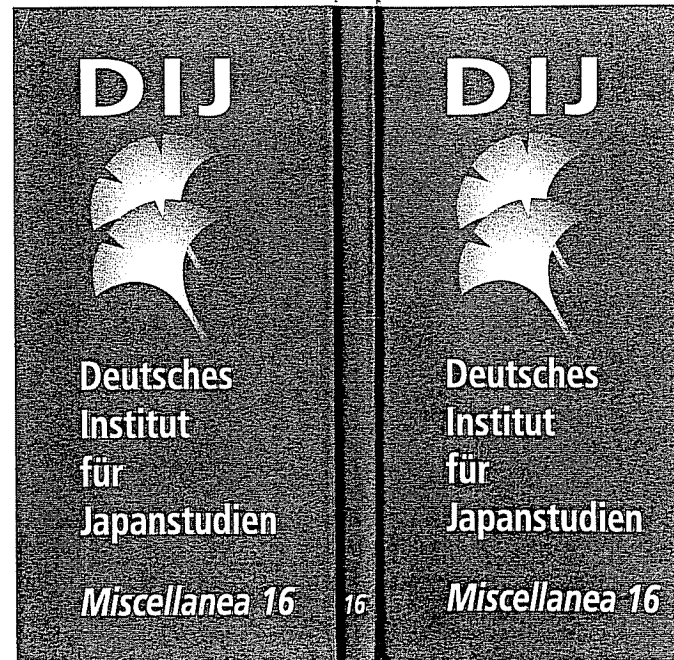


# The Japanese Social Security System in Transition – An Evaluation of Current Pension Reforms

*Harald Conrad*



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Miscellanea 16

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## EXECUTIVE SUMMARY

Of all the industrialized countries, Japan has the largest and most quickly growing concentration of people aged 65 and older. The sharp increase in the aged population will have immense economic and social consequences, especially in the pension and health care arena. The Japanese public pension system, which is basically financed on a pay-as-you-go basis, i.e. current workers pay for current retirees, faces severe financial pressures. Therefore, redesign of pension arrangements has become a major issue at the top of the political reform agenda. This paper evaluates recent and proposed pension reforms in regard to the economic, demographic and social background of Japan. The main points follow:

### ECONOMIC, DEMOGRAPHIC AND SOCIAL CHALLENGES

Economic, demographic and social factors influencing the pension system in Japan have undergone major changes since the 1970s. Currently, continued low economic growth rates and a ballooning public debt limit opportunities for expansive social policy measures. On the other hand, the rapid aging of society, increasing unemployment among the elderly and increasing individualism pose new social policy challenges.

### STRUCTURE OF THE PENSION SYSTEM

The Japanese pension system is multi-tiered and includes a number of public, occupational and personal pension schemes. The main public scheme consists of two tiers. The first tier is the National Pension Insurance, which covers the entire population between the ages of 20 and 59 years. This tier pays basic pension provisions. The second tier, which covers most employees, provides earnings-related benefits. Members are either insured in the Employees Pension Insurance or in one of a number of mutual aid associations.

The main occupational pension schemes so far have been "defined benefit plans," for which the company sets up a retirement income plan that pays a specified sum to qualified employees, based on the number of years in service. "Defined contribution plans," where future benefits are

unspecified and depend on the return on investment have been relatively unsuccessful.

Private insurance products dominate the personal pension market.

### GENERAL POLICY

The reform policy that the government has adopted with regards to the public pension system strives to secure financial sustainability through a number of parametric reform measures such as the curtailment of earnings-related benefits, an increase in the entitlement age and changes in the system of indexing benefits. The 1999 reform package will slash current pension benefits by about 20% by fiscal 2025. On the other hand, a shift to a (partially) capital-funded system, though discussed by the Pension Commission, is not (yet) part of the official reform strategy.

The basic pension paid by the National Pension Insurance is the main tool of income redistribution in Japan. According to the latest reform, the government's share of contributions to the National Pension Insurance will rise from the current one-third to one-half by 2004.

The official reform strategy adopted by the government is designed to offset benefit cuts in public pension schemes through the promotion of occupational pension plans. The government hopes that changes in the regulatory and financial framework will make defined benefit occupational plans more attractive. The government also plans to introduce Japanese-style 401(k) defined contribution plans in 2001. However, the government does not plan to make occupational or personal provisions mandatory.

### FINANCIAL SUSTAINABILITY

Reliable data on the financial sustainability of pension finances are scarce, because official projections cannot be trusted. However, the analysis of some trustworthy financial projections reveals that the combination of recent parametric reform measures is almost sufficient to put the finances of the Employees Pension Insurance on a sustainable financial footing. Yet, due to the slow schedule for implementation of the recent reform measures, benefit cuts or higher than predicted contribution hikes will likely be necessary in the future. The state of the finances of the National Pension Insurance is even harder to assess. Taking all factors into consideration, one can argue that the 1999 reform will have a significant positive effect on the finances of the National Pension Insurance. Information on the effects of a (partial) privatization is equally limited. The available data

show that such a shift can be financed in principal, however, they do not sufficiently quantify the effects of such a transition.

### DISTRIBUTIVE EFFECTS

The Employees Pension Insurance causes considerable intergenerational as well as intragenerational redistribution.

Current pensioners receive several times higher benefits than what their contributions would have produced had the funds been invested in similarly safe investments. However, under recent parametric reforms pensioners will receive much smaller or even negative net transfers in the future.

In terms of intragenerational distributive effects, considerable regressive redistribution within the group of pensioners in the Employees Pension Insurance highlights a problem of fairness. However, due to the introduction of the basic pension system in 1985, this regressive redistribution will ultimately be eliminated. Nevertheless, the National Pension Insurance as the main tool of income redistribution in the pension arena causes a number of confusing distributive effects, which seriously question the fairness and efficiency of the current arrangements.

### MINIMUM INCOME ADEQUACY

The Japanese basic pension system in its current form is not a proper tool to ensure minimum income adequacy. Consequently, the ratio of the elderly within the group of people on social welfare has been rising since the 1960s.

The 1999 reform stipulates that basic pension benefits will no longer be indexed to wages. This will further erode the function of the basic pension as a tool for minimum income security.

### POLITICAL RISKS

The information policy concerning pension reform lacks openness and does not establish suitable trust in the sustainability of the system. Special attention must be paid to changes in the management of the pension reserve fund. This fund, which still holds pension reserves amounting to ¥150 trillion, has yielded returns below market rates in the past. Its reserves have been tied up in the notorious Fiscal Investment and Loan Pro-

gram. However, planned changes in the fund management, starting in 2001, might result in better returns to its investments in the future. On the other hand, these efficiency gains might fall prey to political influence and a lack of financial know-how in the Ministry of Health and Welfare.

#### OCCUPATIONAL PENSION PLANS

With regard to the number of participants and the amount of assets under management, the most important occupational pension schemes so far have been defined benefit plans. The wide diffusion of these schemes is in sharp contrast to the rather low ratio of retirees who actually receive an occupational pension. This discrepancy arises from regulations that fail to guarantee the portability of accrued pension rights. The legal framework also lacks other important regulations regarding fiduciary duties and information requirements. Given the current funding problems of most occupational pension plans, it is likely that companies will try to shift to defined contribution Japanese-style 401(k) plans. These are to be introduced for the first time in 2001. Although the exact nature of these plans was still unclear at the time of this publication, it is likely that the legislation will leave some important issues, such as how to safeguard participants' interests, unresolved. Nevertheless, the new defined contribution plans will likely take off rather swiftly, simply because the Japanese employers have a vested interest in overcoming problems of underfunding in defined benefit plans by shifting to defined contribution plans.

#### OUTLOOK

A comparison of current Japanese reform strategies with those taken up in the 1980s in the United Kingdom reveals underlying similarities. In both countries, occupational and personal pensions are designed to counterbalance public benefit cuts. In the UK, the kind of reforms being proposed in Japan caused a general rise in pensioners' income, while the (pension) income distribution showed increasing disparities. The current distribution of occupational pension plans and the legal and tax framework in Japan indicate that the Japanese experience will be somewhat different. Following the experience in the UK, it is almost certain that the income distribution in Japanese pensions will show increasing disparities. However, in contrast to the United Kingdom, the reforms could also result in a general decline in pensioners' income.

The important key to a successful reform of the Japanese public-private pension mix is a legal and tax framework that favors pension portability and protects accruals in the transition from the old to the new occupational pension schemes.

## ABBREVIATIONS

BRPs	Book Reserve Plans
EPAPPs	Employees Property-Accumulating Pension Plans
EPFPs	Employees Pension Fund Plans
EPI	Employees Pension Insurance
FILP	Fiscal Investment and Loan Program
NPI	National Pension Insurance
SERAMAPs	Smaller Employers Retirement Allowance Mutual Aid Plans
SERPS	State Earnings-Related Pension Scheme (United Kingdom)
TQPPs	Tax Qualified Pension Plans

Note: The Ministry of Health and Welfare and the Ministry of Labour were combined into the new Ministry of Health, Labour and Welfare in January 2001. This book refers to them separately since it covers mainly events prior to this reorganization.

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## PART I: CHALLENGES

### 1 INTRODUCTION

Of all the industrialized countries, Japan has the largest and most quickly growing concentration of people aged 65 and older. The sharp increase in the aged population will have immense economic and social consequences, especially in the pension and health care arena. Like in many other countries, the public pension system in Japan faces severe financial pressures because it is basically financed on a pay-as-you-go basis; i.e., current workers pay for current retirees. Therefore, redesign of pension arrangements has become a major issue on the political reform agenda in Japan. The country has adopted a reform policy that is quite similar to other countries, for example Germany, the United Kingdom or France. The government strives to secure financial sustainability of the public pension system through a number of parametric reform measures such as the curtailment of earnings-related benefits, an increase in the entitlement age and changes in the system of indexing benefits. At the same time, the government hopes that these benefit cuts can be offset through a promotion of occupational pension schemes.

Despite the valuable insights the Japanese experience might provide for those countries that have adopted similar policies, we find that relatively little has been published in western languages on issues of Japanese social security. Although there are several comprehensive studies on the political aspects of social security such as Campbell 1992, Anderson 1993, Gould 1993, Takahashi 1997 or Milly 1999, economic aspects have so far received comparatively little attention. There are a number of good articles on Japanese pensions, such as Seike / Shimada 1994, Takayama 1995 or Clark 1996. There are even some valuable books such as Clark 1991 or Takayama 1992, but these works are mostly outdated or only focus on particular aspects of pensions in Japan.

The purpose of this paper is to take a broader perspective and evaluate the changes in Japanese pensions more comprehensively while taking into account the economic, demographic and social background of the country. What are the criteria for such an evaluation? In general, the criteria used to evaluate a pension system or proposed changes to such a scheme depend directly on the goals of the system (Quinn 1999: 38). Public pension systems follow two objectives. First, they aim to prevent old-age poverty by securing a minimum level of income. Second, they strive

to insure an income beyond this basic level which is related to former earnings and which aims to maintain a standard of living achieved during the working life. These objectives have led to the establishment of public pension systems as mandatory savings programs in order to reallocate income over time, taking contributions during one's working years and then paying benefits during retirement (*savings function*). The systems also function as insurance against the longevity, disability or death of a covered worker, and thereby cushion the household's economic decline (*insurance function*). Finally, public pension systems seek to redistribute income from high-earning participants to low-earning participants and aim to protect a minimum income standard (*redistribution function* and *minimum income function*).

Naturally, multiple goals require multiple evaluation criteria. Some of the criteria applied in this study are directly related to the described functions of public pension schemes. An analysis in terms of *intragenerational distributive effects* will test whether the system fulfills its *redistribution function* by redistributing income from low-earning participants to low-earning participants. The criterion *minimum income adequacy* tests whether a minimum income standard is effectively secured. The analysis in terms of *intergenerational distributive effects* is related to the *savings function*. How well has the system performed at securing savings for the old aged? This question is answered by looking at the experience of different age cohorts. An evaluation in terms of the *insurance function* is not part of this paper, because this would require looking at disability and survivor's provisions. Instead this paper focuses only on old age provisions.

Besides the evaluation criteria, which are directly related to the functions of a public pension scheme, one can think of numerous other criteria. Quinn names for example the effects on economic growth and administrative costs (1999: 47–51). Although these are certainly important issues, I have decided to focus rather on two other criteria, which in my opinion are even more important or which are especially relevant when looking at the Japanese case. The first issue is whether the system is financially sound and efficient enough to fulfill its function in the future. For this reason, this paper applies the criterion of *financial sustainability*. Related to the problem of financial sustainability is the question what kind of *political risks* the system faces and how it can be insulated from these risks by a proper legal and regulatory framework.

This last issue is not only related to public pensions but also to the occupational schemes, which are supposed to counterbalance public benefit cuts in Japan. Since the official policy aims to strengthen occupational pensions, this study takes a closer look at their current diffusion and evaluates the (possible) changes in their regulatory framework.

Finally, the changes in the public-private mix in Japanese pensions are compared to the experience of the United Kingdom in order to draw some more general conclusions about the possible future outcome of the Japanese reforms.

## 2 ECONOMIC CHALLENGES

### 2.1 Economic Growth, Public Debt and the Tax Burden

Since the burst of the "bubble economy" at the end of the 1980s, there have been comparatively low growth rates for Japan's Gross Domestic Product (GDP). Between 1990 and 1999, the GDP grew at an annual average of 1.2% (Keizai Kikakuchō 2000: appendix 14). Official prognoses about future growth rates have also been rather pessimistic. The Ministry of International Trade and Industry has predicted a 1.8% average growth rate for 2001 to 2010 and a 0.8% average growth rate for 2011 to 2025 (Tsūshō Sangyōshō Seisaku Kyokuhen 1997: 21–22). The Japan Center for Economic Research offers similar projections (Hori 1997: 23). Naturally, these low growth rates have limited, and will keep limiting, wage increases for the working population. With regard to the predominantly pay-as-you-go Japanese pension system, this has an important consequence.<sup>1</sup> Since the decline of the growth rate of the working population ( $n$ ) in future can not be compensated for by a rise in wage rates ( $w$ ), there are only a few options left, if the financing mode of the pension system is not fundamentally changed. Benefit levels ( $p$ ) will have to be curtailed, contribution rates ( $b$ ) will have to be raised or declining contributions will have to be counterbalanced by an increase in tax-financed subsidies. However, considering Japan's high national debt, the last policy has obvious limitations. Since the early 1990s, Japan's national debt has increased rapidly as the government resorted to public-spending programs in a bid to revive the economy. Japan became the most debt-ridden of the OECD's 21 member

<sup>1</sup> There are basically two financing methods for public pension schemes: In a *capital-funded system* people save during their working life in order to finance their own future pension benefits. The pension benefit per capita ( $p$ ) is a function of the contributions paid during the working life [contribution rate ( $b$ ) · wage rate ( $w$ )] and the interest ( $r$ ) earned on these contributions:  $p_t = (1+r_{t-1}) \cdot w_{t-1} \cdot b_{t-1}$ . In a *pay-as-you-go system* the pensions are financed by the contributions of the working population. The pension benefit per capita ( $p$ ) depends on the growth rate of the working population ( $n$ ), their wage rate ( $w$ ) and their contribution rate ( $b$ ):  $p_t = (1+n_t) \cdot w_t \cdot b_t$  (Homburg 1988: 16–29)



nations in the year 2000. The ratio of gross fiscal deficit to GDP is expected to reach 117.9% in the year 2000, even higher than Italy's notoriously high deficit (*Nikkei Weekly* 24 May 1999: 2). Although the Japanese government passed a "Fiscal Structural Reform Law" (*Zaisei Kōzō Kaikaku Hō*) in November 1997 to curb fiscal deficits to an increase of 3% or less every year, the administration of Prime Minister Obuchi suspended the law in December 1998 and returned to an expansionary fiscal policy. The chances to consolidate the worsening fiscal finances by increasing tax revenues without tax hikes are rather limited because of low growth rates. For this reason, tax hikes seem inevitable.

Until recently, Japan's ratio of national and local taxes and social security contributions to the national income was only 36.4% (1995). This was considerably lower than Germany (55.2%) or France (59.6%) (*Nihon Ginkō Kokusai Kyokuchō* 1998: 115). However, a simulation of a Working Group on Fiscal and Social Security Problems of the Economic Commission (*Keizai shingikai*) at the Japanese Ministry of Finance shows that without social security reform this ratio is likely to increase to 51.5% in the year 2025 (Hori 1997: 19).

The above data illustrate that the fiscal finances will be under great pressure in the years to come. At the same time demographic changes, which will be discussed later, will significantly effect spending in health care, the long-term care sector, and public pensions. Tax hikes alone will hardly be sufficient to cope with these developments. This assessment has found its way into official judgments on these issues. In 1994, the Japanese government published its "Vision for the 21<sup>st</sup> Century", stating that the public system should only secure a moderate level of social security and that additional benefits would have to be financed on a private basis. According to this report, the ratio of national taxes, local taxes and social security contributions to the national income should not surpass the 50% mark in the 21<sup>st</sup> century (*Kōseisho Daijin Kanbō Seisakuka* 1994: 7–8).

## 2.2 The Labor Market and Employment Practices

Another important background factor of the public pension system in Japan is the employment situation. Since the burst of the bubble-economy, unemployment has risen steadily. Unemployment rates for 60–64 year olds is 7.9% (1999), significantly higher than the average rate of 4.7% (1999) for the entire work force (*Rōdōshō* 2000: 513).<sup>2</sup> Increasing unem-

<sup>2</sup> This is not the place to discuss statistical definitions of the Japanese unemployment statistics. However, comparisons with statistical surveys of other OECD countries show that the Japanese definition is rather strict to the effect that the official unemployment rate tends to underestimate the actual number of unem-

ployment has a negative impact on revenues of the public pension schemes because the unemployed do not contribute to second-tier public pension schemes. Nor do transfers from unemployment insurance funds to the pension insurance funds make up for these revenue losses.

In order to assess the effects of recent and proposed pension reforms, it is necessary to understand the complexity of the Japanese employment system. The so-called dual structure (*nijū kōzō*) of Japanese industry, with its sophisticated division of labor between smaller and bigger companies, is characterized by significant wage differentials as well as differences in employment and retirement practices.<sup>3</sup>

In contrast to common practices in many other industrialized (especially western European) countries, retirement from a company job does not necessarily imply that the employee leaves the labor force altogether. There are a number of specific Japanese retirement practices that have a considerable effect on lifetime earnings as well as on earnings in later working life. In the following section, some of the peculiarities of the Japanese system are described to give a general idea of the complexity of this issue.

Most Japanese firms specify a definite end to the career of their employees by imposing a mandatory retirement age (*teinen*). Until recently, this compulsory retirement age has been relatively young, varying according to the size of the company.<sup>4</sup> Until the mid-1970s more than 45% of all companies applied a mandatory retirement age of 55 years or younger (*Sōmuchō Chōkan Kankyoku Kōreishakai Taisaku Shitsu* 1997: 76). Then, under pressure from the Japanese Ministry of Labor, the employers raised the mandatory retirement age during the 1980s and 1990s (*Campbell* 1992: 254–281). By 1996, 80.4% of all companies had a mandatory retirement age of 60 (*Sōmuchō Chōkan Kankyoku Kōreishakai Taisaku Shitsu* 1997: 76). After the revision of the "Law for the Stabilization of Employment of Older Workers" (*Kōnenreisha Nado Shokugyō Antei Taisaku Kihon Hōshin*) a mandatory retirement age of 60 became legally obligatory beginning in April 1998 (*Rōdōshō* 1997: 286–287).

The mandatory retirement age has never corresponded to the entitlement age for public pension benefits. In fact, it was and still is very common

played (see Bosse 1994: 181–182, Bosse 1995: 594–595 and Kishi 1995: 39–45 for a discussion of the statistical definitions). In 1995 the Economic Planning Agency estimated the Japanese unemployment rate using the indicator of the American Bureau of Labor Statistics. The result was an unemployment rate of 8.9%, whereas the official rate was just 2.7% in February 1994 (Kishi 1995). Accordingly, the real rate of unemployment is likely to be much higher than the officially published.

<sup>3</sup> For a good overview of the Japanese employment system see Demes 1998.

<sup>4</sup> In general, smaller companies used to have an earlier mandatory retirement age.

to have a time gap between mandatory retirement from work and eligibility for public pension benefits. Currently, public pension benefits from the Employees Pension System can still be regularly drawn at 60. However, this does not mean that the revision of the employment law has forever abolished the gap in time between mandatory company retirement and entitlement for public pension benefits. According to the 1994 pension reform, the age at which full benefits are payable will be raised to 65 once every three years starting in 2001. After 2013, employees will regularly draw only a part of their old-age pension between the age of 60 and 64 (*Kōseishō Nenkin-yokyu* 1998: 112). What is more, the pension reform of 1999, which passed the Diet in March 2000, states that starting in 2013 this partial pension will be phased out (see *figure 5*). Accordingly, after 2026 old-age benefits can regularly only be drawn after 65 (*Nihon Keizai Shinbun* 22 March 2000). Since it is rather unlikely that the employers will soon give in to demands by the Ministry of Labor to raise the mandatory retirement age to over 60, the time gap will probably persist for some time in the future.

Three common employment practices further complicate a quantitative assessment of the effect of the mandatory retirement age on the financial situation of older employees. Often, employees, who have reached the mandatory retirement age, are *re-employed* (*saikoyō*) or have their *employment contract extended* (*kinmuenchō*).<sup>5</sup> Another possibility is a *temporary transfer* (*shukko*) to a subsidiary of the same company, which can take place before or upon reaching the mandatory retirement age. In any case, wage cuts normally accompany these practices.

*Re-employment* usually means demotion within the same company or a transfer to a subsidiary of that company once the regular contract expires. More than 70% of all employers lower the salaries of these employees. The new salary is frequently 10% to over 30% lower than it had been before re-employment (*Rōdōshō* 1997: 261, appendix 141).

When the *employment contract is extended*, 30–50% of companies lower the wages of their employees, however, the wage cuts are in most cases lower than 30% (*Rōdōshō* 1997: 261, appendix 141).

A *temporary transfer* means that the employee is employed at a smaller subsidiary of the company or at a subcontractor. Frequently, this transfer is accompanied by wage cuts (although no statistical data seem to be available on this point). Sometimes this transfer takes place before the mandatory retirement age, at around the age of 50. In this case, the trans-

<sup>5</sup> It is entirely at the companies' discretion which employees are re-employed or whose employment contract is prolonged. 70.3% of all companies use one or both systems in their employment practice (*Sōmuchō Chōkan Kankyoku Kō-reishakai Taisaku Shitsu* 1997: 78).

fer is very often not reversible (Bosse 1994: 185). In fact, the Japanese Ministry of Labor noted an increasing number of bigger companies that fell back on this practice to restrain their labor costs once the mandatory retirement age of 60 became a legal requirement (*Rōdōshō* 1997: 236–237). Satō states that these transfers are deliberate measures to shunt aside unwanted middle-aged and older white-collar workers (1994: 7). As a result of these practices, smaller companies employ an increasing number of older employees. In 1996, companies with fewer than 99 employees employed 57.1% of all 55–59 year old workers and 70.7% of all 60–64 year old workers (*Rōdōshō* 1997: 237).

The notion that private companies will be reluctant to adapt their employment practices to the increase of the entitlement age for public pensions is supported by a study of the Japan Institute of Labour (*Nihon Rōdō Kenkyū Kikō*) from August 2000. Only 24.1% of the companies surveyed had already implemented, or were considering, a system of employment up to the age 65. Only 5% of these companies had raised, or were considering raising, their mandatory retirement age. Instead, 83.8% of these companies plan to adjust their *re-employment* practices or their practice of *extending employment contracts* in order to realize this aim. In other words, among the small number of companies that will adjust to the increase of the entitlement age, most will do so through practices that will allow them to cut labor costs and to choose employees who are further employed. As a matter of fact, almost 60% of companies are considering making use of these practices based on the working capabilities of their older employees (*Nihon Rōdō Kenkyū Kikō* 2000).

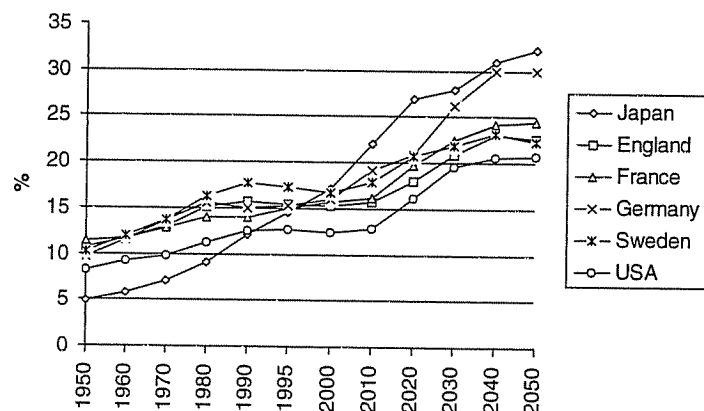
The above section only offers a sketch of the complex employment practices in Japan as they relate to pension reform. Clearly, when talking about the effects of pension reform in this country, employment practices need to be considered. Japanese employment practices cause considerable fluctuations of income in later working life. For each worker these fluctuations depend on several factors, such as what the mandatory retirement age of the workplace is, whether he/she is employed beyond that age, and how much the salary is curtailed in that case. Demes shows that there is a considerable decrease in average yearly income after employees reach the age of 50 (regardless of company size). However, the wage drop in companies with more than 1000 employees is especially noteworthy. In these companies, the average yearly income of employees older than age 50 decreases by about 20% to 30% (1998: 148).<sup>6</sup>

<sup>6</sup> Unfortunately, Japanese statistical data do not allow a comprehensive analysis of the composition of household budgets of the elderly. Even accurate data on

## 3 DEMOGRAPHIC CHALLENGES

Demographic changes are taking place at a much faster rate in Japan than in any other country. As can be seen in *figure 1*, the ratio of the population older than 65 years will increase steadily to reach 32.3% in the year 2050.<sup>7</sup> Japan leads the highly industrialized countries in having the largest and most quickly growing elderly population. Moreover, the ratio of very old people over 75 is projected to rise to 18.8% in the year 2050 (Kokuritsu Hoshō Jinkō Mondai Kenkyūjo 1997: 64).

Figure 1: Ratio of the Population Over 65



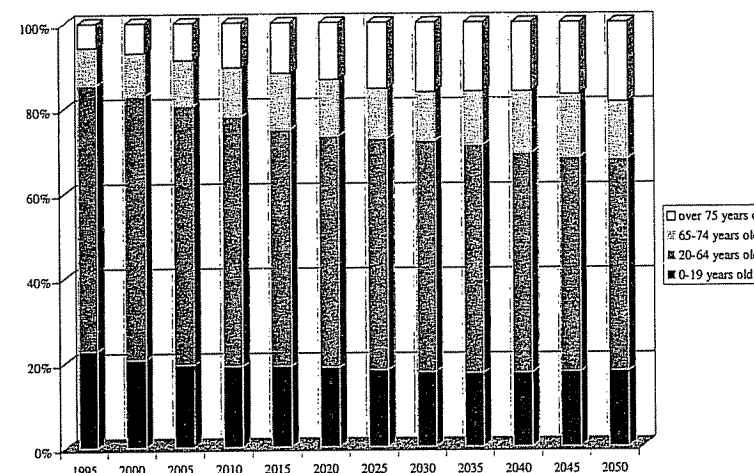
Source: Sōmuchō Chōkan Kankyoku Kōreishakai Taisaku Shitsu 1997: 13

As noted above, this aging process will increase the potential burden on future contributors to the primarily pay-as-you-go Japanese pension system. As can be seen from *figure 2*, the demographic “old age dependency ratio” (population over 65 / population between 15–64), which measures the potential number of old people who have to be supported by the working generation, rises from 0.23 in 1995 to 0.64 until 2050.

the distribution of *public* retirement income are lacking, because until 1997 Japan did not have a unified system of pension insurance numbers. Since many employees have taken part in a number of public pension schemes over their working life, they receive several pensions, which are not statistically recorded.

<sup>7</sup> The two main reasons for the rapid aging are the decline of the death and birth rates. See Sōmuchō 1997: 28–36 for a more detailed discussion of the underlying factors.

Figure 2: Changes in the Demographic Structure of Old Age



Note: Changes in the demographic structure of old age according to the official middle prognosis

Source: Kokuritsu Shakai Hoshō Jinkō Mondai Kenkyūjo 1997: 64

This means that every potential contributor aged 15–64 will have to finance 0.64 pensioners in the year 2050. Following conventional pension policies in the future, without benefit cuts, would therefore require substantially higher contributions. This conclusion can be understood if one refers to the two determinants of the *equilibrium contribution rate* needed to provide for pension payments in a fully-fledged pay-as-you-go system. These are (1) the “*support ratio*”, defined as the number of contributing workers per pensioner and (2) the “*replacement rate*”, defined as the proportion of the average wage, which is replaced by the average pension. The *equilibrium contribution rate* is the product of the “*replacement rate*” with the “*support ratio*” (Chand / Jaeger 1996: 10).

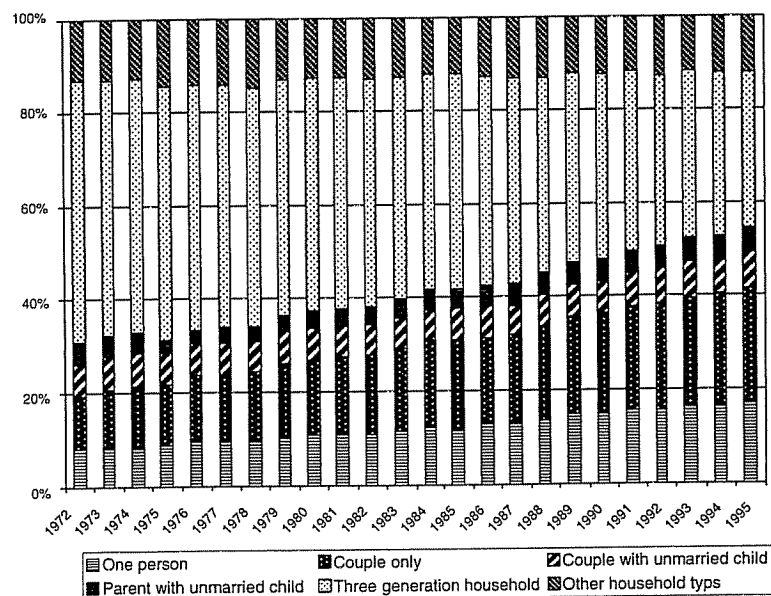
In 1997, the last year for which data were available, the Japanese average replacement rate of the old age pension of the Employees Pension Insurance was about 56% of the average standard remuneration (calculation based on Shakai Hoken Kenkyūjo 1999: 285, 289). If one applies this replacement rate to the data about the old age dependency ratio, one gets to the following simplified calculation:  $0.64 / 1 \times 56 = 35.84$  [support ratio  $\times$  replacement ratio = equilibrium contribution rate]. In other words, the contribution rate would have to rise from currently 17.35% to 35.84% in order to finance the current average replacement rate in the year 2050.

Naturally, this calculation is only a very crude indicator. The actual prognosis about necessary contribution rates and their implications will be discussed in chapter III.1.2.

#### 4 SOCIAL CHALLENGES

The ratio of Japanese over 65 who live in a three-generation-household has constantly declined over the last 25 years (figure 3).

Figure 3: Ratio of Households with People Over 65 According to the Type of Household



Source: Kōseishō Daijīn Kanbō Tōkei Jōhōbu 1997: 235

However, 33.3% (1995) still live in this type of household. In comparison to Germany, for example, where only 15.9% (1991) of people older than 64 live together with their children and 41.1% live alone, this ratio proves to be quite high (Prahl / Schroeter 1996: 129).

The decline in the ratio of old people living in a three-generation-household in Japan can be attributed to an increase of old-aged couples and older people living alone. This trend is expected to continue in the coming

years. A prognosis for the year 2010 states that 32.2% of women older than 65 will be living only with their partners, whereas 15.8% will be living alone. As for men, the respective prognosis predicts 49.8% with a partner and 8.4% living alone (Hiroshima 1995: 17).

These data indicate that a social security system for the elderly, which functions independently from support by children, becomes even more important in the future. In the 1980s, Japanese policy makers promoted what they called a "Japanese-style welfare society" (*Nihon-gata fukushi shakai*), implying that there was a special preparedness on the side of younger Japanese to care for their old parents. However, it has become apparent that this position never really corresponded with social realities, but was rather fostered by those who advocated the ideology of the "Otherness of Japan" or *Nihonjinron*.<sup>8</sup>

<sup>8</sup> See Campbell 1992 for a detailed discussion.

## PART II: RESPONSES

Part I has shown that the economic, demographic and social factors influencing the pension system in Japan have undergone major changes since the 1970s. The purpose of Part II is to analyze how the public pension system has reacted to these changes. The first section will give a short historical overview of the development of the public pension system building on the country-specific factors discussed above. Then follows a short description of the public and occupational pension schemes in their current form.

### 1 A SHORT HISTORY OF THE PUBLIC PENSION SYSTEM IN JAPAN<sup>9</sup>

Until the establishment of Seaman's Insurance (*Senin Hoken*) in 1939, Japan did not have a public pension system for private sector employees. In the Meiji- (1868–1912) and Taishō-periods (1912–1926), only employees of public enterprises, the military and government officials would, under certain conditions, receive state-sponsored pensions (*onkyū*). In 1941, the Workers Pension Insurance (*Rōdōsha Nenkin*) was introduced, which was extended to include employees in 1944.<sup>10</sup> Accordingly, the name of the new system was changed to Employees Pension Insurance (*Kōsei Nenkin*) (hereafter referred to as "EPI"). Yet after the war, these systems were not

<sup>9</sup> This section will only describe the most important reforms. See Yamazaki 1990 for a good historical overview of the development of the Employees Pension Insurance in English. For a comprehensive overview of changes in benefits and contributions see Shakai Hokenchō 1997: 740–795. If not otherwise mentioned the numbers in this chapter are from the latter source. For a more detailed discussion of the development of the Japanese pension system see Conrad 2000a: 89–142.

<sup>10</sup> Interestingly, the introduction of the workers' pension insurance was mainly motivated by the government's wish to raise the national defense capability. The welfare minister Kanemitsu Tsuneo stated that the insurance was meant to "encourage them to work to the limits of their ability to increase coal production even by a single piece of coal, or machine production even by one additional unit, and thereby contribute to raising national defense capability" (cited after Yamazaki 1990: 69). In this respect the Japanese situation was somehow similar to the one in Germany. Bismarck's social policy was also not simply meant to assure the workers' livelihood in their old age but was a calculated political strategy to control the socialists (Schmidt 1998: 28–36).

able to fulfill their function because rapid, post-war inflation eroded their finances. By the end of the occupation period in 1952, the public pension system was still fragmented and not able to pay adequate benefits. A first step in the reconstruction of the system was the 1954 Employees Pension Reform, which sought to put the system's finances on a proper financial footing. In principle, the system was designed to be capital-funded, although not in an actuarial sense, i.e. there was already some pay-as-you-go. The replacement rate was rather low at 26.5% of the monthly average standard remuneration (calculation based on Kōseishō Nenkin'yoku Sūrika 1995: 69). The EPI had a two-tiered contribution-financed benefit structure (with 15%–20% tax-subsidies). The first tier was a fixed benefit, whereas the amount of the second-tier benefit depended on contribution period and payments.

Another important development of the 1950s, with significance for the future, was the establishment of a number of mutual aid associations for different groups of employees outside the EPI system. This led to a fragmentation of the public pension system and would become a major problem in the future. Even today the systems are still characterized by significant differences in benefit and financing structures and there are problems with the accounting of entitlements of members who change from one scheme to another.

In terms of coverage, a major improvement was the establishment of the National Pension Insurance (hereafter referred to as "NPI") in 1961. Until then, only about 40% of the population aged 20 to 59 had been insured in one of the several public pension systems (calculation based on Shakai Hoshō Seido Shingikai / Nenkin Sūribukai 1996b: 150; Sōmuchō Tōkeikyoku 1997a: 46, 630–637 and various years). The NPI became mandatory for large parts of the hitherto uncovered population, mainly farmers and self-employed. Like the EPI, the NPI was designed to be capital-funded, for the most part.

Although the NPI established coverage of large parts of the formerly uncovered population, the new system did not result in a conclusive integration under a unified pension system. The Social Security Systems Deliberation Counsel (*Shakai Hoshō Seido Shingikai*), established in 1948, had originally argued for a universal two-tiered system with a tax-financed fixed-amount benefit and a contribution-financed income-proportional benefit. However, the Ministry of Finance was opposed to a tax-financed fixed-amount benefit because it planned to raise capital for its economic growth strategies and because it worried about a rapid increase in public spending. The political outcome was a compromise, which saw the establishment of the contribution-financed fixed-amount NPI (with 33% tax-subsidies). Part of the political compromise was also a new tax-fi-

nanced Welfare Pension for the Elderly (*Rōrei Fukushi Nenkin*), which was means-tested for people over 70 (who could not pay contributions to the NPI anymore because they had already reached the retirement age). Although the newly founded NPI was in principle capital-funded, low contributions, generous contribution exemptions and shortened qualifying periods of 5 or 10 years soon lead to financial problems.

The introduction of the tax-financed Welfare Pension for the Elderly shows that there was no consensus regarding the proper instrument for minimum income security. On the one hand, policy makers wanted to follow the *insurance model* of social security, which stresses the individual equity aspect by linking contributions closely to benefits. That is why they did not go for a tax-financed fixed-amount NPI. On the other hand, the poor and the elderly could not pay the necessary contributions. This policy had the effect that between 1960 and 1975 about 65% to 75% of the population over 70 received only a very low tax-financed Welfare Pension for the Elderly (calculation based on *Kōseishō Nenkin-yoku* 1998: 284; *Sōmuchō Tōkeikyoku* 1997a: 46). Hence, in marked contrast to many other industrialized countries, such as Germany and France, the Japanese pensioners after the war did not receive fairly high pay-as-you-go financed pensions but instead received low, means-tested benefits.

The successful economic growth policies of the 1960s (set off by the "income-doubling plan" of the Ikeda administration) translated into demands for the establishment of a "welfare state" (*fukushi kokka*). And indeed, several amendments of the pension law in the 1960s resulted in a quick increase in benefit levels, whereas the contributions were not raised at the same speed. The originally capital-funded EPI and NPI transformed subsequently into pay-as-you-go financed systems.

The 1973 reform marked a milestone in Japanese pension policy because it introduced, for the first time, a system of price- and wage-indexation for both pension entitlements and pensions in payment. This had an immense effect on the benefit levels of both EPI and NPI. The replacement rate of the model EPI pension increased rapidly from 45% in 1969 to 62% in 1973 (*Kōseishō Nenkin-yoku* 1998: 42). However, once again the contribution hikes were much lower than what would have been prudent from an actuarial point of view. This was especially evident in the case of the NPI. The finances of this scheme worsened quickly over the following years, so that the NPI realized a deficit, for the first time, of ¥105.1 billion in 1983 (*Shakai Hoshō Seido Shingikai / Nenkin Sūribukai* 1996b: 146). The NPI still had reserves of ¥2,927.6 billion at this point. However, these reserves would have dissolved quickly had not the 1985 pension reform solved the financial problems in the system (*Tajika / Kaneko / Hayashi* 1996: 131–134).

Hence, although this point is seldom officially acknowledged, the restructuring of the pension system in 1985 was the successful attempt to secure the financial basis of the NPI. Participants in the EPI were integrated into the NPI system. The employed and their spouses were added, as "Type 2" and "Type 3" insured persons (see also II.2 below), to the self-employed and farmers who until then had been the only members of the NPI. In this way, the fixed-amount portion of the EPI was integrated into the fixed-amount NPI. The pension system in its current form was the result, as illustrated in figure 4.

By increasing the number of participants in the NPI and introducing a system of cross-subsidies the threat of a collapse in the finances of the NPI scheme was averted.

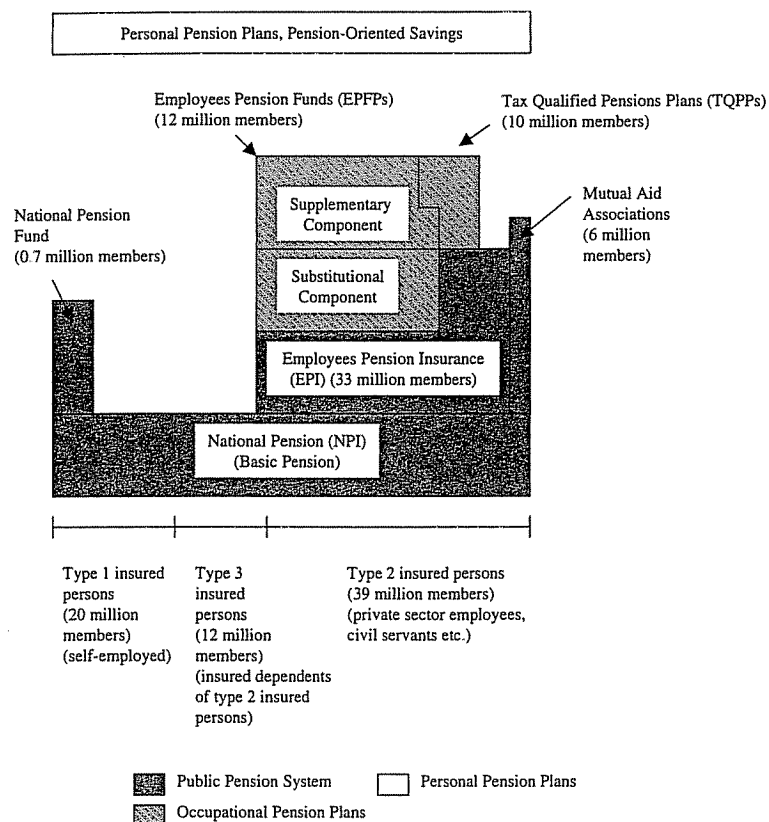
A major outcome of the 1985 pension reform was (for the first time) a considerable cut in benefit levels. The increase in the model replacement rate of the EPI was only superficial. It increased from 68% to 69% of the average standard gross-remuneration of a male employee, but to reach this rate, one had to have participated in the system for 40 years, rather than 32 years as had been the case.

Another important aspect of this reform was the introduction of the basic pension for spouses. Hitherto this group did not have their own pension rights in case of divorce.

Although the benefit levels of the EPI were curtailed as described, the following years would show that the effect on the pension finances was much smaller than expected. This became especially obvious when the Ministry of Health and Welfare presented its financial review prior to the 1994 pension reform. Originally, the 1985 reform was supposed to have limited the projected rise of the contribution rate to 28.9% until 2020 – against 38.8% without reform (*Sakaguchi* 1985: 157). The 1994 projection, however, indicated that without reform, the necessary contribution rate would have to rise to 34.8% until 2025 (*Kōseishō Nenkin-yoku Sūrika* 1995: 237).

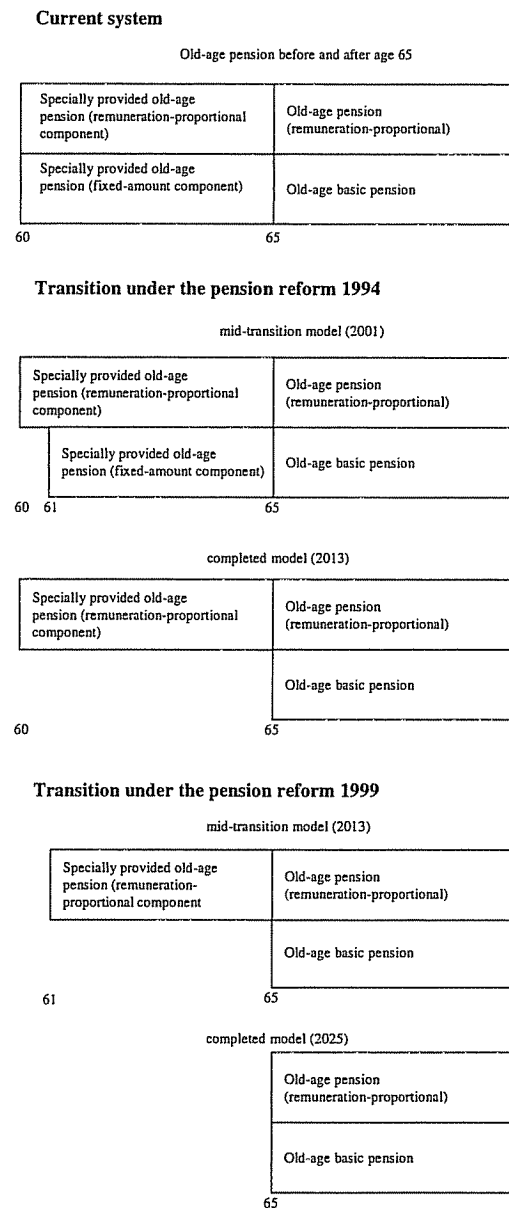
The obvious reaction to the new projection was another round of benefit cuts, this time to be realized by the scheduled partial increase of the entitlement age from 60 to 65 starting in fiscal year 2001. In order to cushion the increase of the entitlement age, a partial pension for those between the age of 60 and 64 was introduced, which equals the remuneration-proportional component (see figure 5). Another measure to cut pension expenditure in the future was the replacement of the hitherto gross wage-indexation by a system of net wage-indexation. In order to raise contribution revenues, a special contribution rate of 1% on bonuses was introduced and an increase of the contribution rate of 2.5 percentage-points every 5 years was decided.

Figure 4: The Structure of the Japanese Pension System (March 1998)



Source: Based on Kōseishō Nenkin'yoku 1998: 23

Figure 5: The Development of the Old-age Pension Benefits According to the Pension Reforms 1994 and 1999



Note: The specially provided old-age pension was introduced in 1985 to make up for the discrepancy in entitlement ages in the EPI and NPI. Currently, the EPI pays a specially provided old-age pension (consisting of remuneration-proportional component and fixed-amount component), between age 60 and 64. These benefits equal benefits paid by EPI and NPI once the insured has reached age 65.

Source: Shakai Hoken Kōhōsha 2000: 21

Although the Ministry of Health and Welfare acknowledged the need for a higher entitlement age back in 1980 (Campbell 1992: 322–327), it took almost 15 years for this measure to be implemented. Even though an increase in the entitlement age was settled on in 1994, it was scheduled to begin in 2001. The introduction of a partial pension, comprised of more than half of the average pension benefits, also proved to be indecisive. This point was belatedly acknowledged in the 1999 pension reform, which mandates that the partial pension be phased out starting in 2013 (see again *figure 5* and paragraph III.1.1).

This overview of pension reforms up to 1994 illustrates that the Japanese system did not pay high benefits until the early 1970s. The public pension expenditure made up only 1.17% of the GDP in 1970 (calculation based on data provided by the National Institute of Population and Social Security Research, Tōkyō). This is in marked contrast to other industrialized countries where the elderly received rather high pay-as-you-go financed benefits immediately following the end of the war. For example, the German ratio of pension expenditure to the GDP had already reached 7.7% in 1970 (Bundesministerium für Arbeit und Sozialordnung 1995a: 125).

However, the Japanese pension system matured at a very high speed thereafter, increasing the benefit levels of both EPI and NPI in the 1960s and 1970s. This soon resulted in a deterioration of the pension finances, because the contribution rates were not raised accordingly.<sup>11</sup>

The development of pension finances is vividly reflected in the changing ratio of the pension fund reserves to the yearly EPI expenditure. From 1954 to 1964, this ratio increased sharply from 20 to 60, i.e. the trust fund reserves reached 60 times the size of the expenditures in 1964 (calculation based on Shakai Hokenchō 1971: 288–290 and various years). However, although this ratio was very high indeed, one should not jump to the conclusion that the system was still capital-funded in an actuarial sense. This is because this ratio depends on a number of influencing factors such as

<sup>11</sup> See Conrad 2000a: 143–161 for a more detailed analysis of the development of the pension finances.

interest earnings, contribution rates, tax-subsidies, cross-subsidies and the number of contributors and beneficiaries. Most important, it does not reflect future pension obligations to members who will be entitled to receive pensions according to benefit formulas, which become more generous over time.

The considerable benefit hikes of the 1960s and 1970s soon translated into almost continuous decreases in the ratio of pension fund reserves to the EPI expenditure from 60 to about 5 to 6 in the early 1990s. Since then, this ratio has held fairly stable.

In the 1980s, Japanese public pension policy shifted from a rather expansive policy, to one that seeks to curtail future expenses in order to deal with the rapid aging process of society. Before evaluating these changes in part III, the next paragraph will give a short overview of the current pension arrangements. This description includes an overview of the occupational pension plans, because they are expected to play a bigger role in the Japanese retirement system in the future.

## 2 THE CURRENT STRUCTURE OF THE JAPANESE PENSION SYSTEM

The current structure of the Japanese pension system goes back to the 1985 pension reform, which saw the integration of the employees into the National Pension Insurance as the basic pension system. The current system is multi-tiered, consisting of public and private pension provisions. The latter include occupational pensions as well personal pensions, such as life insurance or other annuities. However, data on personal pensions are hard to collect because they are difficult to distinguish from other forms of capital income.<sup>12</sup> For this reason, this paper focuses on public and occupational pension schemes. See again *figure 4* for an overview of the current structure of the pension system.

### *The National Pension Insurance (NPI)*

The first public tier is the Basic (*Kiso Nenkin*) or National Pension Insurance (*Kokumin Nenkin*).<sup>13</sup> In principle, all residents in Japan between age 20 and 59 are eligible and required to become subscribers to this scheme.

<sup>12</sup> As was noted above, unfortunately, the Japanese income statistics do not allow a comprehensive breakdown of the composition of the income of the elderly.

<sup>13</sup> National Pension Insurance (*Kokumin Nenkin*) is the institutional name, whereas Basic Pension Insurance (*Kiso Nenkin*) relates to its function. The confusion about the wording results from the fact that until 1985 the National Pension Insurance



The benefits are non-income-related, depending solely on the length of participation. Current benefits are paid out of currently collected premiums, but one third of the benefit expenditure is subsidized out of the general budget of the government. According to the 1999 reform, the government's share is projected to rise to one-half of the expenditure until the year 2004.

There are three types of insured persons:

"Type 1 insured persons" includes all residents in Japan between age 20 and 59 regardless of their nationality. These are mainly self-employed, farmers and non-employees. In principle, they are required to pay a fixed contribution of ¥13,300 (1999) per month. However, low-income earners (about 17% of all Type 1 insured persons) are currently exempt from paying premiums (Kōseishō Nenkin-yoku 1998: 32). Starting from April 2002 the system will be revised so that half-premium exemptions will be possible. Premium-exemptions times are reflected in the pension formula below (Shakai Hoken Kenkyūjo 2000: 62–63).

"Type 2 insured persons" are all employees whose workplace has more than 5 employees (private employees and civil servants etc.). In contrast to Type 1 insured persons, Type 2 insured persons enroll automatically in this scheme when they become a member of the Employees Pension Insurance (EPI) or a mutual aid association, which both provide second tier earnings-related benefits. The premiums for these second-tier insurance systems include the premium to the NPI. Currently, the premium to the EPI is 17.35% of the employee's monthly gross earnings (including overtime payments, travel allowance and family allowance, excluding bonuses) divided equally between employee and employer.

"Type 3 insured persons" are non-working spouses of Type 2 insured persons. They are automatically insured together with their working spouses and are not required to pay their own premiums.

A person born after April 1, 1926 is eligible for old age benefits from the NPI upon reaching age 65, provided that a qualifying period of at least 25 years is completed.<sup>14</sup> The amount of the old-age NPI is calculated accord-

was the sole pension system for the self-employed. In 1985 this system was reformed to create a non-income-related basic pension system for all residents. This way the National Pension Insurance became the Basic Pension Insurance. However, for the self-employed the National Pension Insurance is still the only regular public pension, so that for this group the usage of the term "Basic Pension" does not seem to be suitable. For this reason, this paper refers to this pension mostly by its institutional name "National Pension Insurance" (NPI).

<sup>14</sup> The benefits of a person who was born before that date are calculated according to the formula prior the 1985 amendments. See Shimada 1995: 105–106 for more details.

ing to the formula in figure 6 (March 2000) (Shakai Hoken Kenkyūjo 2000: 19):

Figure 6: Formula for Calculating the Old Age Basic Pension From Age 65

$$\text{monthly old age basic pension} = ¥67,016 \times \frac{A + B \times 1/3 + C \times 2/3}{D}$$

- A = number of months a participant paid premiums
- B = number of months a participant received exemptions from premium payments (for example because of low working income)
- C = number of months a participant received partial exemptions from premium payments
- D = number of insurable months (maximum number of insurable months is 480)

According to this calculation the full amount of the old age basic pension from the NPI is currently ¥67,016 yen per month.

#### *Employees Pension Insurance (EPI) and Mutual Aid Associations*

The second public tier covers most employees and provides income-related pension benefits. Members are either insured through the EPI or in one of a number of mutual aid associations (*Kyōsai Nenkin*). This paper describes only the EPI in detail. Most features of the mutual aid associations are similar to EPI, although the associations generally tend to pay more generous benefits.

By law, workers in private industrial or commercial enterprises that regularly employ one or more workers are covered by the EPI. If the enterprise is owned by an individual, as opposed to a corporate body (a judicial person in Japanese legal parlance), the coverage is only compulsory if the firm regularly hires five or more workers. Contributions and benefits are proportional to the earnings of the insured persons. In order to facilitate the calculation of contributions and benefits, the EPI uses a system of so-called "monthly standard remuneration" (*hyōjun hōshū getsugaku*), that converts actual earnings into insured remuneration. The insured remuneration is used to determine contributions to and benefits from the EPI. This system defines thirty classes of monthly gross income, ranging from less than ¥98,000 to more than ¥620,000 (October 2000).<sup>15</sup> The monthly standard remuneration falls into the middle of one of these classes. For example: The monthly contribution of an employee with a gross income

<sup>15</sup> ¥95,000 is the minimum level of insured earnings, ¥575,000 the maximum level of insured earnings.

between ¥165,000 and ¥175,000 is calculated, not by applying his actual gross salary, but by applying a standard remuneration of ¥170,000.<sup>16</sup>

As already noted above, the monthly contribution to the EPI is currently 17.35% of the employee's monthly standard remuneration excluding bonuses. Currently, a separate contribution rate of 1% is applied to bonuses.<sup>17</sup> However, it has long been argued that a comprehensive income definition should include bonus payments. Therefore, the 1999 pension reform stipulates that a "comprehensive contribution rate" shall be introduced starting in April 2003. From 2003, a new comprehensive rate set at 13.58% will apply. In the benefit calculation formula a lower multiplying rate will apply to keep the contribution burden and benefits at current levels (see below) (Shakai Hoken Kenkyūjo 2000: 64–69):

In principle, the EPI is pay-as-you-go financed, although the social security trust fund still controls a considerable fund amounting to ¥1,184,57.9 billion (1996) (Kōseishō Nenkin-yoku 1998: 296). This, however, does not imply that this fund, including interest earnings, is sufficient to pay for accrued benefits earned for past contributions by current workers and retirees, without raising contribution rates in the future. Although the EPI is officially referred to as a "modified capital-funded system" (*shūsei tsumitate hōshiki*), this official terminology does not appropriately reflect the actual state of affairs (Hatta 1996: 54). This point will be further discussed in part III of this paper.

In order to qualify for the old-age pension, the insured person must satisfy the eligibility conditions for the old-age basic pension under the National Pension Insurance Law, i.e. fulfill a qualifying period of 25 years. Currently, there are exceptions under which an old-age pension is payable from the age of 60, although the formal entitlement age is 65 under the National Pension Law. This discrepancy in entitlement ages stems from different provisions under the two systems prior to the 1985 pension reform. Both a fixed-amount pension component as well as a remuneration-proportional component (referred to as a *specially provided old-age pension*) is to be paid from the EPI until the beneficiary reaches the age of 65. Thereafter, the portion of the old age basic pension is provided by the

<sup>16</sup> In fact, the monthly standard remuneration is not determined every month, but only once a year. The average of the gross income from May to July indicates the income class of the standard remuneration. The resulting monthly standard remuneration is used from October to September the following year to calculate the monthly pension contributions (Shimada 1995: 130–133, 142–144).

<sup>17</sup> A considerable portion of the total working income in Japan consists of overtime-payments and bonuses, which are traditionally paid twice a year. In 1993 the non-monthly payments (first of all bonuses) made up 21.6% of the average income of an industrial worker (Rōdōshō Seisaku Chōsabu 1994: 30).

National Pension, as illustrated in figure 6. However, according to the 1994 pension reform legislation, the payable age of the fixed-amount component of the *specially provided old age pension* shall be raised once every three years starting from 2001 (see figure 5). Accordingly, the fixed-amount component of the *specially provided old-age pension* will be totally phased out by the year 2013. In addition to this, the pension reform legislation of 1999 stipulates that the remuneration-proportional component of the *specially provided old age pension* will subsequently be phased out starting in 2013. Accordingly, after 2026 the regular entitlement age for both NPI and the EPI benefits will be 65.

The old-age pension benefits of the EPI are calculated according to the formulas in figures 7 and 8 (March 2000) (Shakai Hoken Kenkyūjo 2000: 25–33).

Figure 7: Formula for Calculating the "Specially Provided Old-Age Pension" of the EPI Between Age 60 and 64

monthly old-age pension = a) fixed amount component + b) remuneration-proportional component + c) spouse and child allowance

a) = fixed amount ¥1,676 × multiplying factor between 1.875 and 1.000 (depending on date of birth)

b) = average monthly standard remuneration × multiplying factor between 9.5/1000 and 7.125/1000 (depending on date of birth) × number of insured months\*

\*Note: If the calculated benefit is lower than the one which would have resulted using the old formula prior to the 1999 reform, then the remuneration-proportional component is calculated according to the old formula.

c) = spouse and child allowance (for dependent spouse under 65 years of age and/or child under 18)

Note: The specially provided old-age pension was introduced in 1985 to make up for the discrepancy in entitlement ages in the EPI and NPI. Currently, the EPI pays a specially provided old-age pension (consisting of remuneration-proportional component and fixed-amount component), between age 60 and 64. These benefits equal benefits paid by EPI and NPI once the insured has reached age 65.

Figure 8: Formula for Calculating the Old-Age Pension of the EPI From Age 65

monthly old-age pension = b) remuneration-proportional component + c) spouse and child allowance

Note: b) and c) are calculated as in figure 7. On top of this old-age pension, the NPI pays the old-age basic pension according to the formula in figure 6.

The old-age benefits of a pensioner between 60 and 64, who still works and whose salary surpasses a prescribed limit, are reduced. The benefits of a working pensioner 65 years and older are currently paid in full regardless of any additional working income. However, starting from April 2002, the remuneration-proportional benefits of a working beneficiary between 65 and 69 will also be subject to benefit cuts (Shakai Hoken Kenkyūjo 2000: 54–55).

In principle, contributions to the public pension schemes are tax-deductible. The pension income is taxed in the category miscellaneous income of the Japanese income tax. Depending on the total amount of the public pension benefits, different tax deductions are applicable (see Matabu 1997: 256 for details).

### Occupational Pension Plans

With regard to the number of participants and the amount of assets under management, the most important occupational pension schemes in Japan are defined benefit plans.<sup>18</sup> These are namely the Employees Pension Fund Plans (EPFPs) and the Tax Qualified Pension Plans (TQPPs). Table 1 shows that defined contribution schemes<sup>19</sup> have attracted only a small number of participants and that they control only a comparatively small amount of assets. Several reasons can be named for the limited importance of these types of plans so far. There has been a broad consensus in the past on the part of Japanese employers that pension benefits were a “reward for effort”; employees considered pension benefits a form of deferred wages. Because of these perceptions it was natural to set up employer sponsored plans that would pay a specified sum to qualified employees. The other important reason is that the authorities encouraged the founding of defined benefit plans by creating a comparatively favorable tax framework.

The perception of occupational pensions, as a reward or as deferred wages, explains why book reserve plans (BRPs) for severance lump-sum benefits have always played a comparatively large role in the Japanese retirement context. These severance payments, given to employees for

<sup>18</sup> Defined benefit plans are retirement income plans set up by a corporation to pay a specified sum to qualified employees, based on the number of years in service (Fitch 1993: 185).

<sup>19</sup> Defined contribution plans are savings plans allowing employers, and also employees, to make periodic contributions on a tax-deferred basis, for retirement income. In contrast to defined benefit plans, the benefits paid by defined contribution plans are not specified but depend on the return of investment.

faithful service, existed well before the introduction of corporate-type business entities in the Meiji period.

TQPPs were first introduced 1962. Until then employees, who reached retirement age would only receive lump-sum benefits paid by BRPs. TQPPs have mainly been adopted by medium-sized or smaller employers with 15 workers and more. The establishment of TQPPs requires approval from the Ministry of Finance, which also oversees these plans. Theoretically, contributions have to be born equally by employers and employees, however, 96.8% of the companies actually pay the full amount of the contributions (Murakami 1997: 111–112). The employer contributions are treated as business expense and, therefore, a deductible expense in calculations of corporate income tax liability. The funds are invested with life insurance companies, trust banks and/or investment management companies. The benefits are treated as retirement income and taxed in the category miscellaneous income of the personal income tax. Benefits can either be drawn as lump-sum payments or as annuities. However, most workers choose payment as a lump-sum benefit because this results in preferential tax treatment.

Table 1: Indicators of Japanese Occupational Pension Plans

Name of Plans	Nature of Plans	Number of Plans	Number of Members	Amount of Assets
Book Reserve Plans (BRPs) ( <i>Taishoku Ichijikin</i> )	Defined Benefit	—	—	¥13.6 trillion (1996)
Employees Pension Fund Plans (EPFPs) ( <i>Kōsei Nenkin Kikin</i> )	Defined Benefit	1,858 (1998)	12.11 million (1998)	¥51.2 trillion (1998)
Tax Qualified Pension Plans (TQPPs) ( <i>Tekikaku Taishoku Nenkin</i> )	Defined Benefit	85,047 (1998)	10.29 million (1998)	¥19.9 trillion (1998)
Smaller Employers Retirement Allowance Mutual Aid Plans (SERAMAPs) ( <i>Chūshōkigyō Taishoku Kyōsai Kumiai</i> )	Defined Contribution	405,120 (1996)	2.8 million (1996)	¥2.8 trillion (1996)
Employees Property-Accumulating Pension Plans (EPAPPs) ( <i>Zaisan Keisei Nenkin Chochiku</i> )	Defined Contribution	3,200,000 (1996)	3.2 million (1996)	¥4.2 trillion (1996)

Sources: Shintaku Kyōkai 1997; Watanabe 1998: 8; Life Design Kenkyūjo 2000: 17, 23.

The EPFPs<sup>20</sup> are the other major type of occupational pension plan. They were first introduced in 1966. To establish an EPFP, a firm must have 500 or more employees for a single-employer plan or 3000 or more employees for a multi-employer plan. Company unions and the Ministry of Health and Welfare must approve the establishment of a plan. EPFPs are used to contract-out the earnings-related part of the public EPI in return for lower social security contributions with the rebate rate. The benefits of an EPFP consist of two components. The *substitutional component* (*daikō bubun*) is directly linked to the remuneration-proportional part of the public EPI. In exchange for lower social security contributions, the EPFP assumes responsibility for paying this part of the EPI. Meanwhile, the EPI bears the costs for price- and wage-indexation. The difference between the regular social security contribution rate and the rate for participants in EPFP goes to finance the earnings-related, contracted-out benefits, which are now paid by the EPFP. Contributions to pay the *substitutional component* are shared equally by the worker and the firm. Employer contributions are treated as business expenses and are deductible from corporate income tax. Employees' contributions to the EPFP are completely exempt from income tax in the same manner as contributions for public social insurance programs. EPFP benefits are usually paid as annuities.

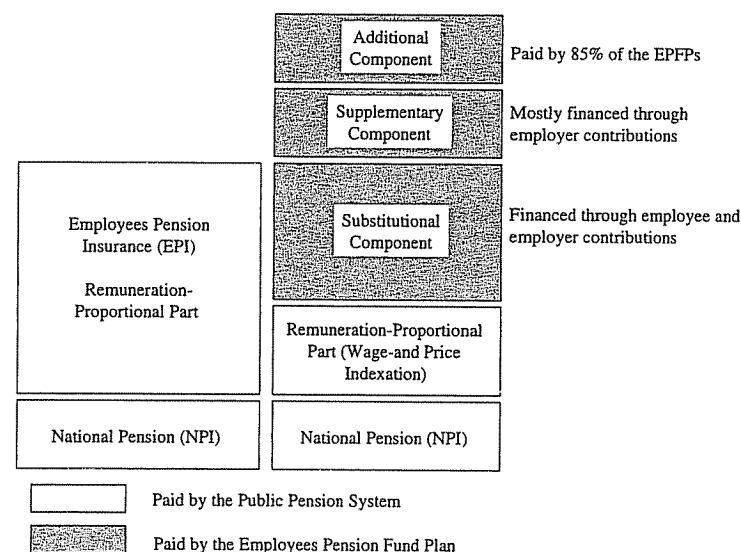
In addition to the *substitutional component*, the EPFPs are required to pay a *supplementary component* (*fuka bubun* or *purasu arufa*), which must not be less than 30% of the *substitutional* EPI benefits accrued while working for a firm. The *supplementary component* is an incentive instrument by which employers attract employees and therefore the main reason for an employer to set up such a plan. Accordingly, most companies pay 100% of the contributions to finance this component. Figure 9 illustrates the functioning of the EPFPs. There are three types of EPFPs, which differ according to how they calculate their benefits.<sup>21</sup> The most common type (85% of all plans) pays a so-called *additional component* (*kasan bubun*) on top of the *substitutional* and *supplementary component* (Kigyō Nenkin Kenkyūjo 1998: 27).

Whereas the investment regulations for TQPPs and EPFPs had been fairly restrictive, since around 1997 these plans have been relatively free to invest their funds with life insurance companies, trust banks and/or investment management companies (see chapter III.2.2.1).

<sup>20</sup> This paper describes only the most important features of the EPFPs. For more details see Conrad 2000a: 255–285. For a good overview in English see Clark 1991.

<sup>21</sup> See Conrad 2000a: 256–257 for details.

Figure 9: The Structure of the Employees Pension Fund Plans (EPFPs)



Source: Based on Shimada 1994: 184; Kigyō Nenkin Kenkyūjo 1998: 27

### Personal Pension Plans

According to the Japanese government's 1994 Family Savings Survey, personal pension-oriented assets (excluding occupational and public pension assets) totaled 4% of personal savings. At the end of 1997 an estimated ¥ 37,000 billion was accumulated or had been received as personal retirement benefits (Curuby & Company 1998: 23).

Insurers have traditionally dominated the personal pension market, because of tax advantages, including the ability to deduct a large portion of premium payments as an expense. Insurers serve about 40% of the personal pension market. The other major players, with a market share of about 30% each, are the associations affiliated with the mutual aid associations of public employees called *Gojo Nenkin* and the Postal Insurance

(*Kanpo*) together with the insurance organizations of the regional agricultural cooperatives.<sup>22</sup>

### *The Japanese Pension Market*

Considered from an international perspective, Japan's combined public and occupational pension plan assets, totaling about ¥245,180 billion (1997), represent the second largest accumulation of funded pension assets in the world behind the USA with ¥615,290 billion. In comparison to the public and occupational pension plan assets, the personal pension market totaling ¥37,000 billion is comparatively small in Japan (Curuby & Company 1998: 3, 23).

<sup>22</sup> For more details on personal pension plans see Curuby & Company 1998: 23–25.

## PART III: EVALUATION

Part I and Part II familiarized the reader with the evolution of the public pension system up to the 1994 pension reform. Part III will take a closer look at the very recent reform measures and evaluate their implications. The evaluation begins with a general analysis of recent reform measures and the underlying reform strategy. For this purpose, the paper looks first at reform proposals prior to the latest pension reform and then at the actual amendments. Then follows a more detailed evaluation of the public pension system in terms of financial sustainability, distributive effects, minimum income adequacy and political risks. The next section focuses on the occupational pension plans and evaluates their current and future role for old age provision. The last section assesses the (planned) changes in the public-private mix from a broader perspective by comparing the Japanese approach with measures taken up in the United Kingdom in the 1980s.

### 1 THE PUBLIC PENSION SYSTEM

#### *1.1 General Remarks on Reform Proposals and Measures of the 1999 Pension Reform*

Japanese pension law mandates that the Ministry of Health and Welfare publish an actuarial review of the finances of the EPI and the NPI every five years. These reviews consider the latest population projections and data on economic development in order to assess the sustainability of current pension arrangements (*zaisei saikeisan*) (Oshio 1998: 76).<sup>24</sup> Based on these actuarial reviews, the Ministry of Health and Welfare presents its own proposals on how to reform the pension system in order to ensure its functioning in the future. Frequently, a Pension Commission (*Nenkin Shingikai*), which consists of bureaucrats, politicians, scientists, and lobbyists, is also installed to discuss these options for reform and to publish its recommendations. In the past, the proposals of the Pension Commission have often been taken up in the amendments of the pension law. The fol-

<sup>24</sup> For some mutual aid associations these actuarial review is not mandatory, however, it has become common for these schemes to undertake such a review (Shakai Hoshō Seido Shingikai / Nenkin Sūribukai 1996b: 36–37).

lowing paragraphs will examine the proposals of the Ministry of Health and Welfare and of the Pension Commission.

### *The Proposals of the Ministry*

In December 1997, the Ministry of Health and Welfare published several scenarios for public pension reform (Kōseishō Nenkin'yoku 1998: 168–183). These scenarios were based on projections for rates of contribution necessary to sustain the EPI and the NPI. The Ministry argued that financing the current replacement rate of the EPI in the future would require raising the current rate of contributions from 17.35% to 34.3% until 2025. Currently, the public pension of a male worker with an average salary and 40 years of contributions to the EPI (model case) replaces 62% of his former net earnings including bonuses (Jinkō Mondai Shingikai 1997). The Ministry discussed a curtailment of this replacement rate in order to limit future contribution hikes. *Table 2* shows the options for reform presented by the Ministry. Apart from the usual contribution rate, this table also shows a “comprehensive contribution rate.” This rate implies that contributions to the EPI should no longer be based on gross earnings excluding bonuses, but rather on a comprehensive income definition that includes bonus payments. Naturally, if this comprehensive income definition is applied, the contribution rate of the EPI could be lower, because the income base would be wider.

**Table 2: Options for Reform of the EPI Presented by the Japanese Ministry of Health and Welfare prior to the 1999 Pension Reform**

	Current system	Option 1	Option 2	Option 3
Replacement rate as a percentage of former net earnings including bonuses	62%	55%	50%	37%
Contribution rate in the year 2025	34.3%	30%	26%	20%
“Comprehensive contribution rate” in the year 2025	26.4%	23%	20%	15%

Source: Kōseishō Nenkin'yoku 1998: 170–173

In its comments on the options for reform, the Ministry takes a rather ambiguous stance. A contribution rate of 30% in the future is regarded as too high. On the other hand, lowering the replacement rate below 50% is considered problematic. According to the Ministry, a solution to this dilemma could be a mixture of parametric reform measures, which could include an

increase of the entitlement age, a change of the indexation system, and the introduction of a comprehensive contribution rate. The Ministry argues that a combination of these reforms would probably make it possible to keep the comprehensive contribution rate below 20% in the future and, at the same time, ensure a replacement rate beyond the 50% mark.

The Ministry has also discussed a partial privatization under a capital-funded system. A reform of this kind would imply that only the basic pension system (NPI) would remain publicly managed, whereas the remuneration-proportional EPI would be privatized and capital-funded in the future. However, the Ministry is rather skeptical about this approach for three reasons (Kōseishō Nenkin'yoku 1998: 172–173). First, it sees the diffusion of personal or occupational pension plans in small and medium sized companies as difficult. Second, the Ministry fears that private pensions would be hard to insure against inflation and other economic shocks. Third, it argues that a transition to a privatized system would put a “double burden” on the current working generation that would have to finance both the accrued rights of current pensioners and its own pensions in the future.

What do these statements say about the ministerial strategy for pension reform? How can this strategy be judged?

The official statements of the Ministry show that the reduction of the replacement rate is regarded as an inevitable step to limit future contribution hikes. In this respect, the recommendations are similar to reform measures implemented in the past. However, the way these options are presented and discussed oversimplifies the complex nature of the pension arrangements. In its discussion of a lower replacement rate, the Ministry does not take the two-tiered nature of the benefits into due consideration (fixed portion from the NPI + remuneration-proportional portion from the EPI). This approach leaves the role and the function of the basic pension system unclear. This point will be further discussed below, when the system is analyzed in terms of minimum income adequacy.

A general problem of the ministerial statements is that they do not properly inform the public about the underlying actuarial reviews. Neither the calculation methods, nor the exact assumptions, nor the results of the review are presented in detail.<sup>25</sup> In fact, the Ministry publishes only one scenario under a middle population projection. Stressing the need for various scenarios Kellison and Moon from the Social Security Board of Trustees in the United States point out: “The complexity of the social and economic factors involved and the long time horizon used mean that alternative sets of assumptions are required to give a range of possible fu-

<sup>25</sup> See Keizei Kikakuchō Keizai Kenkyūjo 1997: 21 and Oshio 1998: 85–86 for similar critic.

ture outcomes" (1999: 61). However, looking at the policy the Ministry of Health and Welfare has adopted on releasing its reports before pension reforms in the past, one reckons that the Ministry presents the public with just as much information as is necessary for the Ministry to justify its own reform proposals. This problem is connected to the issue of political risk, which will be discussed in chapter III.1.5.

Regarding the option of a partial privatization under a capital-funded system, two of the Ministry's arguments are frequently used to deny the feasibility of such an approach. The statement that private insurance cannot properly insure against inflation is unconvincing. As long as interest rates are freely determined in the financial markets, private insurance schemes can incorporate adjustments for inflation (Glismann / Horn 1996: 398).

The Ministry's argument that the transition to a (partially) funded system raises the question of how to finance such a structural shift is frequently addressed in the economic literature. Most economists agree that such a transition cannot be financed without some additional burden. In other words, there is no way to move from a pay-as-you-go system to a capital-funded system in a Pareto-improving fashion (Breyer 1994). However, it can be demonstrated that such a reform can raise economic welfare in the long run if certain conditions are met. The problem that remains, however, is that some people eventually will have to bear the burden of the transition process so that later cohorts can profit from the higher returns in a capital-funded system (Feldstein 1995). In this respect, the Ministry's statements are correct. However, the term "double burden" does not appropriately reflect the situation. One should rather call it an "additional burden," because the transition costs do not have to be borne just by current workers, but can also be borne fully or partially by current pensioners or future workers.

The Ministry also fears that a successful diffusion of personal or occupational pension plans in small and medium sized companies would prove too difficult. This point deserves closer analysis and will therefore be addressed in the context of the current diffusion and the regulating framework of occupational pension plans in chapter III.2.

#### *The Proposals of the Pension Commission*

In October 1998, the Pension Commission published its opinions on the planned 1999 pension reform (Nenkinshingikai 1998). Structural reform (*konponteki na minaoshi*) in favor of a partially funded-system was discussed, however, no consensus was possible. Therefore, the Commission proposed sticking with the current structure of the system and undertaking parametric reform measures to ensure financial sustainability in the

future. The Commission stated that private responsibility should be strengthened. Private provisions through occupational or personal pension plans would compensate for public benefit cuts. Whereas the public system should be reformed (*kaikaku*), the private systems should be improved (*kaizen*). A possible privatization of the remuneration-proportional EPI would, however, require future studies. Shifting the finance mode of the NPI to a 100% tax-financed system was also designated as an issue for future research.

The Commission did not explicitly mention the options for reform advanced by the Ministry of Health and Welfare. Nor did it quantify a cut in the replacement rate. However, a majority of the Commission members favored a comprehensive contribution rate of 20%. According to the Ministry's calculations, this would require a cut of the model replacement rate from 62% to 55%.

The following measures were recommended for the 1999 pension reform (Nenkinshingikai 1998; *Nihon Keizai Shinbun* 13 Sept. 1998: 1; 10 Oct. 1998: 1):

- Abolition of the wage indexation system after commencement of pension payments. Instead, indexation of pensions in payment only to the consumer price index (CPI),
- Curtailment of the pension benefit level of the EPI,
- Abolition of the planned partial pension between 60 and 64, i.e. a complete increase in the entitlement age for regular pension benefits,
- Curtailment of benefits of pensioners older than 65 who have supplementary working income,
- Modification of the premium-calculation method through the introduction of a comprehensive contribution rate that would include bonuses as a base for contributions,
- An increase in state subsidies to the NPI from one-third to one-half,
- Maintaining the benefit level of the NPI (through price indexation, at the minimum), and
- Introduction of a new type of defined contribution occupational pension plan (Japanese-style 401(k) plans modeled on 401(k) plans in the US).<sup>26</sup>

<sup>26</sup> 401(k) plans in the USA are constituted as mutual fund-type investment vehicles designed to attract pension assets. In contrast to defined benefit plans these schemes do not guarantee a definite benefit level in dependence of former contribution payments and qualifying times. Instead, the benefits are solely dependent on the return on investment yielded on contribution payments. Contribution payments into these plans are tax-deductible. In general, the employees pay their own contributions, but in most cases the employers match these contribu-

Apart from the last measure<sup>27</sup>, the 1999 pension reform took up all of the above recommendations. For this reason, the following remarks apply not only to the proposals of the Pension Commission but also to the actual amendments of the latest reform:

The first six recommendations of the Pension Commission are parametric reform measures in the sense that they seek to curtail pension payments by an adjustment of parameters such as entitlement age, benefit level or financing mode. In this respect, they are similar to measures taken up in other industrialized countries in recent years. Combined, the 1999 reform measures will slash pension benefits by about 20% by 2025 (*Nihon Keizai Shinbun* 22 March 2000). The replacement rate (which does not reflect the influence of the increase in the entitlement age and the change in the indexation mode) will sink from the current 62% of net working income including bonuses to 59% (Shakai Hoken Kenkyūjo 1999: 23). As will be shown in chapter III.1.2, this combination of benefit cuts, abolition of wage indexation after commencement of pension payments and the full increase of the regular entitlement age to 65 will have considerable positive effects on EPI finances. However, available calculations indicate that due to a slow schedule for the implementation of these measures, lasting financial sustainability is likely to be gained only if benefits are cut or contributions are raised again in future.

In light of the high life expectancy in Japan, abolition of the partial pension and the scheduled complete increase of the entitlement age to 65 are measures that have been overdue for several years. However, as was described in chapter I.2.2, the pace at which private sector companies are adopting their employment practices to the increase of the retirement age is rather slow. Accordingly, there will likely be more fluctuation in the incomes of the elderly in the future.

The abolition of wage indexation after the commencement of pension payments from the EPI and the NPI is a major measure of the 1999 pension reform (Hoken Kenkyūjo 1999: 17). Among industrialized nations, only Japan and Germany have a system of wage indexation that corresponds to the net wages of both the pension benefits in course of acquisition (entitlements) and pension benefits already being paid to pensioners. Abolition of

wage indexation for pensions in payment is based on the idea that pensioners do not need to participate in the productivity gains of the working generation. This means that the relative replacement rate of the pensioner sinks in comparison to real wage increases of the working population.<sup>28</sup> However, because benefits are still indexed to prices, pensioners can in principle maintain their standard of living at the time of retirement. An appraisal of this measure depends largely on whether one judges it from an absolute or a relative perspective. This becomes especially obvious if one looks at the effect of this measure on the basic pension. Although the Japanese pension law does not require wage indexation of the basic pension, in the past this pension has frequently been adjusted to accommodate wage increases in the working population (Oguchi 1998: 76). The basic pension is supposed to avert old age poverty by providing a basic level of benefits. Usually, modern industrialized countries take a relative perspective in so far as they concede to even the poorest parts of the their population some sort of participation in the economy that goes beyond bare subsistence. In this respect, abolition of wage indexation for the basic pension could be problematic because the benefit level might sink below the relative poverty line. This is indeed a major target of criticism in the Japanese basic pension system. As will be shown later, the benefit level of the basic pension is already less than adequate.

The 1994 pension reform introduced a contribution rate of 1% on bonuses. If one considers that bonuses on the average amount to 20% of the salary of an industrial worker (*Rōdōshō Seisaku Chōsabu* 1994: 30), this was an important measure to increase pension revenues. However, the system was also highly unfair, because these contributions were not taken into account when calculating the remuneration-proportional benefits, i.e. the contributions were similar to a 100% tax. In this respect, the planned introduction of a comprehensive contribution rate until 2003, as part of the 1999 reform, will have a positive effect on *intragenerational* fairness because total contributions payments will be reflected in the benefit calculation formula. However, in terms of *intergenerational* distributive effects this measure is likely to favor older participants. The higher contributions will increase pension revenues, stabilize the system and enable it to pay the accrued benefits of older participants. On the other hand, younger members will hardly profit from the immediate effects on the pension revenues. Pension benefits will be subsequently curtailed and younger participants are not likely to benefit from the improvement in the

tions. The employee can choose the investment strategy according to his own risk adversity. In case the employee changes his workplace he has full control over his own contribution payments and their investment earnings (portability). In dependence of the employee's service time in the company, he becomes gradually the owner of the employers' contributions and investment earnings (vesting) (Katzeff 1996: 1–11, 108).

<sup>27</sup> A new comprehensive occupational pension law and the introduction of Japanese-style 401(k) plans is planned for fiscal year 2001.

<sup>28</sup> For example, after 15 years with an average labor productivity growth of 1.5%, the replacement rate is 20% lower than it was when the pension was first paid (Chand / Jaeger 1996: 25).



system's finances. In other words, younger contributors might not profit from the introduction of the comprehensive contribution rate as much as older participants.

Although the Pension Commission dismissed a structural reform like a partial privatization of the EPI, the planned introduction of Japanese-style 401(k) plans is to some extent a structural reform measure. As mentioned in chapter II.2, defined contribution plans have not yet played a large role in Japan. The introduction of such plans is part of a strategy to compensate for benefit cuts in the public pension arena by promoting occupational pension schemes. Planned changes in the regulatory framework of existing defined benefit plans aim in the same direction. However, there are no plans to make private provisions mandatory. Chapter III.2 further evaluates the implications of this strategy.

Table 3 shows the most important measures of the 1999 pension reform that affect public pension schemes. As noted already, apart from the Japanese-style 401(k) plans, which are supposed to be introduced sometime in fiscal year 2001, this reform took up all the recommendations of the Pension Commission.

Some of the 1999 reform measures will only become effective after a number of years. In this respect, especially the planned increase of the government's share of the NPI expenditure from one-third to one-half by 2004 will certainly prove to be difficult. It is still unclear how the necessary revenues can be secured without raising either direct or indirect taxes. The political parties shun both measures due to the precarious condition of the economy.

The exemption of contributions during childcare leave is supposed to be a measure to promote a reverse in the decline of the birth rate. However, since there are no other conclusive social policy instruments to accompany this measure, it seems rather unlikely that the birth rate will be significantly influenced by this measure alone.

Another area that will certainly draw attention in the future is the planned shift in the management of the pension reserve fund starting in 2001. Up until now, the pension fund reserves have been managed by the Trust Fund Bureau of the Ministry of Finance on behalf of the Social Security Agency. The Trust Fund Bureau has used this money as part of the Fiscal Investment and Loan Program. In overall terms, this program is a huge public financial institution whose main purpose is to provide long-term loans to public finance corporations, public corporations and agencies, local authorities and private companies. In the future, the pension fund reserves will be managed independently by the Ministry of Health and Welfare. The effects of this management change will be discussed in chapter III.1.5.2.

Table 3: Important Measures of the 1999 Pension Reform (enacted in March 2000)

Reform Measures	Effective by
<b>Employees Pension Insurance (EPI)</b>	
<i>Contributions</i>	
• During child-care leave employers are exempted from paying contributions (Hitherto only employees were exempted from contributions). When benefits are calculated, this time is regarded as if contributions had been paid	April 2000
• Pensioners between 65 and 69, who have additional working income, are subject to making contributions	April 2002
• Introduction of a comprehensive contribution rate	April 2003
<i>Benefits</i>	
• 5% cut of benefits of newly awarded pensions (grace period worked into the bill will delay the actual reduction until fiscal 2004)	April 2000
• Abolition of wage indexation for pensions in payment of people 65 and over	April 2000
• Benefit cuts for pensioners with working income between 65 and 69	April 2002
• Gradual increase of the eligibility age for remuneration-proportional benefits from 60 to 65 (see figure 5)	April 2013
<b>National Pension Insurance (NPI)</b>	
<i>Contributions</i>	
• Up to 10 years postponement of students' contribution payments (if contributions are not paid retroactively, this time is only counted as qualifying period)	April 2000
• Low income earners shall pay only half the normal contributions	April 2002
• Increase of government's share of contributions from one-third to one-half	By 2004
<i>Benefits</i>	
• Abolition of wage indexation for pensions in payment of people 65 and over	April 2000
<b>Pension Reserve Fund Management</b>	
• The pension reserve fund is to be gradually managed independently by the Ministry of Health and Welfare	April 2001

Sources: Based on Shakai Hoken Kenkyūjo 1999; *Nihon Keizai Shinbun* 22 March 2000: 1; *Nikkei Weekly* 3 April 2000: 6

### 1.2 Financial Sustainability

The purpose of this chapter is to assess the financial sustainability of the public pension arrangements of the EPI and the NPI and to discuss the possibility of a transition to a partially capital-funded pension system.

#### 1.2.1 Official Financial Projections

As noted above, the Ministry of Health and Welfare follows a very restrictive information policy, which makes it hard to judge the financial health of the public pension system. Neither the calculation methods nor the results of the 5 yearly actuarial reviews are disclosed in detail.

If one looks back at the official calculations of the past 20 years, it becomes clear that an obvious problem of these calculations was the population projection. Frequently, the government used outdated population data. For example, the 1990 review was based on a population projection from December 1986 (Kōseishō Nenkin-yoku Sūrika 1990: 183). More problematic is the fact that the Ministry's calculations are always based on the middle population projection. Frequently, this projection has proven to be too optimistic so that later projections had to be corrected accordingly (Kōseishō Jinkō Mondai Kenkyūjo 1986, 1992; Kokuritsu Shakai Hōshō Jinkō Mondai Kenkyūjo 1997). As Chand and Jaeger point out, fertility rates, and therefore the projection of the future development of a population, are notoriously difficult to predict (1996: 3). For this reason, the Ministry's approach to the actuarial reviews is more than dubious.

Even in its latest calculations that formed the basis for the 1999 pension reform, the Ministry assumed an increase in the birthrate to 1.61 until 2050 (Kokuritsu Shakai Hōshō Jinkō Mondai Kenkyūjo 1997: 26). The actual rate, however, has shown a continuously falling trend. In 1997, it hit a record-low of 1.39 (*Nikkei Weekly* 15 June 1998). Since there are hardly any new family policy measures that would point toward an optimistic outlook for the population development,<sup>29</sup> the latest review will certainly need to be revised in the future.

In this respect, the recent actuarial reviews prove to be an interesting case. In 1990, the Ministry calculated that, assuming a regular entitlement age of 60, the contribution rate of the EPI would have to be raised to 31.5% until 2020. However, under the same assumption the 1994 review specified that a contribution rate of 34.8% would be necessary. After the 1994 reform, which included the scheduled partial increase of the entitlement age, the contribution rate was projected to rise as high as 29.8% in the future. Again, this assumption was revised upwards in 1997 to 34.3%. In

other words, the 1994 reform had only a very limited positive effect in terms of an improvement of the pension finances (Kōseishō Nenkin-yoku Sūrika 1990: 231, 232; 1995: 239–241).

#### 1.2.2 Unofficial Financial Projections

Obviously, the official projections do not allow a clear assessment of the financial sustainability of the pension finances. Therefore this paper tries to draw some conclusions by looking more closely at an unofficial financial projection. This projection was chosen because it is new, fairly reliable and allows at least some conclusions about the effects of different reform measures (Keizai Kikakuchō Keizai Kenkyūjo 1997).<sup>30</sup>

The projection was undertaken by a research group of several well-known Japanese economists in affiliation with the Economic Planning Agency. It differs from the official calculations in that:

1. it specifies assumptions which are more realistic and up-to-date,
2. it includes the interaction of macroeconomic variables and
3. it simulates the effects of different reform measures.

As was noted above, the Ministry of Health and Welfare does not publish the exact calculation methods for its financial reviews. Therefore, in order to test its model, the research group first made calculations under the same assumptions that the Ministry applied in its 1994 actuarial review (including the scheduled contribution hikes as part of the 1994 pension reform). The result hardly differs from the ministerial calculations. The EPI and the NPI would not experience deficits until the year 2050 (Keizai Kikakuchō Keizai Kenkyūjo 1997: 23–24). From this outcome one can draw the conclusion that the major problem of the official calculations is not the calculation method itself, but rather the set of underlying assumptions. However, the research group refines its model later so that some parameters are determined endogenously. In this respect, the group's method might provide even more reliable data.

As noted above, in April 1997 the Ministry of Health and Welfare presented a prognosis about necessary future contribution hikes, which was based on the new population projection from January 1997. The Ministry stated that without new reform measures the contribution rate of the EPI would have to rise to a final rate of 34.3% (Jinkō Mondai Shingikai 1997). However, it did not specify how finances would develop without these contribution hikes. In order to answer this question, the research group

<sup>29</sup> See Oshio 1998: 78 for similar critic.

<sup>30</sup> Apart from this projection there is currently no other comprehensive calculation available which includes the effects of different reform measures.

undertook a calculation under the 1994 assumptions (including scheduled contribution hikes), however, this time under the assumption of the population development according to the population projection from January 1997. It turns out that, starting from 2035, the EPI and the NPI would experience yearly deficits. The deficits of the EPI would increase every year to reach a peak of ¥42.19 trillion in the year 2050, at the same time the NPI's deficit would reach ¥5.04 trillion.

In a third step, the research group refines its model to include the interaction of macroeconomic variables. For this purpose, a neoclassical supply-side model is adopted in which wages, interest rates and labor supply are determined endogenously. In order to test the effect of different reform measures, a reference case is established which is based on the population projection from January 1997 and the scheduled increase of the contribution rates according to the 1994 reform.

In contrast to the above calculations, the reference case indicates that without future reforms, the finances of the EPI and the NPI would worsen much faster. According to the calculations the pension reserve fund of the EPI would be exhausted in 2045; the NPI reserve fund would reach zero in 2035. Thereafter the yearly deficits of the EPI would accumulate to ¥481.2 trillion until 2050. In the same year, the accumulated debt of the NPI would reach ¥76.1 trillion. According to the researchers, the main reason why these numbers are markedly worse than the ones calculated using the other model is that the new model reflects the decrease of labor supply, economic growth and interest rates as a result of the aging of the population (Keizai Kikakuchō Keizai Kenkyūjo 1997: 28).

The next step is to evaluate the effect of different reform measures on the reference case.

The following reform measures were examined:

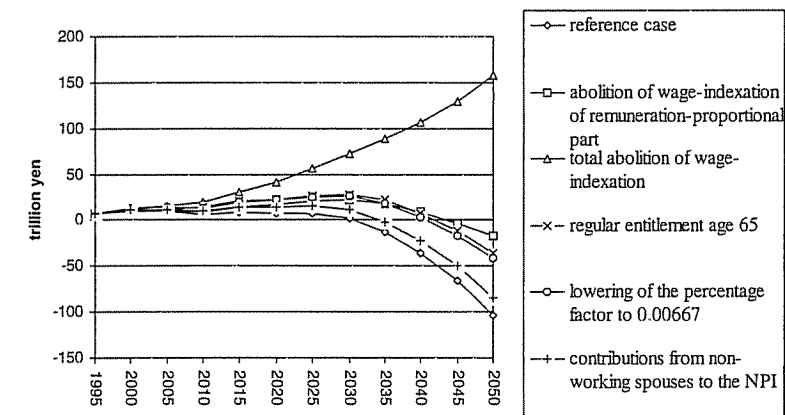
1. The abolition of the net-wage indexation of both the pension benefits in course of acquisition (entitlements) and the pension benefits already being paid to pensioners.
2. The total increase of the entitlement age to 65 (abolition of the partial pension between 60 and 64).
3. Lowering the percentage factor of the pension formula of the EPI from 0.0075 to 0.00667 and abolition of the net-wage indexation of the NPI.
4. Introduction of "own contribution payments" from non-working spouses to the NPI. Since the NPI benefits paid to non-working spouses are drawn from the contribution revenues of the EPI, the introduction of own contribution payments would ease the financial burden on the EPI.

Figure 10 and 11 show the effect of these reform measures on the yearly deficits and surpluses of the EPI and the NPI. The total abolition of the wage-indexation system would have by far the biggest effect on the finances of both schemes. Both systems would not experience any deficits until 2050.

According to the assumptions in the model the net wages rise an average of 3.5%. In contrast, the price index only increases at an average of 2%. As a reflection of the gap between the two, abolition of wage-indexation would strongly effect the financial well-being of a pension system that tied disbursements to wages rather than prices. In a system with net-wage indexation, the pension expenditure would increase 5.6 times within the projection period. In a system with price indexation, outlays would only increase 2.7 times (Oshio 1998: 138–139).

Even the abolition of the wage-indexation of the remuneration-proportional part alone would have a considerable effect. However, the EPI would experience its first yearly deficit in 2045.

Figure 10: Projection of the Yearly Surpluses and Deficits of the EPI under Different Reform Options



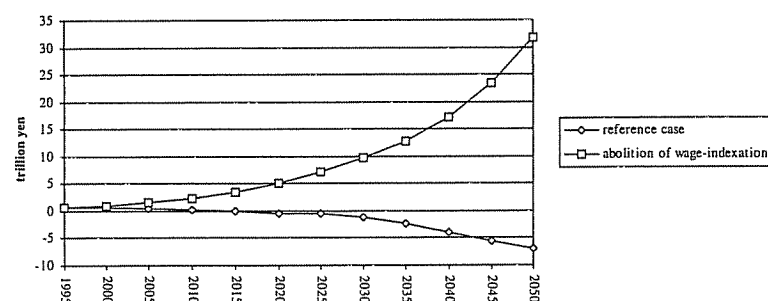
Source: Data of the Economic Planning Agency, equals Keizai Kikakuchō Keizai Kenkyūjo 1997: 33

If one considers the low net-wage increases of recent years (or the current decreases), and the current deflationary tendencies of the consumer price index in Japan, the assumptions of these calculations might indeed appear too high. However, in the long run it is more important how these indicators develop in relation to each other. In this respect, a difference of 1.5

percentage points between net-wages and the consumer price index does not seem unrealistic.

Until this point, the above calculations were based on the increase of the contribution rates according to the 1994 reform schedule. However, eventually it is of more interest to find out how future contribution hikes can be limited by different reform measures. In the following, these effects are calculated under the assumption that no deficits would occur in any given year until 2050 (Keizai Kikakuchō Keizai Kenkyūjo 1997: 28).

Figure 11: The Abolition of Wage Indexation and its Effects on NPI Surpluses



Note: The effect of an introduction of own contribution payments of non-working spouses to the NPI is illustrated in Figure 10

Source: Data of the Economic Planning Agency, equals Keizai Kikakuchō Keizai Kenkyūjo 1997: 33

Table 4 shows contribution rates to the EPI and the NPI under assumptions about different reform measures. If no reforms were initiated, under the middle population projection, the future contribution rate of the EPI would have to rise to 37% in the year 2025. Contributions to the NPI would reach ¥34,700 in 2015. Taking into consideration lower population projections, which instead of an increase assume a decline of the birth rate to 1.38 until 2050, the necessary contribution rates would be even higher.

It is important to note that these contributions are markedly higher than the ones the Ministry of Health and Welfare considered to be necessary prior to the 1999 reform (34.8% for the EPI and ¥24,300 for the NPI).

Table 4: Rates of Contribution Necessary to Keep the EPI and the NPI Solvent Until 2050 Under the Assumption of Various Reform Measures (Middle and Lower Population Projection)

Reform measure	Middle population projection		Lower population projection	
	EPI	NPI	EPI	NPI
Contribution hikes only	37% (2025~)	¥34,700 (2015~)	40% (2025~)	¥36,900 (2015~)
Total increase of the entitlement age to 65 + Contributions of non-working spouses to NPI	31% (2025~)	¥34,700 (2015~)	33.5% (2025~)	¥34,700 (2015~)
Abolition of wage-indexation of remuneration-proportional part only	31% (2025~)	¥34,700 (2015~)	33.5% (2025~)	¥36,900 (2015~)
Abolition of wage-indexation of remuneration-proportional part only + Total increase of the entitlement age to 65	27.7% (2020~)	¥34,700 (2015~)	29.5% (2020~)	¥34,700 (2015~)
Total abolition of wage-indexation	21.5% (2004~)	Same as now ¥12,800	22.5% (2004~)	Same as now ¥12,800
Total abolition of wage-indexation + Total increase of the entitlement age to 65	19.7% (2004~)	Same as now ¥12,800	20.5% (2004~)	Same as now ¥12,800
Total abolition of wage-indexation + Total increase of the entitlement age to 65 + Contributions of non-working spouses to NPI ("reform case")	19.1% (1999~)	Same as now ¥12,800	20% (1999~)	Same as now ¥12,800

Notes: (1) Contributions to the EPI are born equally by employees and employers. (2) The contribution rates are in 1994 prices. (3) Under the assumption that until the year of the highest contribution rate, the contributions are raised according to the 1994 reform schedule. (4) Under the assumption that yearly surpluses equal the ones of the official projections.

Source: Keizai Kikakuchō Keizai Kenkyūjo 1997: 36

Under the assumption of the middle population projection a combination of reform measures including the total abolition of wage-indexation, the total increase of the entitlement age to 65 and the introduction of own contributions of non-working spouses to NPI (hereafter referred to as "the reform case") could limit the necessary contribution rate to 19.1% in the future. Under the assumption of the lower population projection the same combination of reform measures would require a slightly higher contribution rate of 20%. In both cases, the contributions to the NPI would not need to be increased in the future. According to the research group, this shows that the impact of slowing population growth could well be offset by these kinds of reform measures.

### 1.2.3 The Significance of the Unofficial Projection Results

Before judging the significance of the research results discussed above, analysis of the assumptions guiding the calculations and methods seems necessary.

Most economists agree that predicting social security financing is an enormous task. Kellison and Moon point out that the historical review of such projections in the US shows that the future cannot be predicted with certainty, even if the pension law remains unchanged. "This is because future income from payroll taxes, interest, and other sources, and future expenditures for benefits, will depend upon a large number of unknowns including the size and characteristics of the work force subject to payroll taxes, the level of workers' earnings, and the size and composition of the population receiving benefits as well as the level of those benefits." (1999: 61). These unknown factors depend in turn on future birth rates, marriage and divorce patterns, migration, labor force participation, unemployment, productivity gains, wage increases, and a number of other economic and demographic variables. With regards to these enormous problems, the Ministry of Health and Welfare's approach of fixing wage and price increases and interest rates appears rather arbitrary. In contrast, the unofficial financial projection presented above that determines wages, interest rates and labor supply endogenously should be more accurate in this respect. However, the use of a macroeconomic model is not generally regarded as the better choice. For example Chand and Jaeger state that "...the determination of key macroeconomic variables, whose interaction with pension arrangements is, to say the least, controversial, to a 'general equilibrium black box.'" (1996: 11).

This paper cannot comprehensively judge the pros and cons of this methodical debate. However, what makes the unofficial projection more reliable is the mere fact that the model and the data are discussed in more detail than anything presented by the Ministry of Health and Welfare.

Yet, one problem of the unofficial projection is the fact that the researchers undertake their calculations under the assumption that no deficits will occur until 2050. In the "reform case," the reserves of the EPI and the NPI would increase to ¥1414.6 trillion in the year 2050. Unfortunately, the published data of this projection do not reveal how high the pension expenditure would be in 2050, so one cannot assess the ratio of reserves to pension expenditure in this year. However, since the outset of this projection is similar to the one undertaken by the Ministry, one can assume that the reserves in 2050 will be equivalent to two years of pension expenditure (This is what the Ministry assumes in its calculations). Yet, the maintenance of such a high reserve fund does not make much sense. According

to the lower population projection, the ratio of the population over 65 to the population aged 15 to 64 is projected to stabilize at about 65% after 2050 (calculation based on Kokuritsu Shakai Hoshō Jinkō Mondai Kenkyūjo 1997: 193). In other words, at this time a high reserve fund will not be necessary to relieve contributors. Assuming that public pension schemes are run on a pay-as-you-go basis in the future it would make more sense to use a bigger portion of the money from the reserve fund to relieve current contributors. In case of a transition to a (partially) funded system, the reserve fund could be used to ease the additional burden to be shouldered by the transitional generations. Hence, also in this case there is no need for the public authorities to hold large pension fund reserves after the transition.

Despite the problems apparent in the projection method, the data indicate that the financial sustainability of the EPI and the NPI could well be achieved through a combination of reform measures. This assessment is supported by a recent IMF survey (Chand / Jaeger 1996). The results of this comparative analysis of the implications of parametric reform measures in several OECD countries are presented in Table 5. The term "contribution gap" in this table refers to the difference between the "sustainable contribution rates" and the actual contribution rates (as a percentage of the GDP).<sup>31</sup> The contribution gaps of Japan, Germany and France are, with 3.3% and 3.4% of the GDP, the biggest of the countries surveyed by the IMF. When looking at the effect of different reform measures on the contribution gap one understands that the shift to a price-indexation system would have a fairly large effect in Germany, Japan and France (partial wage indexation), the only countries that still had a system of wage-indexation in 1996. An increase in the retirement age to 67 would halve the contribution gap in Japan.

A combination of reform measures would considerably reduce or eliminate the contribution gaps in all countries. In the case of Japan, the researchers state: "This is also likely to be the case for Japan, for whom an initial small but sustained increase in contribution rates, combined with a move to cost of living indexation and an increase in retirement ages, should be sufficient to stabilize the system." (Chand / Jaeger 1996: 26-27).

<sup>31</sup> "The sustainable rate refers to that constant contribution rate that would, when introduced, preserve intertemporal balance between flows as assessed by the sustainability criterion of no debt buildup over the initial reference point." (Chand / Jaeger 1996: 16). The actual contribution rate is kept at its present level in order to examine the fiscal consequences.

**Table 5: Effects of Different Reform Measures on the "Contribution Gap" (in Percent of the GDP)**

	Contribution Gap	Reduction in replacement rate by 5 percentage points; new pensioners only	Reduction in replacement rate by 5 percentage points; all pensioners	100 percent CPI indexation	80 percent CPI indexation	Unified retirement ages at 67 in 1995
JAPAN	3.3	-0.5	-0.7	-1.4	-1.5	-1.6
Canada	2.0	-1.0	-1.2	–	-0.4	-0.7
France	3.3	-0.9	-1.3	-0.8	-1.4	-3.7
Germany	3.4	-1.2	-1.4	-1.9	-2.3	-1.2
Italy	2.5	-0.7	-0.8	–	-0.2	-5.7
Sweden	0.9	-1.0	-1.2	–	-0.6	-1.0
United States	0.8	-0.7	-1.2	–	-0.2	-0.3
United Kingdom	0.1	-0.7	-0.8	–	-0.5	-1.1

Source: Chand / Jaeger 1996: 17, 23, 24–25

How can the above results be judged with regards to the actual situation of the finances after the 1999 pension reform?

The reform measures tested by the Japanese researchers are very similar to the cost cutting measures, which were implemented by the 1999 pension reform. However, there are two major differences.

First, the unofficial projections test the effect of the abolition of the net-wage indexation of both the pension benefits in the course of acquisition (entitlements) and of pension benefits in payment. Yet, the 1999 reform abolished only the latter. Second, the above projections assume an immediate implementation, whereas in reality the entitlement age and the contribution rates are raised over a long span of time. Do these differences alter the above conclusions about the sustainability of pension finances in Japan?

Strictly speaking, this question can only be answered by calculating these effects within the above model. Obviously, this is beyond the scope of this paper. However, even without such calculations it seems reasonable to argue that the above findings also apply to the 1999 reform, at least as far as the EPI is concerned.

The "reform case" cited above includes the total abolition of the wage-indexation, the total increase of the entitlement age to 65 and the introduction of own contributions of non-working spouses to the NPI. Even

without the last of these measures the increase of the contribution rate of the EPI could be limited to 19.7% for the middle population projection or 20.5% for the lower population projection (see *table 4*). Although the 1999 reform did not abolish wage-indexation for pension benefits in the course of acquisition (entitlements), it did include a 5% benefit cut. This benefit cut can to some extent offset the fact that accrued entitlements are still wage-indexed. Another measure not tested in the above model is the introduction of a comprehensive contribution rate, scheduled to be introduced by the year 2003. If a comprehensive income definition is applied, the contribution rate can be lowered accordingly. Thus, one can reasonably argue that the 1999 reform measures will considerably improve the finances of the EPI. However, due to the slow schedule for implementation of the recent reform measures, such as the slow increase in the entitlement age, benefit cuts or higher than predicted contribution hikes might be necessary in the future.<sup>32</sup>

The financial situation of the NPI is much more difficult to assess. Hitherto, the benefit level of the NPI depended largely on political decisions, but was frequently raised in line with the development of the net wages of the working population and the development of the consumer price index. The 1999 pension reform stipulates that starting from April 2000, the benefit level of newly awarded NPI pensions will be decided every five years, at which point the development of the consumer price index in the previous five years is taken into consideration. NPI benefits in payment will only be adjusted to changes in the consumer price index in the future (Shakai Hoken Kōhōsha 2000: 2). The above Japanese calculation indicates that the abolition of the net-wage indexation of pension benefits in the course of acquisition (entitlements) and of the pension benefits in payment would put the NPI finances on a strong financial footing. However, this calculation does not take into account that the NPI faces a problem with participants who either evade contribution payments (8.9% of Type 1 insured members) or who are, because of low income, exempted from paying contributions (17.3% of Type 1 insured members) (Kōseishō Nen-kinkyoku 1998: 32). The problem of contribution evasion might become even more pronounced if the contributions are raised, but not the benefits.

Another factor which makes it hard to assess the future of the NPI is the question of how the government is going to finance the increase of the

<sup>32</sup> The positive evaluation with regard to financial sustainability is also supported by very recent calculations of the National Institute of Population and Social Security Research in Tōkyō, which are not yet published (Presentation on March 29, 2001 on the Socio-economic Effect of Social Security with Application of A Macroeconomic Model and Econometric Analysis).

state subsidy from one-third to one-half by 2004 (*Nikkei Weekly* 3 April 2000: 7) and how this will influence contributions. Although the 1999 official projection indicates that, under the assumption of a state subsidy of one-half of the benefits, the contributions only need to rise to ¥18,200 until 2020 (instead of ¥24,800 in case of a state subsidy of one-third) (Shakai Hoken Kenkyūjo 1999: 208–209), this calculation should be regarded with care.

Taking all these factors into consideration one can argue that, at the minimum, the 1999 reform will improve the financial position of the NPI significantly, even if future adjustments are likely to be necessary.

#### 1.2.4 The Transition to a Capital-Funded System

As for financial sustainability, it is necessary to call into mind that every pay-as-you-go system can be financed as long as the parameters are adjusted accordingly (Feldstein 1997: 2). The real problem is whether these changes are acceptable to both the contributors and the pensioners and what other problems might arise from these parametric measures.

On the first question, one would probably agree that the abolition of the wage indexation after the commencement of payments and an increase in the entitlement age are, in principle, acceptable reform measures. However, as was pointed out already, the abolition of the wage indexation might cause basic pension benefits to sink below the relative poverty line.

On the second question, the economic literature frequently cites the labor market distortions caused by higher contribution rates as the kind of problem that can arise from parametric reform measures. A capital-funded system would not only eliminate these labor market distortions, it would also enhance national saving and output (see Homburg 1988, Siebert 1997, Feldstein 1997 for a theoretical discussion of these issues). For these reasons, most economists prefer a capital-funded system to a pay-as-you-go system and argue in favor of a transition to the former.<sup>33</sup> This chapter looks into the feasibility of a (partial) transition to a capital-funded system.

<sup>33</sup> It is important to distinguish between privatization and prefunding. Privatization means the replacement of the current system with a defined contribution system of individual accounts held in the workers' names. Prefunding means reducing the system's unfunded liability (explicit or implicit). Privatizing alone does not improve welfare in a stylized economy. Only privatization accompanied by prefunding is likely to raise economic welfare. However, some age cohorts will need to shoulder the transitions costs. For them, the returns on a prefunded system net of the higher taxes to finance the transition are lower than under the current pay-as-you-go system (additional burden) (Geanakoplos / Mitchell / Zeldes 1999).

Although quite a few Japanese economists argue in favor of such a transition, there are hardly any projections that satisfactorily evaluate the expected effects of such a shift. In June 1997, the Ministry of Health and Welfare published a calculation of the effects of a privatization of the remuneration-proportional part of the EPI until the end of the year 1999 (hereafter referred to as "partial privatization") (*Nihon Keizai Shinbun* 24 June 1997).<sup>34</sup> According to this calculation, the remuneration-proportional part of the EPI had a "net present pension liability"<sup>35</sup> in 1999 of ¥350 trillion. This implicit debt, which was equal to about 70% of the GDP in 1997 (Rōdōshō 1998: 538) would have to be financed in case of a transition to a partially privatized system.

Oshio estimates that a partial privatization of the Japanese pension system, including the mutual aid associations, would cost far more than ¥400 trillion (1998: 208). Hatta and Oguchi calculate the even higher amount of ¥465 trillion (Hatta / Oguchi 1993).

Taking the ¥350 trillion of the official calculation as a starting point, we shall examine how this burden could be distributed in the transitional period. If the system shift were to be financed through higher contributions by the working population, every member of the EPI would have to shoulder an extra burden of ¥10.6 million. Since this amount is almost 2.5 times the average yearly standard remuneration of a male employee (calculation based on Kōseishō Nenkin-yoku 1998: 288, 42), an immediate transition of this kind is obviously not possible. However, the transition costs do not need to be shouldered by the working generation only, but can be influenced by the terms of their maturity. In theory, two transition paths are possible.

One solution is a transition financed by government debt (Feldstein 1995). In this case, the government gives government bonds to current retirees and employees with a value equal to the present actuarial value of the benefits (of the remuneration-proportional part) to which they are currently entitled. Once the worker retires he exchanges these bonds including interest earnings for an annuity.<sup>36</sup> The initial debt and the interest payments mature at different times, because not all workers retire at once. At the time of maturity, the debt can either be paid out of current taxes or by the issue of new debt. If implemented in such a way, the transition

<sup>34</sup> In accordance with the insufficient information policy regarding its actuarial reviews, the Ministry does not give an exact account of the calculation method.

<sup>35</sup> The present value of the accrued pension benefits minus the present value of contributions paid to cover these entitlements.

<sup>36</sup> Strictly speaking the government debt increases only in so far as interest needs to be paid on the newly issued bonds. The bonds itself are only a substitution for implicit pension liabilities which were made explicit.

costs can be distributed over a long span of time. Depending on the tax system, the costs can be allocated to different age groups. Feldstein shows in a model that such a transition can raise economic welfare if a number of conditions are met (Feldstein 1995).

Another solution for the problem of transition costs is to undertake a gradual implementation of the capital-funded system. Whereas the benefits of the pay-as-you-go system are gradually reduced, the participants pay increasing contributions to a privatized system of capital-funded individual retirement accounts. The longer the transition phase, the smaller the burden on the transitional generations. Feldstein and Samwick show for the US that this kind of transition could generate long-run benefits and would have relatively modest transition costs (Feldstein / Samwick 1996).

The Economic Planning Agency (EPA) discussed the first of the above transition models in its 1996 "Account of the Japanese Economy." Assuming a rate of growth of aggregate wages of 2%, an interest rate of 4% and a discount rate of 3%, the EPA calculated that the total privatization of both the EPI and the NPI would generate a net welfare gain of 3% of the GDP (Keizai Kikakuchō Chōsakyoku 1996: 168–171). The EPA calculation is, however, nothing more than the simple application of the formula presented by Feldstein to prove theoretically that such a shift can generate a welfare gain (Feldstein 1995). It fails to discuss a number of important issues such as population development, treatment of pension entitlements, etc. Also the role of the NPI as a tool for basic pension provisions is totally neglected.

Considering the already high government debt, Oshio claims that a partial privatization cannot be financed by the issuance of government bonds.<sup>37</sup> Therefore, he calculates the effect of a gradual partial privatization of the EPI in accordance with the model of Feldstein and Samwick (Oshio 1998: 209). Table 6 shows the necessary contribution rates to the EPI under the assumption of such a gradual partial privatization.

<sup>37</sup> Theoretically his argument is not convincing, however, because the new issued bonds to recognize the entitlements of current retirees and employees would not be traded freely on the bond market directly (Homburg 1988: 134–135). Only when the workers reach their entitlement age, will these papers subsequently be sold on the market. For this reason a debt financed transition would not have an immediate strong effect on interest rates.

Table 6: Contribution Rates to the EPI under Gradual Partial Privatization

Generation (Year of birth)	In case of continuation of the pay-as- you-go system	In case of privatization			Additional burden
		In sum	To finance entitlements	To finance a capital-funded private pension	
1960	13.1%	17.9%	9.9%	8.0%	4.8% points
1980	14.1%	15.1%	7.9%	7.2%	1.0% points
2000	16.3%	11.0%	3.7%	7.3%	-5.3% points

Notes: (1) Contribution rates only for the remuneration-proportional part. (2) Contribution rates as average rates over the working life between age 20 and 65. (3) Under the assumption of an average real wage increase of 2% and an interest rate of 3%. (4) The benefit level of the pay-as-you-go system and the capital-funded system shall be identical.

Source: Oshio 1998: 219

The results indicate that the baby boom generation born around 1960 would have to shoulder an additional burden of 4.8 percentage points over its working life from age 20 to 65. The additional burden would decrease thereafter and the generation born in the year 2000 would eventually profit from the privatization because its contribution burden would be 5.3 percentage points lower than in the case of a continuation of the pay-as-you-go system in its current form.

Oshio points out himself that this calculation, which is based on a number of simplified assumptions, only serves as a rough indicator of the effects of such a transition. However, the calculation shows that such a shift could be financed and would result in long-term welfare gains for future generations. Although an additional burden of 4.8% percentage points seems to be rather high, this burden could be kept smaller through the adoption of the following measures and the following effects:

1. Oshio's calculation is based on the benefit level prior to the 1999 reform. The 1999 benefit cuts, however, would diminish the additional burden.
2. In the case of a transition to a funded system, the pension reserve fund could be utilized to limit the additional burden.
3. The transition is likely to generate positive growth- and labor market effects, which in turn would increase tax revenues. These could be used to finance some of the costs.
4. Oshio assumes a transition period of 40 years. However, a longer transition period could further limit this burden.



### 1.2.5 Results

Given the limited number of projections, the assessment of the financial health of public pension finances in Japan proves to be difficult. However, analysis has shown that the 1999 pension reform measures are likely to put the finances of the EPI on a sustainable financial footing. Although the influence of the last reform on the NPI finances is harder to assess, it should result at least in a significant positive effect. However, it is still unclear how the problem of participants who refuse to pay contributions to the NPI will be addressed in the future and how financial sources for increased state subsidies can be secured.

Information on the effects of a (partial) privatization is even more limited. The available data allow the conclusion that such a shift can be financed in principle. However, the data are insufficient to quantify the exact effects of such a transition.

### 1.3 Distributive Effects

This chapter analyzes the distributive effects of the EPI and the NPI. The first part focuses on intergenerational issues and the second part looks at intragenerational distributive effects.

#### 1.3.1 Intergenerational Redistribution

All pay-as-you-go systems cause intergenerational redistribution. This simple truth is based on the fact that the first age cohorts receive benefits without having paid equivalent contributions. Geanakoplos, Mitchell and Zeldes show that the internal rate of return in a pay-as-you-go system falls over time (1999: 83–86). Here, “internal rate of return” is defined as the inflation-corrected discount rate that equates, for each individual, to the present value of the stream of social security benefits to the present value of the stream of taxes paid. The rate falls over time even in systems with a constant life expectancy and age structure of the population. These redistributive effects increase markedly if the growth rate of the working population ( $n$ ) sinks. In this case, the contribution rate ( $b$ ) of the working population must be raised if the pension benefit per capita ( $p$ ) is expected to stay the same (see again footnote 1). In other words, later age cohorts realize an even smaller rate of return.

These redistributive effects have caught the attention of many Japanese economists and there are a number of so-called money’s worth calculations. In the following, a few of these calculations will be discussed.

Most Japanese calculations on intergenerational redistributive effects have one feature in common. They are not based on historical data. Rath-

er, they define a hypothetical individual (or a type of household) with a certain period of insurance and life expectancy. Assuming that all individuals are identical, this individual represents an age cohort. The contributions of the individual to the pension system are compared with the received benefits. This kind of comparison is undertaken for the same individual, assuming that the individual joined the labor force at different times. In this way, changes, which took place in the pension system in the past are reflected in the contributions paid and the benefits received. Discounting contributions and benefits, one gets to the “benefit / tax ratio” (*jukyū futan ritsu*) which represents for each age cohort the present value of lifetime pension benefits received, divided by the present value of lifetime pension contributions paid.

Table 7 presents an overview of the results of different Japanese calculations.

These calculations do not offer direct comparisons because they differ as a function of the pension law in effect at the time of calculation and as a function of assumptions about interest rates, wage increases, CPI increases and type of household. However, they are unanimous in showing that the EPI causes considerable intergenerational redistribution.

The current generation of pensioners that includes the birth cohorts before 1940 receives benefits several times greater than what it paid as contributions and what it might have received had the money been invested in similarly safe investments. The older a pensioner is, the higher the benefit.

The benefit cuts and contribution hikes of the 1985 and 1994 reforms cause the “benefit / tax ratio” to sink for later birth cohorts. The cohorts born at the beginning or the middle of the 1960s will receive lower benefits from the EPI in comparison to what they have paid as contributions. There are two reasons for this. First, the 1985 pension reform measures have a greater impact on younger pensioners. This is because the multiplying factor of the pension formula was gradually lowered from 0.01 to 0.0075 for the cohorts born during the years 1926 to 1946. The lower factor of 0.0075 applies only to participants born after April 2, 1946, i.e. future pensioners. Second, during the working life of the current generation of pensioners pension benefits were increased faster than contributions. The rapid benefit hikes of the 1960s are especially important in this respect.

Table 7: Different Calculations of the "Benefit / Tax Ratio" of the EPI

Assumptions	Honma <i>et al.</i> 1984	Ueda/ Iwai/ Hashi- moto 1987	Hashi- moto/ Hayashi/ Atoda 1989	Kimura 1985	Takayama <i>et al.</i> 1990		
Nominal interest rate	7%	4%	3.6%	7%	6.5%		
Nominal wage increase	5%	3%	2.1%	5%	6.5%		
CPI increase	5%	2%	2.1%	5%	4.7%		
Type of household	2 P.	2 P.	2 P.	1 P.	1 P.	2 P.	Double- income
Year of birth	6.00				4.98	5.54	4.60
1925							
1926							
1930	10.40			2.40	3.61	4.13	3.51
1933							
1935		3.30	3.90		2.60	3.13	2.79
1936							
1938	1.80						
1940		2.50		1.34	2.05	2.47	2.23
1943							
1945		1.80	1.70		1.68	1.99	1.84
1946							
1947	0.50						
1950		1.30		0.71	1.35	1.68	1.57
1953							
1955		1.30	1.00		1.16	1.40	1.32
1960				0.53	1.05	1.25	1.17
1965		1.00					
1975		0.80					
1985		0.70					
1995		0.70					
2005		0.70					
2015		0.70					

Note: The 2-person-household is a single-income household.

Sources: As noted in row 1

The comparison of the "benefit / tax ratio" of different types of households reveals that 2-person-single-income households fair better than sin-

gle-person households or double-income households. These effects stem from the contribution-free coverage of non-working spouses in the NPI and from EPI survivors pensions.

How will the 1999 reform measures influence this pattern of intergenerational redistribution in the future?

Hatta demonstrates that intergenerational equity could be improved with the following reforms (Hatta 1998):

1. An immediate increase in the contribution rate to a sustainable level, which would make hikes in the future unnecessary.
2. An immediate increase in the entitlement age to 65.
3. Temporary abolition of the net-wage indexation of entitlements and pensions in payment.

Although the 1999 reform measures are similar to the ones assumed and tested by Hatta, they differ in crucial details. First, the contributions are supposed to be raised gradually in the future. Whereas an immediate increase would put some of the burden on older age cohorts, the gradual increase will have the result that younger age cohorts will shoulder the entire burden. The gradual increase of the entitlement age, instead of an immediate one, will have the same effect. The final (instead of a temporary) abolition of the net-wage indexation as part of the 1999 reform will lower the replacement rate of older participants. However, since this measure is not temporary, the future replacement rates of younger generations will be lowered accordingly. Hatta demonstrates that this kind of measure does not improve intergenerational fairness. In other words, the pension reform of 1999 did not improve intergenerational fairness.

If we interpret the above results with regard to the *savings function* of a public pension scheme, we can state that the EPI has performed very favorably as far as earlier age cohorts are concerned. A capital-funded system would not have generated the high benefits that these age cohorts have been receiving. However, this high internal return has only been achieved at a cost to younger generations, which will receive returns below market rates.

### 1.3.2 Intragenerational Redistribution

#### 1.3.2.1 Redistributive Effects of the Employees Pension Insurance

Table 8 shows the results of money's worth measures undertaken by Aso (1992). In contrast to the above calculations, Aso does not use the "benefit / tax ratio." Instead, he presents the difference of the present value of paid contributions and the present value of received benefits – in monetary terms – as a "net transfer." Aso's findings confirm the findings of the last

section regarding intergenerational redistribution in relation to age cohort and type of household. However, Aso shows also how changes in the “net transfer” are dependent on household income.

**Table 8: The “Net Transfer” of the EPI in Relation to Date of Birth, Type of Household and Income Group (in ¥10,000)**

Year of Birth	Multiple of the average household income	1920	1930	1940	1950	1960	1970	1980	1990	2000
2-Person-Single-Income	0.4	4859	3814	2424	1343	875	581	402	301	251
	0.8	5928	4542	2580	1091	427	28	-178	-250	-236
	1.0	6462	4906	2659	965	204	-248	-468	-525	-480
	1.4	7531	5634	2816	714	-243	-801	-1048	-1076	-967
	1.8	8599	6363	2973	462	-691	-1353	-1628	-1626	-1454
	2.0	9133	6727	3051	336	-914	-1630	-1918	-1901	-1698
Double-Income	0.6	5033	3931	2238	1045	560	238	54	-25	-36
	0.8	5493	4231	2268	878	301	-70	-263	-324	-300
	1.0	5954	4530	2298	712	41	-378	-580	-622	-564
	1.4	6876	5129	2358	378	-478	-993	-1215	-1220	-1092
	1.8	7798	5728	2418	45	-998	-1608	-1849	-1818	-1620
	2.2	8720	6327	2478	-289	-1517	-2224	-2483	-2415	-2418
	2.6	9642	6926	2538	-622	-2037	-2839	-3118	-3013	-2676
	3.0	10563	7525	2598	-956	-2556	-3454	-3752	-3610	-3203
	3.2	11024	7824	2628	-1123	-2816	-3762	-4069	-3909	-3467
Singles	0.4	2565	1957	1003	327	52	-12	-205	-226	-205
	0.8	3420	2497	1020	-44	-500	-76	-868	-844	-752
	1.0	3848	2768	1028	-229	-776	-108	-1193	-1154	-1025
	1.4	4703	3308	1044	-599	-1328	-172	-1852	-1773	-1571
	1.8	5559	3849	1060	-970	-1879	-237	-2511	-2391	-2117
	2.0	5986	4119	1068	-1155	-2155	-269	-2841	-2701	-2390

Notes: Calculations assume nominal growth of 4%; nominal wage growth of 4%; CPI increase of 2%; a discount rate 5.5%; an increase in the entitlement age according to the schedule of the 1989 actuarial review; and prices from 1990.

Source: Aso 1992: 155

A major finding is that the “net transfer” of the age cohorts born before 1940, i.e. the current pensioners, increases in relation to rising working income during the working life. In other words, the income redistribution generated by the EPI is regressive. Redistribution from low-income earners to high-income earners seriously questions the fairness of the current regime. One can see the main reason for this redistribution in the reform measures from the 1960s through the 1973 reform. During this time, the multiplying factor of the pension formula was raised much faster than corresponding contributions (Oguchi / Kimura / Hatta 1994: 339–340).

Accordingly, employees with higher working incomes profited from these measures more than those with lower incomes.

The cohorts born after 1950, i.e. future pensioners, will realize decreasing “net transfers” (or even negative “net transfers”) in relation to increases in their income during their working life. In other words, progressive income redistribution is going to take place within the group of future pensioners. This effect can be attributed to the introduction of the basic pension in 1985. Whereas the contributions to the EPI increase in accord with higher working income, the benefits of the NPI do not depend on the amount of these contributions. The NPI benefits solely depend on the length of participation in the system.

Systemically, the NPI was designed to redistribute pension income progressively. The next section shows, however, that the rationale for this arrangement is debatable and that the NPI system causes a number of other intragenerational redistributive effects that seriously question the system’s fairness.

### 1.3.2.2 Redistributive Effects the National Pension Insurance

In its proposals for pension reform, the World Bank promotes the introduction of a multi-pillar system that clearly separates minimum income and redistributive function from the savings function of a pension system (World Bank 1994). The rationale being, such a division would enhance both effectiveness and efficiency. The first pillar would effectively alleviate old age poverty by redistributing income from high-income earners to low-income earners. The second fully-funded pillar would provide benefits that correspond to former contributions in order to keep labor market distortions to a minimum. Such a system could minimize the trade-off between social and individual equity aspects that effect increases in the system’s “target efficiency” (Klanberg / Prinz 1988).

In principal, the Japanese system is designed as a multi-pillar system in which the NPI fulfills the minimum income and redistributive function and the EPI performs the savings function. Although the EPI departs from World Bank proposals in that it is not fully funded, the Japanese arrangement does follow the underlying philosophy of functional differentiation.

This section discusses the different redistributive effects of the NPI while answering the question, are the Japanese arrangements indeed likely to improve the system’s “target efficiency?” The question of effectiveness is addressed in Chapter III.1.4, which discusses the minimum income adequacy criterion.

1. As described in paragraph II.2, the NPI insures three types of participants. Whereas the fixed contributions and benefits of the Type 1 insured (mainly self-employed, farmers, and the non-employed) are closely related, this kind of equivalence principle does not hold for Type 2 insured (employees). Employees do not pay fixed contributions to the EPI, but rather a ratio of their working income – currently 17.35%. In accord with higher contributions, the remuneration-proportional benefits of the EPI increase. In contrast, the benefits from the basic pension (NPI) are not related to contributions; they solely depend on the length of participation. The EPI transfers contribution revenues to the NPI to cover its part of the NPI expenditure (the calculation formula for this transfer will be discussed below). This arrangement is intended to transfer resources from high-income earners to low-income earners. However, does this arrangement really target the right people?

Table 9 analyzes the basic pension system by insurance program. It considers the total benefits from, and contributions to, participants in the NPI, EPI, and the mutual aid associations. The overall expenditures of the EPI, borne by the Type 2 insured, to the NPI are higher than the overall benefits, which are drawn by the EPI Type 2 and Type 3 participants from the NPI. On the other hand, the basic pension benefits drawn by the Type 1 insured are higher than the respective contribution revenues from this group, in other words the system redistributes income to Type 1 insured members. Within the Type 1 group, earners of low incomes probably constitute a larger fraction than they do within the Type 2 group (although there are no data to back this statement sufficiently). However, it is at least debatable, whether the self-employed persons that constitute the majority of participants insured in the Type 1 group are in general a needy constituency worthy of income redistribution.

The numbers in table 9 reveal also that the current arrangement favors participants in mutual aid associations. If one includes benefits drawn by a non-working spouse, the overall benefit to the participant in a mutual aid association surpasses the contribution burden. In other words, the EPI subsidizes not only the Type 1 insured of the NPI, but also the insured of the mutual aid associations. However, if one considers that the remuneration-proportional benefits of the mutual aid associations are frequently higher than the ones paid by the EPI, the participants of the mutual aid associations are certainly not a needy constituency that requires systematic income redistribution. Projections of the burden *per capita* reveal that, because of demographic changes, the burden of the insured in the EPI and the mutual aid associations will be much higher in the future than the burden on the Type 1 participants (Oguchi 1998: 78).

**Table 9: Projection for Benefits from, and Contributions to, the Basic Pension System, by Insurance Program (¥ trillion)**

Year	Benefits from the Basic Pension System			Contributions to the Basic Pension System Including State Subsidies		
	NPI	EPI	Mutual Aid Associations	NPI	EPI	Mutual Aid Associations
	Type 1 Participants	Type 2 Participants () = including Type 3 Participants	Type 2 Participants () = including Type 3 Participants	Expenditure borne by Type 1 Participants	Expenditure borne by Type 2 Participants	Expenditure borne by Type 2 Participants
1995	3.51	3.24 (3.68)	1.27 (1.56)	2.38	5.43	0.94
2000	4.18	5.14 (5.91)	1.68 (2.09)	3.30	7.59	1.27
2010	6.43	10.50 (12.26)	2.52 (3.10)	5.56	13.81	2.40
2020	8.63	16.71 (19.61)	2.68 (3.51)	7.75	20.58	3.43
2030	10.12	19.44 (22.97)	3.22 (4.28)	8.73	24.57	4.06
2040	11.60	25.99 (30.23)	4.26 (5.63)	10.69	31.39	5.37
2050	12.69	30.41 (35.28)	4.95 (6.60)	12.40	36.03	6.15
2060	13.83	32.60 (37.81)	5.04 (6.82)	13.50	38.53	6.40

Note: Based on the actuarial review of 1994 by the Ministry of Health and Welfare and population projections from 1991.

Source: Calculations based on Oguchi 1998: 77–78

2. Another important aspect of the redistribution issue relates to the fixed contributions of the participants in the Type 1 group. When the income of the participant is low, the relative burden of fixed contributions is high. Schmähl argues that this regressive effect is unfair and can lead to problems with evasion (1991: 10). The Japanese situation proves him right. A study of the Japanese Social Security Administration reveals that the ratio of non-paying participants to the NPI increases considerably in accordance with lower income. The same study reveals that almost 9% of Type 1 insured participants evaded contributions for the last two years and another 17.3% were exempted from paying contributions (Kōseishō Kenkin-kyoku 1998: 32–35). This problem is closely connected to the following issue: In order to cover the expenditure for the basic pension, the different insurance programs need to transfer money to the so-called “basic pension account” (*kiso nenkin kanjō*) of the NPI, which then pays out the basic pension benefits. The formulas used to calculate the necessary transfers are presented below (the formula for the mutual aid associations is identical to the one used for the EPI) (Oguchi 1998: 77–78):

Portion of the transfer from the NPI to the "basic pension account" = number of contribution-paying Type 1 insured / (number of contributors in the Type 1 group + number of Type 2 insured of the EPI + number of Type 2 insured of mutual aid associations + number of Type 3 insured non-working spouses)

Portion of the transfer from the EPI to the "basic pension account" = number of Type 2 insured of the EPI + their non-working Type 3 insured spouses / (number of contribution paying Type 1 insured + number of Type 2 insured from the EPI + number of Type 2 insured from mutual aid associations + number of Type 3 insured non-working spouses)

Note: The state-subsidy is not transferred directly to the basic pension account, but the insurance programs receive subsidies of 1/3 of the expenditure according to the above calculations.

What is noteworthy about this formula is that the EPI transfer includes only the number of Type 1 insured who actually pay contributions, but not the total number of participants. As was mentioned above, there is a considerable number in the group of Type 1 insured who either refuse to pay their contributions or who are exempted from doing so. As part of the current arrangements the Type 2 insured in the EPI and mutual aid associations have to bear the resulting burden because the transfers to the NPI increase if the number of non-paying Type 1 participants increases.<sup>38</sup>

3. After 25 years of contribution payments, Type 1 participants can de facto opt out of the system without risking the loss of their entitlements. However, the Type 2 insured do not have this option (Keizai Kikakuchō Keizai Kenkyūjo 1999: 80–81). It is likely that demographic changes will encourage more Type 1 insured persons to make use of this legal loophole. This means that the Type 2 insured will have to bear an even greater burden in the future.

4. Mandatory insurance for the Type 2 insured under age 20 and over age 60 does not result in higher NPI benefits. This is another redistributive effect of the NPI (Keizai Kikakuchō Keizai Kenkyūjo 1999: 81).

<sup>38</sup> For similar critic see Keizai Kikakuchō Keizai Kenkyūjo 1999: 79.

Points 1. through 4. show that the NPI generates a number of complicated intragenerational redistributive effects. It is impossible to quantify these effects exactly. What becomes clear, however, is that these effects are hardly in line with the underlying philosophy of a multi-tiered pension system that strives to separate savings functions from redistributive functions. The Type 2 insured in the EPI subsidize both the basic pension payments of the Type 1 insured and members of the mutual aid associations. In the future, those insured by the EPI and the mutual aid associations will have to shoulder a burden that is, per capita, increasingly larger than the burden borne by the Type 1 insured. The number of the Type 1 insured that does not pay contributions will likely increase if benefits are not raised in line with contribution hikes.

Japanese policy makers avoid requiring increased contributions to the NPI by the insured. Rather, they favor state subsidies. This is evident in the 1999 pension reform's plan to increase state support to the NPI from one-third to one-half of expenditures. In general, tax-financed state-subsidies stress the social equity aspect (*tax-transfer model, redistributive function*) of a pension system. A contribution-based financing mode stresses the individual equity aspects of a social security system (*insurance model, savings function*) (Thompson 1983: 1436–1438). As mentioned, the World Bank's proposal for a multi-pillar system is based on the idea that a separation of functions will enhance effectiveness and efficiency. Although the Japanese system is superficially multi-tiered, the current basic pension arrangements try to combine aspects of both models in one pillar. The planned increase of the state-subsidy does not fundamentally change this assessment. It is doubtful whether a combination of contributions and tax subsidies makes much sense altogether because the resulting distributive effects are hard to assess.

### 1.3.3 Results

The analysis has shown that the Japanese pension system causes considerable intergenerational redistribution. Although these effects are common to a pay-as-you-go system, the magnitude of these effects is remarkable. The current pensioners receive several times what their contributions would have produced had the funds been invested in similarly safe investments. In contrast, age cohorts born since the beginning or the middle of the 1960s will receive lower benefits from the EPI than what they paid as contributions. These effects will quickly erode the trust of younger generations in the public pension system.

With regards to intragenerational redistributive effects, the analysis reveals that the EPI causes regressive redistribution within the group of cur-

rent pensioners, highlighting a serious problem of fairness. As a result of the introduction of the basic pension in 1985, the regressive redistribution will become a progressive redistribution in the future. However it is doubtful that this kind of progressive redistribution will improve the system's overall fairness, because it fails to target the people who really need financial support. The Type 1 insured are not by definition a needy constituency. The same is true for the insured members of the mutual aid associations. These people do not need subsidies. In fact, they constitute a group that, in general, receives higher earnings-related benefits than those distributed through the EPI.

#### 1.4 Minimum Income Adequacy

As noted in the introduction, among the several goals of a public pension system is securing a minimum level of benefits. In the Japanese public pension system the basic pension paid by the NPI is supposed to secure this minimum level of benefits. This chapter analyses whether the current level of benefits is adequate.

##### 1.4.1 Analysis

In the multi-tiered Japanese system, basic pension benefits paid by the NPI are intended to fulfill the *minimum income function*. The NPI model pension is supposed to cover the basic costs for nutrition, clothing and housing of a non-working 65 year-old pensioner who lives alone. Based on the National Survey of Income and Expenditure (*Zenkoku Shōhi Jittai Chōsa*), the Ministry of Health and Welfare determines this level at ¥72,336 per month (Kōseishō Nenkin'yoku 1998: 179–180). However, the model basic pension after 40 years of contributions is currently only ¥67,016 per month.

One would expect the Ministry to argue in favor of an increase in the benefit level of the NPI in order to cover a basic cost of living. Instead, the Ministry suggested in its first ever 1998 Pension White Book that the indicator for the minimum level of benefits should not be the basic cost of living for a single-person household, but the basic cost of living for an old-aged couple (male over 65, female over 60).<sup>39</sup> The respective costs are

<sup>39</sup> This opinion is not expressed directly as the official point of view, but presented in a paragraph, which discusses several problems of the basic pension. However, judging from the fact that these opinions are backed up by detailed numbers and not explicitly criticized, it can be judged that they represent the official viewpoint.

¥116,509 per couple per month, or ¥58,255 per person. The line of reasoning is not at all clear. The Ministry offers an argument that the ratio of old-aged couple households has increased since the mid-80s from 63.6% to 68.5% (1994).

The Ministry also argues that it might be better to use the median instead of the national average as a suitable cost-of-living indicator. If this indicator were applied, an old-aged couple would need at least ¥100,476 per month (¥50,238 per person) (Kōseishō Nenkin'yoku 1998: 179–180).

How can these arguments be judged with regards to the role of the NPI?

1. The sheer number of a type of household says nothing about the basic pension necessary to meet the cost-of-living expenditure for that type of household. Indeed, the ratio of old-aged couples has increased in the past, but so has the ratio of people over 65 who live alone (see again *figure 3*). This development is mainly due to a decrease in the number of three-generation households. As discussed in Chapter I.4, this trend will likely continue in the future. Consequently, the role of the basic pension will become even more important, because intergenerational support within the family is likely to weaken further.

Basically, the role of the basic pension is to prevent old-age poverty. In general, the economic situation of old-aged Japanese has improved markedly since the 1960s. Whereas in 1960, 24.6% of the old-aged households still drew benefits from public assistance, this ratio has declined to 4.5% in the mid-1990s (Hori 1997: 4). Takayama and Arita show that in terms of consumption expenditure, there is on average no difference between old-aged and younger households (Takayama / Arita 1996). However, the situation for the old-aged living alone, especially women, is markedly worse than that of other types of old-aged households. For example, 20% of non-working women living alone over 60 receive means-tested social welfare benefits (Takayama / Arita 1996: 150). These data indicate that the Japanese basic pension should re-orient itself to the cost-of-living expenditure for single, old-aged people because on average these people are the worst off.

2. The level of the model basic pension as a means for covering basic cost-of-living expenditures should be considered in light of benefit levels in the system of public assistance. Benefits in the Japanese system of public assistance reflect regional differences in the standard of living. The system designates a minimum subsistence level for each region. For a two-person, old-aged household (male 72, female 67) this subsistence level varies between ¥116,120 and ¥149,989 depending on the region. For a single woman aged 70, this level ranges from ¥84,064 to ¥108,506 (Kōsei Tōkei Kyōkai 1998: 99). These numbers indicate that the current model basic pension for an old-aged couple of ¥134,032 (¥67,016 x 2) reaches the

subsistence level in some regions. However, the basic pension for a single-person household does not even meet the lowest subsistence level. In conclusion, the basic pension is too low to effectively avert old-age poverty.

3. This conclusion becomes even more pronounced if one takes into consideration that most people cannot draw the model basic pension because they have not paid 40 years of contributions. In 1996, the average amount of newly awarded basic pensions was ¥54,931 (Keizai Kikakuchō Keizai Kenkyūjo 1999: 3). Looking at the basic pension for different groups of the insured, one understands that, on the average, the member of the Type 1 insured group (who only draws benefits from the NPI) receives only ¥45,000 (1995) (Shakai Hokenchō 1997: 53).

4. That the basic pension benefits do not cover the subsistence level might be responsible for an increase in the ratio of the old-aged among those receiving public assistance. Although the absolute number of old-aged welfare recipients has sharply declined, as was pointed out above, their relative number has markedly risen. In 1965, 18.4% of the welfare recipients were people over 60, in 1997 this ratio was 46.4% (Kōsei Tōkei Kyōkai 1998: 102). Obviously, the public assistance system functions more and more as a last resort to cover shortfalls in the public pension system.

#### 1.4.2 Results

The analysis has shown that the Japanese basic pension system does not fulfill its self-defined function as a tool for minimum income security. Taking into account the results of Chapter III.1.3.2.2, one can state that the basic pension system is neither effective in averting old-age poverty nor is it efficient because it generates complicated redistributive effects which are likely to cause labor market distortions.

### 1.5 Political Risks

This chapter highlights and analyzes the political risks that could undermine the successful transformation of the Japanese public pension system into a system that stands on solid financial ground.

#### 1.5.1 Information Policy

As mentioned above, the information policy of the Ministry of Health and Welfare is insufficient. Its actuarial reviews are systematically too optimistic and as a result, undermine confidence in the public pension system. A successful transformation of the Japanese pension system requires

that the public be accurately informed about the financial situation and the reform options. This would include information on the likely effects of a partial shift to a capital-funded system. Instead, the recent pension reforms have failed to articulate a concrete vision of what the pension system will look like in the future. The reform process itself proves to be a muddling through, in which the Ministry of Health and Welfare presents just as much information as is necessary to justify its own reform proposals. The Ministry's newly adopted strategy, one can hardly call it a vision, in which benefit cuts in the public pillar are to be offset by promoting occupational pension plans, is not communicated to the public. Neither is the strategy evaluated in terms of its likely effects on income distribution and pension income adequacy. An opinion poll that the *Yomiuri Shinbun* conducted in early 1998 showed that public sentiment toward the pension system was rather negative. The majority of the respondents did not trust the public pension system. For those in their 20s this figure reached 67% (Curuby & Company 1998: 113).

Whereas an insufficient information policy poses a serious but somehow vague risk, in the past the threat of discretionary usage of the pension reserves for political reasons has been very concrete. The next section looks closer at the political forces that shape the management of the pension reserve fund.

#### 1.5.2 Pension Reserve Fund Management

##### 1.5.2.1 Current Arrangements

The Social Security Agency (*Shakai Hokenchō*) is responsible for the collection of the contributions to the EPI and the NPI. It entrusts these revenues to the Trust Fund Bureau (*Shikin Un'yōbu*) of the Ministry of Finance. The Trust Fund Bureau pays deposit interest (*yotaku kinri*) on these deposits, which are usually held for about seven years, and repays them once the Social Security Agency needs the funds to cover its pension expenditures. During the period when the reserves are entrusted to the Trust Fund Bureau, they finance part of the Fiscal Investment and Loan Program (FILP) (*Zaisei Tōyūshi*).<sup>40</sup> In addition to pension reserves, postal savings and postal life insurances constitute other important sources of financing for the FILP. In 1997, pension reserves made up 16% of FILP funds and postal savings made up 25.7% (Kōsei Tōkei Kyōkai 1997: 221). The main purpose

<sup>40</sup> A small portion of these funds is also devoted to government bond purchases (Ishi 1993: 84).

of the FILP is to provide long-term funds for financing government policy and investment objectives. The program does not belong to the general budget, but because of its size (2/3 of the general account) it is in fact a very important secondary budget. However, in contrast to tax-financed projects of the general account, the FILP funds must be invested in profitable projects because the funds, plus interest, must be repaid to the Social Security Agency (Ushimaru 1996: 77–124).

In 1996, 73% of the pension reserves financed investments in government enterprises. These included public corporations, government financial institutions and some local governments. Reserves also funded loans to selected private businesses that have special importance for development and social policy and loans to projects that could not be adequately financed by the private sector (Ishi 1993: 82–83).

The remaining 27% (1996) of the pension reserves were lent to the Pension/Welfare Public Service Corporation (*Nenkin Fukushi Jigyōdan*). The purpose of this corporation is twofold. First, it provides several kinds of loans designed to improve public welfare. These loans subsidize construction for social infrastructure investments (e.g. hospitals and old age homes), they also fund housing and consumer loans to members of the pension insurances and they fund large recreation facilities for the pension participants (*Daikibo Nenkin Hoyō Kichi*). Second, the Corporation makes investments in the capital-markets. Through these investments, the Corporation seeks to realize a return higher than the interest it must pay to the Trust Fund Bureau. 70% of the funds of the Corporation are invested in the capital markets; 30% are used for different loan programs (Kōseishō Nenkin-yoku 1998: 96–98).

This usage of the pension reserves is problematic in several ways:

1. With the FILP as part of the public sector, problems arise in terms of its size and function. Although the FILP is compiled and presented every year to the Diet it has the nature of a shadow budget that is firmly controlled by the Ministry of Finance. Liabilities in the FILP budget are covered by the tax-payers, however, if the funds are not invested in government bonds, these liabilities are not included in official numbers on Japan's public sector debt. A study conducted by the Paul H. Nitze School of Advanced International Studies revealed the scope of the problem of this shadow budget. The study estimated that if the hidden liabilities of the FILP were included, the public sector debt in 1996 was probably not 87.1% of the GDP, as officially stated, but closer to 150% of GDP (*Financial Times* 11 July 1998: 13). The opacity of public sector accounting makes citing a definite figure difficult, so the absolute number cited in this study should be regarded with some care. However, the study highlights the magnitude of the problem. The absolute volume of bad loans within the

public sector depends largely on how many of these loans really defaulted in the aftermath of the bubble economy since the beginning of the 1990s. Whereas the magnitude of the bad loan problem becomes slowly apparent in the private sector – where the bad loan crises acts as the primary drag on a sustained economic recovery – the magnitude of the bad loan problem in the public sector is yet unclear.

There is a risk that the funds of the Trust Fund Bureau, and therefore the pension fund reserves, are being used to pay interest on loans for projects with limited viability that are routinely rolled over (“Ponzi financing”). Such projects came to light when the government took Trust Fund Bureau debt onto its books in the process of the establishment of the Japan National Railway Settlement Corporation. It turned out that the Corporation had been bankrupt for years (*Financial Times* 11 July 1998: 13). In the late 1990s, public finance agencies such as the People's Finance Corporation markedly increased their loans to small- and middle-sized companies. They did so to make up for the smaller volume in loans to these businesses by Japanese private banks (the so-called “credit-crunch”) (*Financial Times* 16 June 1998: 6). Many of these loans were granted without collateral, increasing the chances that the FILP will face a crisis over bad loans in the future.

2. Regardless of the absolute size of the loan problem, the role of the FILP is questionable. The use of postal savings and pension reserves to finance the FILP program highlights a principal-agent problem. Under the structure of the FILP program, the interests of the principals – contributors – and their agents – in this case, politicians and government officials – are at odds. Postal savers and members of pension insurances want to realize a high return on their investments, whereas a low interest rate enables the state to cheaply finance infrastructure and public institutions. Conflict of interest is common to other systems in which reserves purchase government bonds. However, in contrast to the Japanese case, in which reserves fund loans are not backed by collateral, reserves in other countries are being used to buy government bonds, so that the money will at least realize a definite return. The investment in the FILP program poses risks that are borne by pension insurance subscribers and postal savers. *Table 10* shows the rate of return for different investments. It is evident that the return yielded by the pension reserves in the past was on the average higher than the one realized on 10-year government bonds.



Table 10: Average Return on Various Kinds of Investments (in %)

Period until 1998	Japanese Stocks 1 <sup>st</sup> Section of the Tokyo Stock Exchange (Topix)	Over-the-Counter Sales Yields of Interest-bearing Government Bonds (10 Years)	Japanese Corporate Bonds (12 Years)	EPI Pension Reserves
5 years	-4.34	2.88	3.46	4.88
10 years	-0.92	4.02	4.60	5.35
15 years	6.13	4.51	5.08	5.87
20 years	6.98	5.44	5.81	6.18
25 years	6.24	5.98	—	6.33

Sources: Calculations based on Sōmuchō Tōkeikyoku 1987: 213; Sōmuchō Tōkeikyoku 1999: 476 and various issues; Nihon Ginkō Chōsa Tōkeikyokuchō 1999: 175 and various issues; Shakai Hoshō Seido Shingikai / Nenkin Sūribukai 1996b: 149; Kōseishō Nenkin-yoku 1998: 97

On the surface, this finding contradicts the argument just made. However, the difference in returns to investment is not the outcome of a consistent policy to pay higher returns on FILP money than on government bonds. Instead, two periods can be clearly distinguished within the 25-year period of table 10.<sup>41</sup> Until 1983, the yield on 10-year government bonds was higher than the return on pension reserves (apart from the year 1978). Thereafter, the return on pension reserves was higher than the yield realized on government bonds. According to Ushimaru, this shows how much the return on investment depends on political considerations (1996: 117–119). Table 10 shows that an investment of the pension reserves in the Japanese stock market would not necessarily have yielded a higher return in the long run. However, in light of the better performance of the stock markets in Europe and the USA, investing part of the reserves in foreign stock markets would probably have proven to be a good choice.

Yet, the risks related to stock market investments should not be neglected. For example, the Pension/Welfare Public Service Corporation realized increasing losses in stock market investments, which amounted to ¥1.44 trillion until 1996 (*Nihon Keizai Shinbun* 6 July 1998: 1). In general, one can also question the assumption that stocks necessarily outperform bonds. Indeed, Brown, Goetzmann and Ross (1995), gathering data from all stock markets in existence around the world since 1900, show that stocks on the average just barely outperformed bonds. In the US, where the public pension reserves are currently fully invested in government bonds, a possible investment in stocks was sharply criticized by Alan Greenspan of the Fed-

eral Reserve Bank. Greenspan argued that a) the size of the funds would have too great an influence on the stock market, b) the investment of the reserves might be influenced by politicized decision-making and c) increases in returns from equities would be offset by lower returns in the rest of the economy (*Financial Times* 4 March 1999: 4). Although no empirical evidence confirms the argument that “[i]nvesting Social Security assets in equities is...largely a zero-sum game” (*Financial Times* 4 March 1999: 4), at minimum, the argument regarding the threat of politically induced misuse of the pension reserves should be taken very seriously. If one follows Greenspan’s arguments, a minimum demand would be the investment of Japanese pension reserves in government bonds.

#### 1.5.2.2 Planned Changes

The FILP program has frequently been criticized for its opacity and lack of efficiency (Ushimaru 1996: 119; Oshio 1998: 222). The ministries involved (Ministry of Finance, Ministry of Health and Welfare, and Ministry of Post and Telecommunications) have frequently struggled about the control of its funds. These problems are to be addressed by the reform of the FILP program, which passed the Diet in May 2000 and will become effective in March 2001. With regards to the pension arena, the reform has basically two objectives. First, it is designed to enhance returns on investments of public pension assets in order to reduce the funding burden in the future. Second, decision-making about investments shall be shifted away from the Ministry of Finance and the FILP and towards the Ministry of Health and Welfare. Funds hitherto invested in the FILP program will be under the direct control of the Ministry of Health and Welfare. FILP institutions will be required to issue their own bonds in order to finance their activities. It is hoped that this will improve aspects of FILP governance such as the utilization of policy cost analysis, because the agencies will need to convince the financial markets of their efficiency.

With regards to the issue of pension reserve fund management, the first objective is of special importance.<sup>42</sup> Pension reserves will be managed by the Ministry of Health and Welfare, which is to establish a so-called Investment Council (*Un’yō Kanri Kikan*). Probably as early as April 2001, the Council will start to entrust assets to external managers and will also engage in in-house management. However, the exact investment objectives that will govern how the money will be invested remain to be clarified. The Investment Council will be advised and monitored by a new advisory

<sup>41</sup> This cannot be seen in table 10, because this table shows only averages.

<sup>42</sup> For a more detailed discussion of the FILP reform and its problems see Conrad 2000b.

body called the Asset Management Council. In June 1998, this Council published a report in which it commented on the issue of what percent of funds should be invested in what kind of financial instruments. 80% to 65% of the funds are likely to be invested in domestic bonds, whereas the rest will probably be invested in domestic stocks. The report calls for constraints on investments in derivatives to avoid high risk and also a ban on using investments in stocks to support an ailing stock market (*Nikkei Weekly* 6 July 1998). However, as of the time of this publication it is still unclear who will bear final responsibility for investments and what happens if the pension reserves realize negative returns.

Over a period of seven years, funds amounting to ¥150 trillion that are currently invested in the FILP program will be transferred to the Ministry of Health and Welfare (*Nihon Keizai Shinbun* 29 March 2000).

How can these changes be judged in terms of the effective utilization of the pension reserve fund?

The control over the reserve fund by the Ministry of Health and Welfare raises a serious issue of political dependency. The Investment Council will not be a separate institutional body, independent from the Ministry of Health and Welfare. It is questionable, whether such an arrangement can insure investment policies that safeguard the interests of pension participants.

Another problem is that the assets-management scheme will not depend on public approval (*Nikkei Weekly* 10 August 1998). A constitutional characteristic of most personal pension schemes is that the participants influence how their money is invested. This way, the individual's risk aversion is reflected in each member's portfolio. However, this will not be the case with the public pension money.

Last but not least, there is a serious threat that the money might not be invested with the welfare of the pensioners foremost in mind, but that the funds might be used strategically to revive the ailing stock market or the stocks of a specific company.

### 1.5.3 Results

The analysis of political risks has shown that the current official information policy is not sufficient to establish public trust in the reform process. The reform options and their likely effects are not clearly communicated to the public. Another political risk is connected to the use of the pension money in the FILP program. Frequently, the funds have been used for politically motivated projects where the return on investment has been lower than what could have been realized had the money been invested in a mixed portfolio in the capital market. It is too early to evaluate how the planned changes will influence the return on investment and whether the responsibilities of the trust management will be clearly defined. The anal-

ysis of the occupational pension plans in the next chapter shows that ill-defined fiduciary duties can lead to major problems and represent an obstacle for the successful transformation of these plans. In the future, the same kind of problems could arise in public pensions if the duties and responsibilities of the fund managers are not clearly defined.

## 2 THE OCCUPATIONAL PENSION PLANS

Chapter III.1.1 has shown that the official reform strategy adopted by the government is designed to offset benefit cuts in public pension schemes through the promotion of occupational pension plans. The government hopes that changes in the regulatory and financial framework will make defined benefit occupational plans more attractive. The government also plans to introduce Japanese-style 401(k) defined contribution plans in 2001.

The following chapters analyse the current diffusion of the defined benefit plans and discuss the implications of expected changes in their regulatory framework. The paper then addresses the planned introduction of the new defined contribution plans and offers a brief evaluation of their implications.

### 2.1 Current Diffusion of Defined Benefit Plans

This section discusses the current diffusion of defined benefit plans, which so far have been the most important occupational pension schemes in Japan.<sup>43</sup>

In 1993, 92% of all firms with more than 30 employees had some type of occupational pension scheme. Firms with more than 300 employees often pay occupational annuities as well as severance lump-sum benefits from book reserve plans (BRPs). 80.6% of these firms ran an occupational pension plan, 54.2% paid both kinds of benefits. Smaller firms, on the other hand, tended to pay lump-sum benefits only (*Rōdōdaijin Kanbō Seisaku Chōsabu* 1995: 14; *Sōmuchō Chōkan Kankyoku Kōreishakai Taisaku Shitsū* 1997: 112). Unfortunately, the available data do not allow an assessment of the situation in firms with less than 30 employees. However, about 54% of the workforce is engaged in establishments with less than 30 persons (Calculation based on *Sōmuchō Tōkeikyoku* 1999: 180–181). As a result, the above data show only a small portion of the overall landscape of occupational pensions.

<sup>43</sup> See again chapter II.2 for an overview of the occupational pension schemes in Japan.

What is more, an examination of the absolute number of firms that have adopted some sort of occupational pension scheme does not tell much about the actual number of people receiving occupational pensions. There are two reasons for this discrepancy. First, 55.2% of all companies employ part-time workers. Only 10% of these firms pay part-time workers some sort of occupational pension (Rōdōdaijin Kanbō Seisaku Chōsabu 1995: 33). Second, the portability of accrued pension rights is not well developed in Japan. If an employee changes his job, he very often loses the accrued right to draw an occupational pension.

Table 11 shows the ratio of retirees between 60 and 64 who received some sort of occupational pension, excluding onetime severance lump-sum benefits from book reserve plans. The ratio of retirees who receive an occupational pension annuity increases in accord with the size of the company. However, in general the ratios are lower than what one would expect considering the high ratio of firms that have adopted occupational pension schemes. Even in big companies with more than 5000 employees, only 27.2% of the male retirees received an occupational pension annuity. There are also big differences between male and female workers. More male retirees receive occupational pensions than women and they receive higher pensions. These differences are the result of the shorter, interrupted working careers of women that tend to stem from marriage, childbirth or care for the frail elderly. Thus, women lose their accrued pension rights more frequently than men (Kaneko / Takahashi 1997: 183).

**Table 11: Ratio of Retirees between 60 and 64 Who Received Occupational Pension Annuities (as a percentage of employees who have been employed at the same firm since they were 55)**

Size of the firm	Ratio of retirees who received occupational pensions		Average monthly occupational pension in ¥	
	Male	Female	Male	Female
Average	13.8	4.9		
5-29 employees	3.3	0.7	53,300	0
30-99 employees	6.7	2.5	62,500	41,200
100-299 employees	7.2	3.2	66,100	40,800
300-999 employees	9.5	4.2	72,300	29,300
1000-4999 employees	15.8	5.8	87,600	37,800
Over 5000 employees	27.2	18.1	89,400	49,900

Note: Without severance lump-sum benefits from book reserve plans.

Sources: Kaneko / Takahashi 1997: 183; Asano / Kaneko 1998: 35

Also, gender-specific wage differentials during the working life are later reflected in lower pension benefits, another reason women receive lower pensions.

The diffusion of Employees Pension Fund Plans (EPFPs) and Tax Qualified Pension Plans (TQPPs) is closely related to the size of a company. In 1998, the ratio of TQPPs with less than 100 members was 77.7%. On the other hand, the ratio of EPFPs with more than 1000 employees was roughly 88% (Life Design Kenkyūjo 2000: 17, 124). EPFPs and TQPPs differ also in terms of length of payment. 71.4% of the TQPPs pay annuities for up to 10 years, whereas the EPFPs usually pay lifetime annuities (Rōdōdaijin Kanbō Seisaku Chōsabu 1995: 24; Life Design Kenkyūjo 2000: 19). The average monthly TQPP pension was ¥58,499 in 1998. The average pension of new pensioners of the EPFPs was ¥57,000 (Life Design Kenkyūjo 2000: 22, 27).

**Table 12: The Ratio of the Elderly Who Draw Benefits from the EPI and from Occupational Pension Schemes (1992)**

Age group	Ratio of the elderly who receive an EPI pension		Ratio of the elderly, drawing an EPI pension, who also receive occupational pensions		Average monthly occupational pension in ¥	
	Male	Female	Male	Female	Male	Female
59-59	20.00%	9.87%	1.61%	3.86%	119,600	42,300
60-64	60.09%	28.74%	12.50%	3.95%	92,900	54,400
Over 65	61.60%	31.52%	10.68%	2.86%	62,400	60,900

Note: The sharp decline in the average monthly occupational pension between the age groups is likely to be related to the fact that most TQPPs only pay annuities for up to 10 years.

Source: Asano / Kaneko 1998: 36

Table 12 shows the ratio of the elderly who draw benefits from the EPI and from occupational pension schemes. The ratio of women over 65 who draw an EPI pension is only half as large as the respective ratio for male pensioners. As for women who draw an EPI pension, only 2.86% also receive an occupational pension. Even the respective ratio for men (10.68%) is low with regards to the high percentage of companies which have an occupational pension scheme.<sup>44</sup> The main reason is certainly the lack of portability of accrued pension rights.

<sup>44</sup> The ratio of male pensioners with income from private (mainly occupational) pensions in Australia (19%) and Germany (18%) is also comparatively low. The

Asano and Kaneko demonstrate that the ratio of employees who draw an occupational pension after company retirement declines significantly if the employees change their jobs after they have reached age 55 (1998: 35–37).

## 2.2 Financial and Regulatory Issues of Defined Benefit Plans

At the time of this publication, the regulations regarding occupational pension schemes were still under review. The Ministry of Health and Welfare, the Ministry of Labor and the Ministry of Finance are currently planning a comprehensive occupational pension law which will propose major changes to the existing defined benefit plans and which will lay the foundation for Japanese-style 401(k) plans. The following sections examine current financial and regulatory issues with regards to occupational pension plans and then discuss the possible changes and obstacles that will meet these new schemes.

### 2.2.1 Funding Problems and Financial Deregulation

Many EPFPs and TQPPs have recently come under financial pressure. Until 1997, the government's actuarially mandated deferral interest rate for EPFPs and TQPPs, i.e. the expected rate of return, was set at 5.5%. However, the yield from fund reserves has been substantially lower for several years than this deferral interest rate because of a continued monetary policy of low interest rates. As a result of rigid actuarial assumptions and a number of investment restrictions, many EPFPs and TQPPs have carried unrealized losses (*fukumi-son*). Yet, recent low interest rates alone cannot explain the worsening financial situation of many funds. Recalling the return of investment in *table 10*, one understands that the yield of a mixed portfolio over 20 years was on the average higher than 5.5%. In other words, older funds, at least, should not have ended up facing such large financial troubles. However, in reality older funds seem to be especially vulnerable. Asano and Kaneko state four reasons for this finding (1998: 73–75): 1. Because of an increasing life expectancy and wage increases and a decline in the number of fund members, the financial situation of funds has worsened over time. 2. Older funds have frequently used yearly surpluses for benefit hikes. 3. If the surpluses surpassed a designated limit, funds used these revenues to finance the construction of leisure facilities

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respective ratios in the United States (~38%) and the United Kingdom (~70%) are much higher. With the exemption of Finland, all 11 countries analyzed by Behrendt also had much lower female recipient rates (Behrendt 2000).

for their members. 4. Until recently, most funds have accounted for their financial holdings according to purchasing prices. However, the market value of these holdings has declined considerably since the burst of the bubble-economy sent the stock and real estate markets falling. Most funds have not parted with their holdings because that would have made the underfunding problem obvious.

For many years, a reluctance to sell unprofitable holdings has prevented management of investments that is oriented toward earning returns. Even after the deferral expected interest rate was lowered for the first time in 1997, many funds kept using the old rate of 5.5% because switching to a lower rate would have made the underfunding problem visible (Watanabe 1998: 10). So far, the magnitude of the funding problem has been impossible to quantify because plan sponsors have not revealed enough financial data. However, if one considers the fate of the 27 leading Japanese companies that do reveal most of their pension finance data in the US under the Generally Accepted Accounting Rules, one can catch a glimpse of the magnitude of the problem. At the end of fiscal 1996, these companies had on the average an underfunding problem of ¥140.8 billion, which was equivalent to 15.5% of their combined shareholders' equity. Since these companies are among the best Japanese companies, one can rightfully assume that the situation in the rest of the market is much worse (Asia Agenda International 1998: 15).

Since March 31, 1998, EPFPs have been required to revalue their portfolios on a market basis with between five to ten years to depreciate any resulting losses. In their fiscal 2000 financial statements, all companies will have to disclose assets for pension payouts and expected liabilities. This means that the underfunding problems of TQPPs will come to light in the near future. High pension expenses arising from underfunding will negatively affect net income, price/earnings ratios, debt/equity ratios and cash flow. Since many companies fear these unpleasant revelations, they have gone ahead and recognized their pension fund deficits, shoring up their funds. In fiscal year 1998, ending in March 1999, 230 defined benefit plans received contributions from sponsoring companies to cover shortfalls (Shibata 1999: 30). In fiscal 1999, companies paid ¥1.01 trillion to 1800 EPFPs. Nearly every EPFP received additional funds to cover pension shortfalls (*Nihon Keizai Shinbun* 18 Aug. 2000). About a third of Japan's major companies contributed to their pension plans through specially designed trusts to offset unfunded liabilities. This allows them to remove contributed portfolio shares from their balance sheets, which in turn shrinks their asset base and opens the way for more efficient use of assets (*Nikkei Weekly* 31 July 2000: 17).

Regulations concerning EPFPs provide fairly strict protection for the vested rights of employees. This obliges the EPFPs to shore up their funding which is not so much the case with TQPPs. Small- and medium-sized companies which constitute the largest share of the sponsors of TQPPs often lack the financial resources to eliminate pension shortfalls. An increasing number of companies were therefore allowed to dissolve pension plans. In recent years, an average of 3000 to 4000 plans ceased their operations (*Nihon Keizai Shinbun* 18 Aug. 2000).

Apart from the current funding problems, changes in regulation of the financial environment will have a significant influence on the performance of occupational pension plans in the future. This environment has changed considerably since the mid-1990s.<sup>45</sup> Since that time regulations regarding pension money have been rapidly abolished.<sup>46</sup> One of the most important regulations in this respect was the so-called "5-3-3-2 rule." Under this rule, pension plans had to invest 50% of their funds in domestic fixed-income assets, less than 30% in Japanese stocks, less than 30% in foreign denominated assets and less than 20% in property. This rule was finally abolished in December 1997 and replaced by guidelines specifying that companies have a duty to appoint a director in charge of executing investment management decisions, establish an appropriate policy for setting the plan's asset mix and assign personnel with professional knowledge (Curuby & Company 1998: 32).

Hence, there are hardly any financial regulations in place that would prevent the pension funds from seeking higher returns. However, it will certainly take some time before companies make full use of these new opportunities. Historically, most sponsors have relied on Japanese trust banks and life insurance companies for asset-management services. Manager selection had little to do with investment performance. Life insurance companies were frequently chosen because they were substantial shareholders in the companies that sponsored the funds. Trust banks were often selected because of their close ties to the company as its financing bank (main bank) within a *keiretsu* or corporate family. In this respect, the search for better returns is to some extent linked to the pace with which the typical cross-share holding structures in the Japanese economy unwind in the future.

<sup>45</sup> The turning point in this respect was the signing of the US-Japan financial services pact in January 1995. See Asia Agenda International 1998 for a good overview of financial deregulation.

<sup>46</sup> See Conrad 2000: 268-270 for details.

### 2.2.2 Major Obstacles and Possible Changes

Three major obstacles block a successful transformation of the existing defined benefit plans.

The first problem is political. Currently, the different schemes are under the jurisdiction of different ministries that are engaged in a turf-battle to protect their areas of control. The Ministry of Health and Welfare oversees the EPFPs. The Ministry of Finance is in charge of the TQPPs. The Ministry of Labor, which regulates the defined contribution Employees Property-Accumulating Pension Plans (EPAPPs) (see chapter II.2), has also re-entered the pension arena. These EPAPPs, which have so far not played a major role in the Japanese retirement context, are now in the limelight because they are regarded as the possible base for the planned introduction of Japanese-style 401(k) plans. Since the three ministries seek to protect their turf, it seems difficult to devise a comprehensive framework in the best interests of employers and employees.

The second major problem is the lack of a regulatory legal framework. Since the jurisdiction of the different schemes lies with the different ministries, the country does not have a unified private pension law like the *Employee Retirement Income Security Act* (ERISA) in the United States of America or an insurance against insolvency like the German *Pensionsversicherungs-Verein auf Gegenseitigkeit* (PSVaG). This has resulted in lax attention to the fiduciary responsibility of protecting the vested rights of employees, especially in the case of the TQPPs. So far there is also no legal obligation to fund occupational pension schemes.

The third problem is the lack of a non-discriminatory tax framework. The tax system treats EPFPs more favourably than TQPPs. EPFP assets are essentially untaxed and are only subject to a special corporate tax imposed on accumulated pension assets above an amount equal to 2.7 times the required funding level of the *substitutional component*. On the other hand, TQPPs are subject to an annual corporate tax of 1% on funded assets and a local inhabitants tax of 0.173%. Curuby & Partner estimate that TQPPs pay around ¥200 billion in taxes a year, whereas EPFPs pay only about ¥2.2 billion (1998: 34). Another problem is discriminatory taxation of pension benefits. Most employees choose to receive their TQPP benefits as a lump-sum payment because the tax on severance payments is substantially below the income tax rate. The tax framework is also the reason why the existing defined contribution plans have been relatively unpopular, so far. All existing defined contribution plans are subject to full tax payments.

As noted above, the respective ministries are currently discussing a comprehensive framework for a new corporate pension law that would

tighten scrutiny over occupational funds in order to protect the vested rights of corporate employees. The draft of the new bill revolves around a system of periodic audits (once a year) for TQPPs that would ensure that these funds raise their contributions if shortfalls exceed a specific level. The draft also outlines the conditions under which a firm shall be allowed to transfer the *substitutional component* of its EPFPs back to the government, so that it would only be responsible for the payment of the *supplementary* and *additional component*. It is projected that in the future, EPFPs will be able to choose between lifetime annuities, terminated annuities or lump-sum payments.

Apart from the changes concerning the regulations of TQPPs and EPFPs, a new type of defined benefit plan (*shingata nenkin*) might be introduced in 2001. The general idea is that firms that have so far relied on TQPPs and EPFPs should also be given the option to shift their funds to this new type of plan. Based on mutual agreement among employers and employees, firms shall have considerable discretion regarding questions of benefit qualification in these new plans and the type and length of pension payment. The new plans would also be characterized by stricter fiduciary duties for investment managers and stricter rules concerning information disclosure as well as a duty to cover pension shortfalls. In terms of tax treatment, the new type of plans would treat 100% of the employer's contribution as a pecuniary loss, the same way these contributions are now treated in EPFPs. The pension reserves will be tax free up to a certain amount, as they are in EPFPs. At the time of payment, the benefits are taxed in the category "miscellaneous income" of the income tax (*Nihon Keizai Shinbun* 21 August 2000; *Nikkei Weekly* 28 August 2000).

It is yet too early to fully assess how these (planned) changes would influence the practices of defined benefit plans in Japan. However, it is safe to say that improved fiduciary duties and information requirements constitute an important, overdue measure in the safeguarding of the pension rights of corporate employees. This is particularly true in the context of a widely deregulated financial market. In 1997, a study group at the Ministry of Health and Welfare published a report of proposed fiduciary duty guidelines. However, the standards it put forward were vague and weak in comparison to those prevailing in the US. If the proposals are incorporated, unrevised, into the planned reform legislation, Japan will continue to lag behind internationally accepted norms (*Asia Agenda International* 1998: 19).

### 2.3 Japanese-style 401(k) Plans

Apart from the changes of regulations envisioned regarding defined benefit plans, the Japanese government also plans to introduce a new type of defined contribution plan. This new type of plan would be modelled on so-called 401(k) plans<sup>47</sup> in the US. 401(k) plans are mutual fund-type investment vehicles designed to attract pension assets. In contrast to defined benefit plans, defined contribution plans, such as 401(k) plans, require that an employee contributes specific amounts (in absolute terms or as a percentage of salary) but do not specify how much an employee will receive as a retirement benefit. The retirement benefit depends on the performance of the fund. American 401(k) plans are tax-deductible and employers can match employee contributions, up to 50%. As long as the investment earnings remain in the plan, they remain untaxed. The employer establishes such a plan, selects the investment vehicles, trustees and custodians and monitors the managers' performance. The employee chooses among arrangements on offer and invests in one of the funds.

There are three perceived advantages of defined contribution plans. First, they promise professional management. Second, their assets can be better protected against malfeasance and political pressures. Third, they offer a better match to the risk preferences of a participant than do traditional defined benefit plans. Mitchell points out that these advantages do not apply to defined contributions plans in general, but can indeed be attributed to the American 401(k) plans. The following features make these plans attractive to both employees and employers (Mitchell 1999): 1. The employee can voluntarily contribute to retirement savings out of a pre-tax income if he chooses, up to a taxable limit. 2. Employees ask for, and often receive, multiple investment options in their 401(k) plans. This allows them to allocate their pension assets according to their personal risk preferences. 3. Labor market mobility increases because 401(k) plans allow employees to move their accumulations to a new plan if they change jobs (portability). 4. Employers can design these plans to attract or retain a particular kind of employee, while penalizing other sorts of workers. 5. Employers are not directly responsible for the investment return. However, as corporate pension sponsors they are considered the legal fiduciary, which means that they may be held personally liable for pension mismanagement. 6. Since employees can choose their pension investments, this has placed new demands on plan record keeping and investment management skills and facilitated the massive investment in computer, record

<sup>47</sup> The name 401(k) plan stems from the clause in the US Internal Revenue Code, which sanctions this type of plan.

keeping and investment systems on the part of financial institutions. This development has driven improvements in transparency regarding plan expenses, greater cost containment, efficiency in record keeping and improved service.

Because of these advantageous features, the Japanese government is contemplating the introduction of 401(k) plans. Japanese employers favor these plans because they place the investment risk squarely on the shoulders of employees. It is also said that some Japanese bureaucrats consider 401(k) plans as a force for reviving the ailing stock market. After all, American 401(k) plans hold over 60% in equities and less than a quarter in bonds and stable value funds (Mitchell 1999: 14).

The Japanese government is currently considering the means by which companies might transfer assets pooled in EPFPs and TQPPs to 401(k) plans. Such a move would relieve companies from the burden of making up for projected shortfalls in defined benefit plans. Many Japanese experts assume that it would be relatively easy for the Ministry of Finance, which oversees TQPPs, to convert the TQPP system into 401(k) plans. That would, however, require tax or other incentives to induce employees to give up a portion of the benefits promised them. According to Takayama, such a transition would require that the new tax framework include special exemptions that would take into account the length of continued employment. However, the planned reform bill for Japanese-style 401(k) plans foresees only uniform tax-exemptions regardless of age and length of continued employment. This might diminish the chances of a smooth shift from defined benefit plans to the new 401(k)-style defined contribution plans (Takayama 2000).

Another possible way to introduce 401(k) plans in Japan would be to enlarge the existing defined contribution Employees Property-Accumulating Pension Plans (EPAPPs). Currently, these plans are subject to a number of restrictions that have limited their appeal for employees. These include low tax ceilings and a limited choice among financial products and institutions. If these obstacles were removed, these plans could be transformed into Japanese-style 401(k) plans.

At the time of this publication, the exact nature of the Japanese 401(k) plans was yet unclear. Therefore, this analysis can only assess likely changes from a broader perspective. For this purpose it is helpful to refer to areas where governments must establish high standards to ensure that defined contribution plans meet the needs of plan participants (Mitchell 1999: 14–21):

1. Governments must carefully structure policy regarding tax deductibility of pension contributions in order to increase pension participation.

To induce greater participation, the system might require government or employer matches that are larger for low-wage workers.

2. Governments need to focus on the investment decision-making process rather than the asset mix. In the US, this approach finds expression in the so-called “prudent man” policy according to which pension fund fiduciaries manage the money in the best interest of plan participants. This requires that they show that they have diversified the pension portfolio in order to balance risk and return.

3. The environment for pension record keeping and reporting needs to be improved. Especially, governments need to establish disclosure standards for pension system fees and commissions.

4. The environment for pension plan payout needs careful structuring. If retiring workers can take lump sum benefits rather than buying a life annuity, a risk of outliving the assets arises. Governments must standardize the reporting of annuity fees and commissions so participants can compare different annuity products. Also, the problem of adverse selection needs to be addressed. This problem arises among annuity purchasers in a voluntary market when those who anticipate living longer than average will buy an annuity, while those expecting shorter-than-average mortality will not. This results in pricing which makes annuities less attractive for people anticipating an average life expectancy. This problem can make it necessary for governments to mandate some minimum amount of risk pooling for all pension participants. Also the tax environment of pension payouts needs careful consideration.

A comparison of these best practises with the likely framework of the Japanese 401(k) plans shows that the legislation will probably leave some of these crucial issues untouched. For example, proposed legislation does not address the issue of matching contributions by employers (Takayama 2000). It is also unlikely that disclosure standards for pension fees and commissions are part of the new regulations. The same is true for the rules regarding pension payout and the problem of adverse selection. In short, regulations will probably be less than sufficient to ensure that participants’ needs are fully met. Notwithstanding the lack of regulatory safeguards for the interests of participants, the new plans are likely to give the Japanese pension market new momentum. Foreign fund-management firms have identified the Japanese defined contribution market as one of the main growth markets of the coming years (Solomon Smith Barney 1998: 101–118). The consulting firm Fordyce & Associates estimates that the defined contribution market could have assets under management of between US\$ 99 billion and US\$ 132 billion by 2005 (Asia Agenda International 1998: 28).

Still, the form that the new plans will take remains unclear. A September 2000 survey on defined contribution pensions by the *Nihon Keizai*



*Shinbun* reflected this. It revealed that among the 501 companies responding, only 14.5% considered introducing defined contribution pension plans. Nearly two times that number, 24%, were not considering such plans and 61.5% were undecided (*Nihon Keizai Shinbun* 2 Oct. 2000: 3).

#### 2.4 Results

To date, the most important occupational pension plans in Japan have been of the defined benefit type. The diffusion of these plans is closely related to company size. The absolute number of pensioners who draw occupational pensions is small in comparison to the number of companies that have some sort of occupational pension scheme. The main reason for this is the insufficient portability of accrued pension rights. The legal framework for defined benefit plans lacks a number of other important regulations that provide for fiduciary duties, information disclosure and the duty to correct for pension shortfalls. In this respect, the changes to be enacted in 2001 are an important step in the direction of safeguarding the future pension rights of corporate employees. However, it is too early to assess the influence of the new legislation in full.

The Japanese-style 401(k) plans that are likely to be enacted in 2001 will have a significant influence on the Japanese pension environment. However, it looks as if these plans will lack important features necessary for sufficiently safeguarding the interests of participants in the plan. Nevertheless, one can expect that these new plans will swiftly take off because Japanese employers are keen to unload investment risks onto their employees. If one considers the huge funding problem of the defined benefit plans, it is very likely that employers will do their utmost to press for a shift to defined contribution plans in order to shift liabilities from the company to the employee. As one might imagine, the largest Japanese trade-union confederation (*Rengo*), supports defined benefit plans over defined contribution plans as the primary guarantor of occupational pensions (*Japan Labor Bulletin* 1 Nov. 1999: 4).

### 3 AN ASSESSMENT OF CHANGES IN THE PUBLIC-PRIVATE MIX

This chapter assesses the (planned) changes in the public and occupational pension schemes from a broader perspective. For this purpose, it is helpful to look at the experience of countries where such changes in the public-private mix have already taken place.

In general, the debate on strengthening private elements in pension systems is torn between two arguments. On one side, observers argue that

workers are able to provide for themselves. On the other side, observers are concerned about growing inequalities in the distribution of pensions among the population. The latter group fears that large groups of older people will be marginalized.

How will the Japanese pension reform process influence the well being of the elderly in the future and what are the likely distributive effects?

In general, three tendencies support the argument that a shift in the public-private mix will lead to growing inequalities (Behrendt 2000: 5–6):

First, unlike most public pension schemes, private schemes usually do not include redistributive elements that would compensate for a low level of participation in the labor force during working life, low wages, or periods of non-employment.

Second, occupational pension schemes frequently cover only the core workforce, while part-time workers are not included.

Third, an occupational pension where the employee bears some or all of the expense of accumulating savings requires a certain level of income so that current consumption is not unduly restricted.

In a cross-country analysis<sup>48</sup>, Behrendt confirms that private pensions (predominantly occupational pensions) have reproduced or even strengthened existing inequalities in the labor market. However, the study also shows that a high degree of inequality is not necessarily a characteristic of private pensions as such, but strongly depends on other policy factors. Regulation of private schemes can make a large difference in terms of distributive effects. For example, Finland and other Scandinavian countries have relatively high degrees of equality in the distribution of private pensions, partly because private provisions are mandatory in some of these countries (2000: 18–23).

Japan, however, does not aim to make occupational pensions mandatory. Instead, the Japanese policy is to better regulate the pension environment and add new choices to the occupational pension menu such as a new type of defined benefit plan (*shingata nenkin*) and the Japanese-style 401(k) plans.

In order to assess the likely effects of the changes in Japan, a comparison with pension policies taken up in the United Kingdom in the 1980s can provide some interesting hints. Broadly, the pension system in the United Kingdom consists of a flat-rate basic pension based on a mixture of flat-rate and earnings-related contributions. Entitlement for the basic pension is based on the contribution record. In order to receive full benefits, employees must have paid contributions for about 90% of their working life. Peo-

<sup>48</sup> According to Behrendt, the study did not include Japan because of a lack of suitable data.



ple with inadequate income can apply for means-tested welfare benefits. The second-tier pensions of employees are provided by the State Earnings-Related Pension Scheme (SERPS) or by occupational or personal pension schemes. All employees with income above a certain limit must belong to either SERPS or an appropriate private scheme. In the 1980s, the United Kingdom adopted a policy to encourage workers to contract out of SERPS and join either occupational pension schemes (both defined benefit and defined contribution plans) or personal pension insurances. Because of a favorable rebate rate many employees choose to leave SERPS and joined private pension arrangements. Today, approximately 73% of all employees are members of occupational pension schemes or have personal pensions. 12% are insured in SERPS and about 5% are members of both occupational schemes and SERPS (Budd / Campbell 1998: 100). In contrast to the current situation in Japan, where only EPFPs can partially contract-out of the public pension scheme, the United Kingdom allows full contracting out to defined contribution and personal pension schemes.

While the income of pensioners as a whole has grown in the United Kingdom, this growth has not been uniform. There has been a noticeable increase in the inequality of pensioner incomes while the frequency and level of private incomes has risen. Average pensioner incomes have risen between 40 to 50% in real terms since the late 1970s (Dilnot *et al.* 1994: 41; Budd / Campbell 1998: 116). Despite the increased inequality, living standards for pensioners as a group have improved. At the same time, the basic state pension in Britain has largely lost its role as a guarantor of a minimum level of income because the benefits have only been indexed to prices since the 1980s. Thus, these benefits keep falling relative to general living standards. In 1996–1997, the full basic pension was only 15% of the average full-time male earnings (Budd / Campbell 1998: 101). In the basic pension, the relationship between contributions and benefits has become more and more distant. At the same time, the number of old-aged recipients of means-tested welfare benefits, benefits that are in fact higher than the basic pension level, has increased over the last 20 years (Dilnot *et al.* 1994: 12–13).

The situation in Japan could follow a similar course if the options of contracting out beyond the EPFP framework are encouraged. However, there is no indication that this will happen in the near future. The pension policy in the United Kingdom aimed at a systematic replacement of the public SERPS by private pension plans. This resulted in an increase in pensioner income as a whole. The Japanese approach, on the other hand, is less systematic. Therefore, it is likely that existing differences in pension income between the self-employed, employees of small and medium sized companies and workers of big companies will be widened. Only

privileged groups will have improved access to private provisions. In contrast to developments in the United Kingdom, this could mean that incomes of Japanese pensioners as a whole might not increase in the future.

It is also important to realize that the occupational pension provision is primarily an instrument of human resource management in the private sector. Companies use occupational pension provisions as an incentive for continued employment or to attract a certain type of employee. Therefore, it is rather unlikely that the Japanese private sector will significantly extend the coverage under defined benefit schemes in which the individual company bears the investment risk. This is especially true in the light of the current underfunding problems. Companies will be rather reluctant to take on new obligations. Thus, defined contribution schemes, in which the employee shoulders the investment risk, offer an appealing alternative for many companies.

With regard to the Japanese basic pension, the problems in the United Kingdom can also provide valuable lessons. If the Japanese basic pension is only indexed to prices in the future, more and more pensioners will be forced into means-tested social welfare. This problem has already increased in the last forty years. As noted above, since the 1960s the ratio of the elderly to the number of people on social welfare has risen significantly. Even without the abolition of wage indexation, the full basic pension benefits of a citizen living alone are below the minimum living standard as defined by the social welfare law. To the extent that the link between contributions and sufficient benefits erodes over time, the number of people evading contribution payments is also likely to increase.

Summarizing the results, it seems likely that the changes in the public-private mix will lead to growing inequalities among pensioners in Japan. In a worst-case scenario, these growing inequalities might even be accompanied by a general overall decline in pension income.

## PART IV: CONCLUSION

Economic, demographic and social factors influencing the Japanese pension system have undergone major changes since the 1970s. As a result of these changes the public pension system has recently come under severe pressures.

From a macroeconomic perspective the most important factors influencing the pension system are the economic growth rate, public sector debt, the employment rate and the tax burden. The tax burden aside, all of these factors fared poorly in the last 10 to 15 years. Deteriorating public sector finances, in particular, severely limit new social policy initiatives. The only light in the gloomy macroeconomic situation is the tax burden, which is still comparatively low. Future hikes of direct and indirect taxes as well as of social security contributions can, to a certain extent, absorb the negative impact of the rapid aging of society. On the other hand, tax hikes alone will hardly be sufficient to cope with these challenges.

From a microeconomic perspective, the most important factor with regard to pensions is the Japanese system of employment practices. These practices cause considerable fluctuations of income in later working life, which must be considered when evaluating the effects of public and occupational pension reform in Japan.

Certainly the most striking factor influencing changes in the Japanese pension system is the rapid aging of society. Among the highly-industrialized countries, Japan has the largest elderly population and it is growing at the fastest rate. This aging process directly influences the potential burden on future contributors to the primarily pay-as-you-go Japanese pension system. At the same time the number of the elderly who live alone has been increasing significantly. These facts highlight the need for an income security system that will function independently from support by children.

Developments in the Japanese public pension system reflect changes in the economic, demographic and social environment. After World War II, the few existing public pension schemes were totally defunct. In marked contrast to many other industrialized countries, Japanese pensioners after the war did not receive fairly high pay-as-you-go financed pensions but instead received only low, means-tested benefits. However, an expansive public pension policy soon followed the successful economic growth policy of the 1960s, which quickly led to coverage of most of the population. The 1960s and 1970s saw quick increases in the benefit levels, yet the con-

tributions were not raised at the same speed. Originally the two main public schemes, Employees Pension Insurance (EPI) and the National Pension Insurance (NPI), were capital funded but were later transformed into pay-as-you-go financed systems. By the early 1980s it became apparent that this expansive pension policy was not in line with economic, demographic and social changes. Beginning with the 1985 reform, public pension policy ceased to be expansive and sought to curtail future expenses in order to deal with the rapid aging process of society. The 1985, 1994 and 1999 pension reforms strove to secure financial sustainability through a number of parametric measures such as the curtailment of benefits, an increase in the entitlement age and changes in the system of indexing benefits. By fiscal 2025, the 1999 reform package will slash current pension benefits by about 20%. In order to counterbalance benefit cuts, the government aims to strengthen the role of occupational pension schemes. It hopes that changes in the regulatory and financial framework will make defined benefit occupational plans more attractive. The government also plans to introduce Japanese-style 401(k) defined contribution plans in 2001.

An evaluation of the long-term effects of recent reforms yields the following conclusions:

With regard to the issue of financial sustainability, reliable data are scarce and official projections cannot be trusted. However, some trustworthy financial projections have shown that the combination of recent parametric reform measures is almost sufficient to put the finances of the Employees Pension Insurance (EPI) on a sustainable footing. Yet, due to the slow schedule for implementation of the recent reform measures, benefit cuts or higher than predicted contribution hikes will likely be necessary in the future. The state of the finances of the National Pension Insurance (NPI) is even harder to assess. Taking all factors into consideration, one can argue that the 1999 reform will have a significant, positive effect on the NPI finances. A recent IMF survey also supports the conclusion that the finances of the public pension system in Japan could be sustainable.

Information on the effects of a (partial) privatization is also very limited. Some data suggest that such a shift could be financed, in principle. However, the data do not sufficiently quantify the effects of such a transition. Given this limited information, it comes as no surprise that the Pension Commission designated the issue of (partial) privatization of the public pension system as an issue requiring further study.

In terms of distributive effects, the analysis of recent pension reforms reveals that the Employees Pension Insurance (EPI) causes considerable intergenerational as well as intragenerational redistribution.

Current pensioners receive benefits that are several times higher than what their contributions would have produced had the funds been invested in similarly safe investments. However, pensioners will receive much smaller, or even negative, net transfers in the future under recent parametric reforms. The 1999 pension reform did not improve intergenerational fairness.

In terms of intragenerational distributive effects, considerable regressive redistribution within the group of current pensioners in the Employees Pension Insurance (EPI) highlights a problem of fairness. However, due to the introduction of the basic pension in 1985, which is paid for by the National Pension Insurance (NPI), this regressive redistribution will ultimately be eliminated.

Nevertheless, the National Pension Insurance (NPI) as the main tool of income redistribution in the pension arena causes a number of confusing distributive effects. These effects seriously question the fairness and efficiency of the current system. In this respect, subsidization of members of the mutual aid associations is especially problematic.

The National Pension Insurance (NPI) is not an effective mechanism for ensuring minimum income adequacy. In some cases, the model basic pension of an old-aged couple reaches a subsistence level; however, the basic pension for a single-person household does not even meet the lowest subsistence level in the public assistance system. The fact that benefits for the basic pension are below the subsistence level might be responsible for an increase in the ratio of the old-aged among those receiving public assistance. The 1999 reform, which stipulates that basic pension benefits will no longer be indexed to wages, will further erode the function of the basic pension as a tool for minimum income security.

With regard to political risks, there are two major problems. First, the information policy of the Ministry of Health and Welfare is insufficient. Its actuarial reviews are systematically too optimistic and as a result, undermine confidence in the public pension system. The Ministry presents the public with just as much information as is necessary for the Ministry to justify its own proposals. The strategy it has adopted to offset benefit cuts in the public pillar by promoting occupational pension plans is not communicated to the public. Nor does it evaluate its strategy in terms of its likely effects on income distribution and pension income.

The second political risk is connected to the management of the pension reserve fund. This fund, which still holds pension reserves amounting to ¥150 trillion, has frequently been used to finance politically motivated pork-barrel projects. Return on investment in these projects has been lower than what could have been realized had the money been invested in a mixed portfolio in the capital market. It is quite possible that parts of the

fund were lost through the FILP program and the bad loan crisis. Starting in April 2001, the system of mandatory investment in the FILP program will be abolished and management of the pension reserve fund will be put under direct control of the Ministry of Health and Welfare. This might result in better returns to the pension investments in the future, but it could also mean that proposed efficiency gains would fall prey to political influence or a lack of financial know-how in the Ministry. It is too early to evaluate how the planned changes will eventually influence the return on investment and whether the responsibilities for management of the trust fund will be clearly defined.

With regard to the number of participants and the amount of assets under management, the most important occupational pension schemes have, so far, been the defined benefit programs. The wide diffusion of these schemes stands in sharp contrast to the rather low ratio of retirees who actually receive an occupational pension. This discrepancy arises from regulations that fail to guarantee the portability of accrued pension rights. The legal framework also lacks other important regulations regarding fiduciary duties and information requirements. Besides the lack of a sufficient legal framework, there are two other obstacles that obstruct a successful transformation of the existing defined benefit plans. The first is political. Currently, the different schemes are under the jurisdiction of different ministries engaged in a turf-battle to protect their areas of control. Thus, it is difficult to devise a comprehensive framework that is in the best interests of employers and employees. The second problem is the lack of a non-discriminatory tax framework. The different taxation of contributions and benefits prevents the unhindered diffusion of new defined-benefit plans.

Currently, the respective ministries are discussing a comprehensive framework for a new corporate pension law that would tighten scrutiny over occupational funds in order to protect the vested rights of corporate employees. It is yet too early to fully assess how these changes will influence the practices of defined benefit plans in Japan. However, if the proposals concerning fiduciary duty published by a study group at the Ministry of Health and Welfare are incorporated into the planned reform legislation without revision, Japan will continue to lag behind internationally accepted norms.

Apart from the envisioned changes in regulations for defined benefit plans, the Japanese government also plans to introduce a new type of defined contribution plan, which is to be modeled on so-called 401(k) plans in the US. At the time of this publication, the exact nature of the Japanese 401(k) plans was unclear. However, a comparison of the best practices of 401(k) plans in the US with the proposed plans in Japan shows that the

legislation will probably leave some crucial issues, such as disclosure standards, rules regarding pension payout and problems of adverse selection, untouched. Notwithstanding the lack of sufficient regulatory safeguards, the new plans are likely to give the Japanese pension market new momentum. Given the current funding problems of most defined benefit plans, it is likely that companies will try to shift to defined contribution Japanese-style 401(k) plans. Not surprisingly, foreign fund-management firms have identified the Japanese defined contribution market as one of the main growth markets of the coming years.

A comparison of current Japanese reform strategies with those dating from the 1980s in the United Kingdom reveals underlying similarities. In both countries, occupational and personal pensions are designed to counterbalance public benefit cuts. In the UK, the kind of reforms being proposed in Japan caused a general rise in pensioners' income, while the (pension) income distribution showed increasing disparities. The current distribution of occupational pension plans and the legal and tax framework in Japan indicate that the Japanese experience will be somewhat different. Following the experience in the UK, it is almost certain that the income distribution in Japanese pensions will show increasing disparities. This is likely if one considers the already existing differences, which are closely related to the dual structure of the Japanese industry, with its complex division of labor between smaller and bigger companies, its significant wage differentials as well as differences in employment and retirement practices. The existing differences in pension income between the self-employed, employees of small and medium sized companies and workers of big companies will be widened. If the options for contracting out are not encouraged as they were in the United Kingdom, only privileged groups will have improved access to occupational provisions. In contrast to developments in the United Kingdom, this could mean that incomes of Japanese pensioners as a whole might not increase in the future.

With regards to the basic pension in Japan, the problems in the United Kingdom can also provide some valuable lessons. If the Japanese basic pension is only indexed to prices in the future, more and more pensioners will be forced into means-tested social welfare.

Summarizing the results, it seems likely that the changes in the public-private mix will lead to growing inequalities among pensioners in Japan. In a worst-case scenario, these growing inequalities might even be accompanied by a general overall decline in pension income.

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