution rate b with $p_t = (1+n_t) \cdot w_t \cdot b_t$ (Homburg, 1988: 16-29)

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