

**The Ninth Annual Colloquium of Superannuation Researchers
on Reform of Superannuation and Pensions**

Mathews Theatre, The University of New South Wales, Sydney, Australia
9 – 10, July 2001

The Keynote Address
Reform of Public and Private Pensions in Japan

by

Noriyuki Takayama

Professor of Economics

Institute of Economic Research, Hitotsubashi University

2-1 Naka, Kunitachi, Tokyo 186-8603

e-mail: takayama@ier.hit-u.ac.jp

URL: <http://www.ier.hit-u.ac.jp/~takayama/index.html>

1 Introduction

In the past, families and occupational schemes on a private basis were the major old-age safety net in Japan. The principal social security pension program was introduced during the World War II. It had developed gradually under the period of high-speed economic growth. Its development looked like a dividend from economic growth. An enormous shift of the population from farmers to salaried-men took place during the rapid growth period, along with attaining longer life expectancy. The household size has become smaller and smaller on average. The rise and the fall of private enterprises has been very common in this period. These factors forced the major source of old-age income to shift from families and occupational schemes to social security pension programs.

The future demographic and economic situations of Japan will make the current, generous social security pensions hard to maintain, however. It is still an open question whether or not Japan will manage to contain the increasing social security pension cost, while assuring its people stable lives over the whole life-cycle.

This paper discusses pension reforms of Japan at the turn of the century. Section 2 explains the past development in Japan's social security pension programs. Current Japan's pension programs are outlined in Section 3. Section 4 describes what kind of discussions are currently going on in Japan's pension debates. The latest reform of Japan's pension programs are discussed in Section 5. Sections 6 and 7 proposes how the public and private mix of safety net in old-age income has to be implemented.

2 Development in Japan's Social Security Pension Program

Japan currently has six social security pension programs covering different sectors of the population. The earliest plan was established in 1890; the most recent, in 1961. The earliest plan was for military servants, which asked no individual contributions. It was totally financed by general revenue. The scheme was then expanded to civil servants. The old-age benefit for military and civil servants was based on the final salary and its level was generous from

the outset.

The principal program mandatory for private sector employees is the Kosei-Nenekin-Hoken (KNH), which was enacted in the wartime in 1942. Old-age pensions of the KNH were forced to suspend immediately after the end of the war and the KNH contribution rate was reduced from 11% to 3%. The KNH was rebuilt in 1954 shifting from an earnings-related pension to a two-tier benefits system with flat-rate basic benefits.

2.1 High-speed Growth Period

The social security pension system was and is to be reformed at least every five years. In the early stages, the KNH benefit level was not charming yet, and for the old-age retirees at that time a lump-sum retirement benefit provided on an private basis by their employers was often of much more significance. On the other hand, pension benefits for civil servants were considerably higher. This difference induced “gap-decreasing” adjustments in benefit levels between private and public sector employees. Drastic improvements in the KNH old-age benefits were taken place in 1965 and in 1973; the replacement ratio in gross wage terms was increased to 40% and then to 60%. In 1973 the updating of past salary together with the benefit indexation were able to afford to manage in their old-age with the generous KNH benefits. In the meantime, there happened the sharp decline in the real significance of their lump-sum retirement benefits provided privately by their employers.

Under the KNH, equal percentage contributions are required of employees and their employers. The 3% contribution rate had been gradually increased and the total percentage went up to 7.8% in 1973.

At the outset, the KNH was established as a defined-benefit plan on a fully funded basis. It was initially regarded as a compulsory saving program to prevent inflation. Its finance shifted gradually from funded to pay-as-you-go. Currently the KNH has a reserve fund of about 130 trillion yen in 1998. KNH contributions have been accumulated in a reserve fund to be invested in social overhead capital for the construction of highways, railways, bridges, airports, and other public projects.

Before 1961 the self-employed, people engaged in agriculture/forestry/fishery, the unemployed, persons with no occupation, and employees working in small firms were still excluded in the social security pension system. The Kokumin-Nenkin (KN) Law was put into effect in April 1961, embracing all the people, previously uncovered, under social security. The participation in the KN has been compulsory for everyone (even for the jobless persons) between 20 and 59 years old.

The basic structure of the KN is a flat-rate basic benefit and a flat-rate contribution on an individual basis. One-third of the KN benefits were (and are) financed by subsidy through general revenue. The full old-age benefit of the KN was payable initially after 25 years of contributions from age 65, although an actuarially reduced or increased benefit could be claimed at any age between 60 and 70. The transitional KN old-age benefit with a special 10-year-contribution requirement began to be paid actually in 1971. A majority of the elderly came to enjoy receiving this special benefit, which contributed to making the public aware of a significant role of social security pensions in old-age income security. "Go and Go" policies were immediately adopted. The benefit formula of the KN had been revised to be more and more generous. Meanwhile indexation of the KN benefit was also enforced in 1973.

2.2 Period of Diminished Expectations

The KN started with a very small contribution, which was politically difficult to increase. The KN soon faced severe difficulties in financing benefits. An enormous shift of the population from farmers to salaried-men during the rapid growth period obliged some revenue-sharing scheme between employees' and non-employees' pensions to be necessary. The scheme was established in 1986, and since then, the first-tier basic flat-rate benefits of all the pension systems have been financially integrated. Currently the flat-rate pension benefit is financed on a fully pay-as-you-go basis. The 1986 reform has changed some requirements of the KN; the full old-age pension is payable after 40 years of contributions, provided the contribution were made before 60 years of age. There have been introduced special transitional provisions for those born after 1926 with at least 25 years of coverage. They can receive the

maximum pension even with fewer contribution years, provided they had been contributing since 1961.

It should be noted that those covered by the KNH (and the other employee pension systems) are not required to make individual contributions to the KN, while the KNH itself is responsible for the financial participation in the integrated first-tier, flat-rate basic pensions.

Since the 1986 reform, if the husband has the contribution deducted from his salary and placed in the KNH, his dependent wife has been automatically entitled in her own name to the flat-rate basic benefits, and she has not been required to make any individual payments to the public pension system. Through this, the women's right for pension has been comprehensively established.

The 1986 reform included another advance in the flat-rate disability pensions. A dependent child of age less than 20 got to be entitled to the flat-rate basic benefits in case of disability. Though the medical check was (and is) very strict, the handicapped children largely came to be supported by the social security pension system and not by the special welfare program.

Through the 1986 pension reform, the accrual rate for the earnings-related component of the KNH old-age benefits was to be reduced gradually from 1.0% per year to 0.75% cohort by cohort. The reductions corresponded to the longer average contribution years of the younger cohorts. On average, each cohort was expected to receive 30% of his career average monthly real earnings as the earnings-related component.

The future demographic situations of Japan was getting darker and darker; the total fertility rate (TFR) showed an unexpected sharp decline from 1975 and the current level in 2000 is 1.35. There is still little sign that the TFR will stabilize or return to a higher level. Japan's total population will soon begin to fall sharply to reach 40% of its current level by 2100¹⁾. On the other hand, life expectancy was steadily increasing. Consequently, the proportion of the elderly (65 years and above) for Japan will be 17.8% in 2001, becoming the front runner in the world. It is expected to reach 25% by 2015 and more than

30% around 2040. In the 1990s, the Japanese economy changed dramatically, too, when the asset bubble finally burst. In fiscal 1997, Japan's GDP showed negative growth in real terms, and in fiscal 1998, the economy appeared to have shrunk further, with fiscal deficit around 10% of its GDP. Thus the colorful dreams that Japanese youth have placed in their economy would be likely to be destroyed.

Both demographic and economic factors in the future will probably impose greater stresses on social security pension programs which are based on pay-as-you-go defined-benefit financing. The biggest political issue in the Japanese pension system was when to start benefit payments. The pension age was 60 years for workers in the 1990s. The government had proposed twice in 1979 and 1989 to raise the eligibility age for all workers to 65. The proposal was turned down by the Diet both times since trade unions and opposition parties were strongly against the bill.

In summer 1993, the political situation changed dramatically. The Liberal Democratic Party, which had been ruling Japan ever since the end of the Second World War, fell from power. It was replaced by a coalition of opposition parties (excluding the Japanese Communist Party). It was this coalition that prepared the 1994 legislation.

The approved legislation guarantees that the tier-2 earnings-related benefits for retired employees between 60 and 64 will be paid without any reduction. The tier-1 basic benefits for this age group are to be phased out by stages (between 2001 and 2013 for men), and eventually nobody under 65 will receive full basic benefits (the phasing out of basic benefits for female employees will be delayed by five years starting only in 2006).

Up to October 1994, benefits were adjusted in line with the hikes in gross wages, but since 1994, they have been in net wages.

3 Outline of Current Japan's Pension Programs²⁾

3.1 Public Pensions

Old-age Benefits

The present system is based on the 1986 reform. Under the new system, which become effective on 1 April 1986, all sectors of the population receive a common, flat-rate basic benefit. The other five systems for employees provide a supplement on the top of it related to the contributions. Although each system has its own contribution and benefit structure, all systems are similar, operating largely like pay-as-you-go defined-benefit systems.

This section will focus on the KNH (see Takayama, 1998 for more details of Japan's pension system).

The maximum basic benefit is 65,000 yen³⁾ per month at 1994 prices. The benefit is indexed automatically each fiscal year (from 1 April) to reflect changes in the consumer price index (CPI) of the previous calendar year. The current maximum basic benefit for 2001 fiscal year is 67,017 yen per month. In principle, benefit payments begin at the age of 65, but there was a special legal provision allowing employees to receive the full amount of the basic benefit from age 60. The tier-1 basic benefits are to be phased out by stages between 2001 and 2013 for men in their early 60s. The phasing out for female employees will be delayed by five years starting in 2006. Eventually nobody under 65 will receive full basic benefits. In exchange, employees between 60 and 64 will become eligible for advance payments at a reduced rate from the basic benefit.

Under the KNH, the accrual rate for the 2nd-tier, earnings-related component of old-age benefits is 0.75 percent per year (before the 1999 reform). Thus, 40-year contributions would earn 30 percent of the career average monthly real earnings. The career average monthly earnings are calculated over the employee's entire period of coverage, adjusted by a net wage index factor, and converted to the current net earnings level. These conversions are carried out at least every five years; after each conversion, benefits are indexed automatically every fiscal year to reflect changes in the CPI.

The full earnings-related portion is currently payable from age 60 to an employee who is fully retired. On reaching the age 60, an individual who has not fully retired can receive a reduced pension with the earnings test.

Under the KNH, equal percentage contributions are required of employees and their employers. The contributions are based on the monthly standard earnings. The total percentage in effect since October 1996 has been 17.35 percent.

Since April 1995, contributions have been deducted from bonuses. The rate is 1 percent of the bonuses, with employees and their employers each contributing half this amount. These contributions are not used for benefit calculation purposes.

The total annual cost of the flat-rate basic benefits is shared by all the programs on a fully pay-as-you-go basis. This cost sharing is in proportion to the number of persons covered.

The government covers one-third of the total cost of the flat-rate basic benefits. There is no subsidy for the earnings-related part of the KNH. The government pays administrative expenses, as well.

Disability Benefits

A disability pension is payable to any disabled person if he or she has contributed to social security for two-thirds or more of the covered period. Japan has a special arrangement for dependent young disabled people, since they are eligible for the disability pension benefit from age 20 if they have become disabled before age 20.

The two-tier benefits are provided as disability pensions. The first-tier basic benefit is 65,000 yen per month at 1994 prices. Japan gives the seriously disabled persons a basic disability benefit of 81,250 yen (25 percent up from the normal amount) per month. The earnings-related component of disability pensions is calculated essentially in the same way as old-age pensions. There are two differences between the two. One difference is that the covered period for disability pensions is regarded as 30 years if it is less than 30 years. The other is the 25 percent increase in the level of earnings-related disability benefits for seriously disabled persons⁴⁾.

A medical check for qualifying disability pensions is usually very strict in Japan and it is believed that there are quite few cases of its abuse. The aggregate amount of disability pension benefits was only 4.6 percent of the total sum of the 1996 pension benefits.

Survivor's Benefits

A surviving child (or children) of age less than 18 is eligible for the basic survivor's benefit if the dead father has contributed to social security for two-thirds or more of the covered period or if the dead father has contributed for 25 years or more. If the child's (or children's) mother is alive, the basic survivor's benefit is paid in the name of the surviving widow.

The basic survivor's benefit is 65,000 yen per month at 1994 prices. There are additional basic payments for surviving children; the first and the second child receive 18,700 yen per month per each and from the third child he or she receives 6,233 yen per month per each at 1994 prices.

The earnings-related survivor's benefit is payable for the dependent spouse, the dependent parents (or dependent grandparents) of age 60 and over, or the dependent child (children) of age less than 18. The normal amount is three-fourths of the old-age equivalent benefit. If the covered period is less than 30 years, then it is regarded as 30 years. For the surviving dependent widow aged 35 or over with no child, an additional pension benefit is given between ages from 40 to 65. Its monthly amount is 48,750 yen at 1994 prices.

Any Japanese are usually eligible for only one pension from old-age, disability and survivor's benefits. One exception is that a survivor can receive his or her own basic old-age benefit and an earnings-related survivor's benefit. For the surviving spouse aged 65 or over of a dual-earner couple, the earnings-related benefit is the best of the following three options: his or her own old-age benefit, three-fourths of the old-age benefit for the dead partner, or one half of the combined old-age benefits.

3.2 Occupational Pensions

Japanese employees receive occupational pensions and/or lump-sum retirement benefits. Currently the coverage of occupational retirement benefits is near 90 percent, although the coverage of occupational pension plans is about 50 percent. Typical in retirement benefits is a defined-benefit, final pay scheme. Both manual and desk workers within each company are covered by the same plan.

The average lump-sum retirement benefits paid to mandated career male retirees were 25 to 29 million yen in large firms and 11 to 16 million yen in smaller firms in 1999. The main purpose for employers to have their occupational pension plans is not to pay annuities, but to accumulate funds under favorable tax treatments. In fact, very often, retiring employees choose lump sum retirement benefits, although their employers have a formal pension plan whose basic form is an annuity.

There are three major schemes for employers to prepare for paying retirement benefits.

- (a) Pay-as-you-go schemes with book reserve accounting (started in 1952, similar to that of Germany). Book reserves are tax deductible within certain limits: namely 20 percent of the benefit liability can be deducted from income tax calculations as a corporate expense. Originally a deduction was permitted on 100 percent of the liability.
- (b) Tax-qualified plans (started in 1962). The plan must be funded outside through a group annuity contract or a trust agreement. The employers' contributions to a tax qualified plan are 100 percent tax deductible as a business expense. A special 1.173 percent corporate tax is levied annually on fund assets⁵). The plan must contain a provision for annuity payments, though a lump sum option is permitted.
- (c) Contracted-out plans (started in 1966) through the Kosei-Nenkin-Kikin (KNK, Employees' Pension Fund). The benefits of the KNK consist of two components: the equivalent benefit of the earnings-related portion of the social security (excluding the benefit resulting from indexing), and the

supplementary benefit. The latter is primarily financed by the employer. It can be received in a lump sum at the discretion of the employee, although in principle it should be in the form of a life annuity. The plan must be funded through a trust fund or an insurance contract. The tax treatment of the contracted-out plan is virtually the same as that of the tax qualified plan, except that the KNK does not pay taxes on accrued benefit liabilities equal to 2.7 times the equivalent benefit of the earnings-related portion of the State scheme (with only the undynamized benefit).

Book reserves are not funded outside, but actually have been retained as internal profits, contributing to further investments of the firms. The funded reserve of the tax qualified plans and contracted-out plans has been rapidly growing. It contributes to an increase in national savings in Japan. Prefunding has gradually become common since the introduction of the tax-qualified plans and the contracted-out plans. Today, occupational retirement benefits in Japan still remain partially funded. It is mainly the tax advantage that decides how much these benefits are funded.

3.3 Personal Pensions

The accumulation of private saving in Japan is among the highest in the world. The distribution of monetary asset holding, however, is very much skewed. In the past, the role of personal pension plans was not so great. It has been rapidly growing, however. The household coverage of personal pension plans had risen to about 35 percent in 1994.

In April 1991, a special defined-benefit type of personal retirement pension accounts, called the Kokumin-Nenkin-Kikin became available for non-employees and their spouses (aged 20 to 60). A contribution of up to 68,000 yen *per month* per person is now tax-exempt, which is very generous compared with 50,000 yen *per year* (for all) for personal "pension" insurance policy premiums.

4 Pension Debate in Japan

Due to demographic and economic changes mentioned earlier in Section 2.2, Japan will probably be involved in difficulties in managing its social security. Are there any solutions for containing the social security pension costs? Are social security pension benefits still too generous? Is privatization of social security pensions a good idea? Is it possible for Japan to freeze any increases in the contribution rate of social security pensions to avoid any more damages to the economy? Should an earmarked consumption-based tax be introduced as a new income source of pension benefits? Is it inevitable to increase the normal pensionable age to 65 or further to 67? Are there any alternatives for it? How to arrange the pension provisions for women? Should the existing contracting-out option be deleted? These are examples of topics in the pension debate in current Japan. This section examines these issues one by one.

4.1 Pros and Cons for a Pay-as-you-go Defined-benefit Plan

Japan has a pay-as-you-go defined-benefit (PAYG DB) system for social security pensions. Japanese have once had a successful story of this system when the economy enjoyed a relatively high speed of growth with relatively young populations. It has been effective in reducing poverty among the elderly and also in providing people with a stable living standard after retirement. Further, administrative costs of this system have been quite low, showing quite an efficient system-operation⁶⁾.

For the past 20 years, however, the PAYG DB plan for public pensions have been facing severe and growing criticisms in Japan. Criticisms are so many. Among others, financial stresses are becoming so severe under a declining rate of economic growth with the population aging. The system is now quite unpopular among younger people.

It becomes quite difficult for Japan to increase the contribution rate for social security pensions. In fiscal 1999, its contribution amounts to 30 trillion yen, while personal income tax is 15.7 trillion yen and corporate income tax is 10.4 trillion yen respectively in the same year (see Figure 1). Hikes in the contribution rate will bitterly damage domestic companies which have been facing the “mega-competition” on a global scale, thereby exerting adverse

effects on the economy, inducing a higher unemployment rate, lower economic growth, lower saving rates and so on.

Figure 1 about here

Hikes in the contribution rate will induce an incentive compatibility problem, too. The internal rate of return in the public pension system will be quite low or will become negative for the younger cohorts, and younger generations will find that their participation in the public pension system does not pay.

There is another criticism on the current PAYG DB plan. It exerts perverse redistribution. Through a massive transfer of income by public pensions, the rich elderly are becoming richer, while other elderly people still are suffering from low income.

Political resistances to cutting the benefits level or to increasing the normal pensionable age have been so strong. Indeed, many people in Japan are feeling that the government is breaking its promise with them. There has been a growing concern on an incredibility problem. Namely, distrust against the government commitment is growing.

With a better understanding of the PAYG DB system, however, some of the criticisms will disappear. Moreover, we can rectify some of deficiencies and inequities in the existing system.

We can draw some lessons from the experiences in other OECD countries for the past 20 years, where they have had so painstaking reforms of social security pensions. The important lessons are as follows.

First, the PAYG DB system has been working not as a pure insurance system but rather as a tax-and-transfer system involving huge amounts of income transfers between generations. It is possibly a problem between managers and trade unions, but mainly is a problem *between generations*.

We have a political difficulty in this sense. Seniors are strong voters while the younger people and future generations currently have so weak or no

political powers. The interest of future generations is likely to be neglected.

Second, the nature of the intergenerational contract is difficult for many people to understand. Maintaining a fixed rate of replacement in gross income terms is by no means “a contract.” It is found to be quite risky, pushing its costs entirely to actively working generations or future generations.

In a PAYG system, pension benefits don't come from the heaven. Pension benefits for the aged parents are financed mainly by contributions of their children and grandchildren. It is a socialized system of intergenerational transfers between parents and their children. Without a socialized system, ordinary parents and their children would have responded quite flexibly to a changing circumstance. The retired parents are expected to maintain their dignity, while actively working children should be adequately rewarded for their labours. There should be little difference in the design of a PAYG DB social security pension plan and the privately based income transfers between aged parents and their children. The PAYG DB system should prescribe the rules for satisfying two needs for the aged parents and their children just stated.

The benefits and contributions in PAYG DB plan should be changed flexibly to respond to changing circumstances. As Diamond (1996) explained, it partly comes from the incompleteness of planning for different possible outcomes in the future. Consequently we have found that the replacement rate embedded in the law is not a “promise” in a strict sense, but it is just the “starting place” of an ongoing process of adaptation to a changing and unpredictable world. Everlasting reforms are required to keep the system viable, while they can be viewed as “political risks.” Japan succeeded two times in reducing a part of “earned entitlements” to nil in 1986 and 1994. These efforts are to continue in the future.

The third lesson is that continued economic growth is definitely in need to maintain the PAYG finance healthy. Were the economy to fail to expand when the share of senior citizens in the population increased, the real after-tax pay of workers would decline. Younger people would despair of achieving a higher standard of living than their parents, and the present level of intergenerational transfers from workers to the retired would become hard to maintain.

In this light, we need to approach the question of funding from the perspective of circumventing constraints on economic growth. We must ask which revenue sources will slow down growth the least. The answer is not a wage tax nor an income tax, but a consumption-based tax. The consumption tax does not function as a direct levy on the saving and investment that powers the economy. In this respect, social security contributions (wage tax) are highly problematic. It will make sense in Japan to fund part of the increased costs of her greying society by raising the rate of consumption-based tax. Current reforms in Spain, Portugal, Switzerland and Germany followed this approach by reducing the contribution rate for public pensions, with increasing the rate of VAT, instead⁷⁾. Through these reforms, as well, pension burdens will be shared more evenly over the whole life cycle of each person.

4.2 Advantages and Disadvantages of the Funded Defined-contribution Plan

Due to a reduction of benefit levels in a PAYG DB plan, there has been a move, passive or active, toward a funded scheme of pensions in many OECD countries. A funded DC scheme has a potential advantage over the PAYG DB plan. It is mainly because the rate of return from the financial market could now become much higher than the internal rate of return in PAYG systems, on average.

All economists in Japan agree with an opinion that we should not ignore or make light of the current move toward more prefunding. Partial prefunding by mandating or encouraging private pensions is inevitable. It has due reasons. We have to accept it as a matter of fact.

Obviously the funded DC scheme has some other advantages such as possible increase in the saving rate, possible higher rates of economic growth, understandability or transparency, and flexible response to increasing diversity of a life-course of ours (increasing heterogeneity, increasing freedom to choose a working place, working hours, and working periods, widening choices of no-kids, divorce, and remarriage, etc.). It also encourages people to make responsible for themselves and to support themselves on self-reliance, not allowing to behave irresponsibly to impose cost on others, especially on future

generations who have no political influence today.

The funded DC plan will have several difficulties, however. First, the market rate of return is quite volatile in the short-term, as is known as “the NIKKEI effect.” Its differentials are quite large. The rate of return from the financial market will decline with an ongoing population aging, and with ample supply of funded money. It is not inflation-proof.

Consequently the insured people will face the investment risk. The income disparity after retirement will get widened, and the increasing proportion of the elderly will suffer from low income. Some of the current retirees, namely, asset-holders will also have some damages from a possible decline in the market rate of return on their assets.

Second, we have to have relevant regulations on the funded scheme. We can learn something from experiences of the Anglo-Saxon countries. But, so far we have had insufficient knowledge about them. Missing are institutions against investment risks.

Third, there exists an administrative cost problem. Take the Chilean case, for example. Chilean pension funds earned a real rate of return about 11 percent per annum on average between 1981 to 1998, but it went down at 4.2 percent in net terms after deducting administrative costs. If we look at the period after 1990, the real rate return turned minus on average in net terms⁸⁾. This problem will be quite serious especially for the low-income earners. They are forced to have a relatively low rate of return.

We have other problems here in shifting from a PAYG to a funded system. Among others, a “twice-burden” problem should not be ignored. It is still an open question whether people can politically accept the heavier burdens on the middle-aged generations at the start-up of the transitional period. The Singaporean case is another example. Its contribution rate for pensions still remains at 4 percent. More than 40 years have passed since Singapore introduced the provident fund. It is said that not a few aged people in Singapore still depend on their children to maintain their standard of living⁹⁾.

Feldstein-Samwick (2000) proposed to shift 2 percent of payroll tax payment from the US social security trust fund to personal retirement accounts (PRA), thereby freezing any increases in the contribution rate of social security from current 12.4 percent. Their idea is to assure old-age income security given by the current PAYG DB system at least on the one hand, and to avoid the twice-burden problem by shifting to the proposed 2 percent DC plan on the other hand. The essence of Feldstein proposal is a combination of the existing PAYG DB plan with a funded DC plan. Privatization of social security will remain partial.

We have also had an important intellectual innovation from recent reforms in Sweden. The “notional” rate of return is to be introduced in shifting to a PAYG DC plan from a PAYG DB plan. With this shift, we can entirely escape from the “twice-burden” problem. As James(1996) observed, unfunded DC schemes can produce a close transparent relationship between contributions and benefits, thereby deterring evasion and other distortionary behavior, as well. They can eliminate undesirable redistribution within the same cohort of individuals, too. On the other hand, the real level of pension benefits may decrease step by step in the future.

4.3 A Diversified Multi-pillar System

Some emphasized advantages of the PAYG DB plan more than its disadvantages, alerting risks involved in the funded DC plan, while others did the opposite, calling for a “paradigm shift” to a funded scheme. Nonetheless, they all seemed to agree that a diversified multi-pillar system is most advisable. Differences would be in the magnitude of reforms and in the speed of adjustments.

For Japan, increased costs are still required to prevent poverty with securing stable income after retirement. We have no painless solutions for the future. No reforms without tears.

Partial prefunding, mandatory or voluntary, is inevitable¹⁰). Missing are better instruments to minimize risks involved on the funded system. Missing as well are better understandings in the induced individual behaviors, the macro

economic impacts, and the distributional outcomes from increased prefunding.

Different objectives are often competing. Promoting later retirement may induce higher unemployment for younger people. Encouraging occupational and individual pensions can lead to early retirement. Tax smoothing or advance increases in the contribution rate for the long-term sound financing will cause higher unemployment in the short-term. Solutions will be different depending on which objective is more important.

What we want to have is not a society with so small a cradle with so many graves. We are moving to a society of compassion with a harder edge. Time is now not to deliver generous benefits, but rather to manage to share the increased costs. Who shares them and when? How are they shared? These are the imminent questions before us. More specifically, are the costs to be shared by increasing social security contributions? By increasing taxes? By increased individual savings? By later retirement? Or by reducing benefits? Who is to bear basic living costs arising from longer life expectancy? Are there any differences in responding to this question when longer life expectancy is expected in well advance to take place and when unexpected? How much is increased freedom to choose accompanied by self-reliance in old age? How much is the exchange of income resources between generations allowed through a public program? Is there any room for a universal or differential cut of benefits for the elderly? Can it be accepted at once or gradually? What devices (other than cutting benefits) can we have in making part of increased costs shared by current pensioners? What economic differences will come from all of the alternative solutions? The answers will be different individual by individual.

In the end, life is still risky. We have to realize that we cannot eliminate all of risks in our long life completely. But we have been making great efforts to control these risks at a minimum level. I eagerly hope that Japanese will be wise enough to manage them.

5 The Latest Pension Reform

Changes in the social security pension system have thus far been made at least every five years in Japan. So frequent changes are considered as fine tunings to the rapidly changing socio-economic circumstances. Because the great overhaul was proposed in 1994, the chances were that 1999 would become another year of pension reform.

In December 1998, the Japanese government decided to temporarily freeze increases in social security contribution rates for pensions for some years from fiscal 1999 (from April 1). This freeze was mainly due to the ongoing downturn of the Japanese economy. Also, in December 1998, the government decided to increase existing pension benefits in fiscal year 1999 to reflect only changes in the CPI over the previous calendar year, though fiscal year 1999 was previously anticipated as seeing net-wage indexation of existing pension benefits after a five-year interval.

In July 1999, the government submitted the 1999 social security pension reform bill to the parliament, which was passed in March 2000. The aim of this section is to explain the main content of the 1999 pension reform, with some discussions.

There have been growing stresses in private pensions of Japan. The Japanese government recently proposed a newly defined contribution plan, along with amending the existing defined benefit plans of occupational pensions. The reform bills concerned passed the parliament in June 2001. This section explains the main points of these reforms in private pensions, as well.

5.1 The 1999 Social Security Pension Reform

The main content of the 1999 pension reform for social security is as follows.

5.1.1 Reductions in Benefits

Aggregate pension benefits will be reduced by 20 percent by 2025 for the system to have a healthier financing basis. Following four measures are adopted to attain this purpose.

Reductions in the Benefit Level

Through the 1999 reform, the earnings-related benefits were to be reduced by five percent; more specifically, the former annual accrual rate of 0.75 percent was to be decreased to 0.7125 percent from fiscal year 2000.

Shift to CPI-indexation

Both the flat-rate basic benefits and the earnings-related benefits once paid were to be CPI-indexed after age 65 from fiscal year 2000. In the past, the benefits had been wage-indexed every five years.

In Japan, the gap in future increases between wages and CPI is assumed to be 1.0 percent annually. A shift from wage-indexation to CPI-indexation will bring a considerable effect on reducing aggregate pension benefits as years go. The relative level of pensions over wages will continue to decline after receiving benefits. At age 87 the relative level of benefits will be reduced by 20 percent.

New Earnings-test Introduced

An earnings-test for those aged 65 to 69 is to be newly introduced from fiscal year 2002. Note that Japan currently has no such test for them. The test is quite generous, however, as is depicted in Figure 2. The first-tier, basic benefits are fully paid regardless of salary and wage earnings. There are no reductions in earnings-related benefits until the total monthly sum of that benefits and earnings come up to 370,000 yen. If the total exceeds that level, the earnings related benefits are reduced by 10,000 yen for each 20,000 yen increment in wages.

The newly introduced earnings-test may induce earlier retirement, more or less, for those currently working in their late sixties.

Figure 2 about here

Pensionable Age Increased to 65

The normal pensionable age for earnings-related old-age benefits is to be increased step by step from age 60 to 65 for men from fiscal year 2013 to 2025. The phasing out of earnings-related old-age benefits for female employees in their early sixties will be delayed by five years starting only in 2018. In exchange those between 60 and 64 will become eligible for newly provided advance payment at a reduced rate out of the earnings related benefits. The rate of reduction will be 0.5 percent by one month (6 percent by one year). If a person begins to receive the advance payment from age 60, his/her benefit level will be 70 percent of the normal amount.

Note that the normal pensionable age for the first-tier, basic old-age benefit is increased step by step from 60 to 65 for men from fiscal year 2001 to 2013. This was decided by the 1994 pension reform. The 1999 pension reform act raises the normal pensionable age for the second-tier benefit from 2013, just after the shift's end of the normal pensionable age of the first-tier benefit (see Table 1).

Table 1 about here

The size of reduction for advance payment of the first-tier benefit was to be reviewed in 2000 using the latest data on life expectancy. The new rates for reductions/increases, as shown in Figure 3, are to be applied for those born after 2 April 1941. One can say the new rates of reduction for advance payment is still too severe, since the actuarially neutral rate of reduction for those starting to receive their old age benefit at age 60 should be currently 73 or 75 percent of the normal amount.

Figure 3 about here

There were so much debates for and against increasing the normal pensionable age in Japan. It seemed to be universal to all employees, at first sight. It will turn out, however, to be virtually selective. It will more damage those with shorter schooling experience, coming earlier to the labor market. They are apt to be burnt out or to have a sense of fulfillment after 40 or 45 years working experience. Most of them are weary and ready for retirement by the time they reach the age of 60. They will be most likely to receive reduced benefits from age 60.

Compare this increase with an extension of the normal contribution period from current 40 to 45 years. The latter alternative will most damage those with longer schooling experience, say, the university graduates or MA/PHD holders. Usually they are competent, facing a very advantageous labor market even after age 60. It is easy for them to stay in an excellent job up to age 65. This means that they will have least sufferings if the normal pensionable age is to be increased to 65. Their disadvantage will be not a little, however, if the normal covered years are to be extended to 45. Their level of benefits will be reduced due to shorter contributing years.

Some proposed to extend the normal covered years to 45, first. The government turned down this proposal, however.

Encouraging later retirement is advisable, but there have been little signs for any increases in the male labor force participation rate after age 60 in Japan. In promoting later retirement, it is crucial for older workers to have higher productivity. Training incentives to this end should be more freely available. Job re-designing for greater productivity in part-time or flexitime is also required¹¹⁾.

By the four measures listed above, the contribution rate of the KNH will peak by 2025 at 27.8 percentage point, instead of 34.5 percentage point anticipated without the 1999 reform.

5.1.2 Several Changes in Contributions

Covered Earnings Upgraded

The monthly standard earnings base for social security pensions was upgraded to the 98,000 to 620,000 yen range from October 2000. It had been the 92,000 to 590,000 yen range, before. This upgrading just reflects the increases in average earnings for the past five years.

No Contributions during Child-care Leave

Employers became exempted from paying their share of social security

pension contributions for their employees on child-care leave from fiscal year 2000. Employees on child-care leave have already been exempted from their share of contributions since April 1995.

Yet, no special transfers from general revenue have been arranged to make up for the loss from this exemption. Compensations virtually come from contributions from those not on child-care leave.

Needless to say, the aim of the above exemption is to give support to child-bearing in the age of the fertility decline.

Shifting to the Annual Earnings Base

The benefit/contribution base is to be shifted from current, monthly standard earnings to annual earnings including semi-annual bonuses from fiscal year 2003. The shift is to be adjusted to induce no changes in aggregate income from contributions in the starting year. The current contribution rate of 17.35 percentage point over monthly standard earnings for the KNH will be changed to 13.58 percentage point over annual earnings from April 2003. At the same time, the new accrual rate of 0.5481 percent will be applied.

Note that a special 1.0 percentage point contributions for social security pensions have been done from semi-annual bonuses. These special contributions will be abolished from April 2003 and instead, the same percentage point of 13.58 will be levied on semi-annual bonuses as contributions for social security pensions.

This shift is expected to induce more equitable contributions among different levels of wage and salary earners. One serious problem is that there is a ceiling for the covered bonuses; 1.5 million yen, one time. This ceiling will encourage people to pay bonuses not semi-annually but once annually, especially for high-income earners. For them, the current pay system of basic monthly salaries with semi-annual bonuses will no longer look charming. An alternative system on an annual salaries base (with no bonuses) may even help avoid to pay in some of contributions for social security pensions.

New Arrangements for Low-income Groups

A 50 percent discounted flat-rate contributions for the non-employees is to be newly introduced from fiscal year 2002. This is mainly for low-income groups. Their basic benefit will be two-thirds of the full amount. Note that one third of the full benefit is financed by transfers from general revenue.

The new arrangement is like a bargain sale of the basic benefit for the non-employees, though its main purpose is to lessen the drop-out. It is quite uncertain, however, that growing distrust among young people against the government in charge of social security pensions will disappear through this arrangement; the government is still asking further increases in the contribution rate of social security pensions in the future, which will intensify the problem of “incentive compatibility.”

Another arrangement was that from April 2000, students aged 20 and over were allowed to postpone paying in their flat-rate contributions for ten years at the most. They are, however, to be eligible for full basic disability benefits during years of non-payment.

The majority of the students are currently postponing that payment, with little hope of back paying-in after graduation. No back-payment will lead to a reduction in their level of basic old-age benefits.

5.1.3 Partial Funding Shift to General Revenue

In December 1998, the ruling coalition parties announced that they will introduce a partial funding shift to general revenue from current one-third to one-half in financing basic benefits from fiscal year 2004 at the latest, although no legal arrangements have been specified yet. The funding shift will enable the contribution rate for social security pensions to decrease simultaneously by one percentage point for the KNH, and by 3,000 yen per month per each non-employee person. If increased general revenue is to be financed by a consumption-based tax (earmarked to pay pension benefits, though not legislated yet), a 0.9 percentage point increase in the consumption tax rate (currently 5 percent) will be necessary in 2004.

While the funding shift above mentioned will induce no additional pension burdens as a whole, current pensioners will be also forced to share the cost of social security pensions. Actively working generations and their employers will get some advantages through this kind of the funding shift. Most Japanese think of it as equitable from an intergenerational point of view¹²⁾. Whether or not the funding shift will actually take place in 2004 is decisively depending on the political will, especially on its ability to persuade the pensioners.

It is said that the funding shift to one-half is not enough for the system to get free from the problem of incentive compatibility. The contributions of social security pensions for the principal scheme are estimated to be 25.4 percentage point at their peak (if calculated on the monthly standard earnings base) even if the funding shift above mentioned is adopted. Consequently further increases in the contribution rate from current 17.35 percentage point is inevitable, which will be sure to do more harms to the Japanese economy, together with making younger generations more inclined to think that their participation in the social security pension system does not pay.

5.2 New Legislations on Private Pensions

A long awaited defined contribution (DC) plan is to be introduced in Japan from 1 October 2001. The Defined Benefit (DB) Corporate Pension Act will take effect on 1 April 2002, as well. This section explains the main points of these developments in private pension schemes in Japan.

5.2.1 New DC Plans

Eligibility

There are two types of new DC pension plans: the employer-sponsored type and the individual type. Under the former, the employer pays contributions of the pension plan for its employees (of age 60 or younger), but the employees are not permitted to pay matching contributions. This is similar to money purchase plans in the US. Participants will be fully vested with three years of service.

Non-salaried workers can contribute to a DC individual pension plan, if they are paying flat-rate contributions to social security pensions. In the case of a company that does not have a contracted-out DB plan (an employee pension fund), a tax-qualified DB pension plan or a DC employer-sponsored pension plan, employees can contribute to a DC individual pension plan at their discretion, provided they are 60 years of age or younger. The individual type is similar to the US 401(k) plans or IRA, but employers cannot make matching contributions to it.

Civil servants and full-time housewives are not eligible to contribute to either of the DC pension plans.

Procedures Involved to Participate

In the case of a DC employer-sponsored pension plan, the employer and the employees have to work out a set of rules agreeable to both parties, and get the approval of the minister concerned. On the other hand, subscription to a DC individual pension plan must be filed through the Kokumin-Nenkin-Kikin Association.

Limits to Contributions

The monthly amount a person can contribute is limited to the amounts set forth below. Any amount in excess of these amounts is not accepted.

Employer-sponsored type:

If the employer has no contracted-out DB plan nor a DB tax-qualified pension plan	36,000 yen
If the employer has a contracted-out DB plan or a DB tax-qualified pension plan	18,000 yen

Individual type:

Self-employed person (together with the contribution to the DB national pension fund)	68,000 yen
An employee in a private company	15,000 yen

Tax Treatment

Contributions are fully tax deductible, and investment earnings are tax-deferred. However, the special corporate tax of 1.173 percentage point applies on pension assets annually, as is the case for the existing DB corporate pension plans, though it is suspended until March 31, 2003 under the current adverse investment environments in Japan. Benefits are taxable, as a rule. But the generous deduction of income from social security pension benefits and from a lump-sum retirement benefit is applied to benefits paid. Rollovers are tax-free.

Benefits Available and Rollover

There are three types of benefits payable in a lump sum; old-age benefits, disability benefits and death benefits. In principle, people 60 years of age or older will be eligible to receive old-age benefits with over 10 years of participation. This means that at termination of employment, employees cannot receive benefits unless they are 60 years old or more. They are forced to just rollover their account balance to the new employer's DC plan or an individual DC plan before they reach age 60. This completely differs from the US DC plans.

Participants can start receiving old-age benefits any time between 60 and 70 years old. When they reach age 70, they have to receive it.

Asset Management

Plan administrators will give planholders instructions as to how to invest their pension assets. There should be more than three options, ranging from a capital guaranteed product to bank deposits, bonds, stocks, mutual funds and insurance products. Pension assets can also be invested in individual stocks and shares of the company the planholder is employed by. Planholders can reshuffle the portfolio at least every three months.

Market Outlook in the Future

Japanese DC plans will grow in the long run, but the short time prospects for the market growth is not expected to be so remarkable. According to the estimates by Nippon Life Insurance Company, the largest one in Japan, the DC assets for both types combined will be 16.5 trillion yen and their participants will be 8.6 million in ten years.

There are several reasons for this. First, contribution limits are fairly low. Second, no matching contributions are allowed, at all. Third, a transfer of accumulated assets from existing DB plans or book reserve retirement plans will face tight restrictions, though the detailed requirements of that transfer have not been made public, yet. Fourth, benefit events are severely limited coupled with mandatory rollover. Fifth, the participants are limited, not open to all Japanese. Sixth, the special corporate tax is applied. All these are very user-unfriendly.

With current, quite low rate of interest and the sluggish stock market in Japan, it does not seem attractive for any to start on a DC plan. Missing is economic recovery of Japan for DC plans to develop.

5.2.2 DB Corporate Pension Reform

Contracted-out Plans

The benefits of the existing contracted-out plans through the KNK (Employees' Pension Fund) consist of two components: the equivalent benefit of the earnings-related portion of social security pensions (excluding the benefit resulting from indexing) and the supplementary benefit. Due to the bad investment performance for the past ten years, most contracted-out plans are seriously suffering from under-funding. They have been forced to pay considerable money additionally to compensate for the under-funded portion for the social security equivalent benefit.

Managements and trade unions were strongly asking to abolish the contracted-out or to drastically relax requirements for the contracted-in from contracted-out plans by lowering the set rate of return used in calculating the asset amount to be transferred to social security. The new DB Occupational

Pension Reform Act allows a new DB corporate scheme (the Fund Type DB Plan) which excludes the equivalent benefit of the earnings related portion of social security, by relaxing requirements mentioned above. A separate pension entity from the employer is to be set up, as is the case in existing contracted-out plans.

Tax-Qualified Plans

Many tax-qualified pension plans have been terminated recently without enough assets to pay benefits. To enhance protection of participants rights and beneficiaries, some measures are necessary to strengthen the operational rules. The new Act creates another new DB scheme (the Contract Type DB Plan) to replace existing tax-qualified plans. The new scheme is not asked to set up a separate pension entity from the employer. This is the same as the existing tax-qualified plan. The existing plans have to be terminated by March 2012. Under the new plan, minimum funding rules are to be introduced, with fiduciary duties defined. Disclosure of plan operations to participants will be required, as well.

No Insurance for Plan Termination

Plan termination insurance is not introduced. It is mainly because most employers are reluctant to pay extra money to save unhealthy company's pension plans.

Hybrid Plans Permitted

Designing of benefits is to be liberalized. Hybrid plans are newly allowed to be set up.

Future Prospects

Almost all occupational retirement plans are currently of the DB type in Japan. Not a few companies are considering to replace part of or whole of existing DB plans with hybrid or DC plans. In this context, the newly established DB plans (the Fund Type and the Contract Type) seem not

promising. Instead, increased termination of the existing contracted-out plan without any move to new Fund Type DB plans will be more likely to take place.

The new legislation brings more regulations in operating the switched DB plans (the Contract Type), forcing increases in costs of maintaining them, though employees' rights for benefits are strengthened. More rules and more regulations will naturally induce more terminations of tax-qualified plans.

The new DB Occupational Pension Act may be another driving force for DC plans to grow in Japan.

6 Containing the Increasing Cost of Social Security Pensions

The officials of the Japanese government still believe that step-by-step increases in social security pension contributions have to be done in the future for the system to become sustainable. They have been ignoring the adverse effect of the payroll tax. As depicted in Figure 1, however, the social security pension contributions (payroll taxes) have become the No.1 income source for the central government. Employees and their employers will continue to strongly resist to any increases in payroll taxes.

This section will propose a set of policy options to freeze the contribution rate of social security pensions at the current 17.35 percentage point or below its level.

6.1 Partial Funding Shift from Wage-based Contributions to an Ear-marked Consumption-based Tax

The first-tier, flat-rate basic benefit is currently financed partly by general revenue. The share of general revenue is currently one third. The remaining two-thirds are financed by contributions.

For self-employed and jobless persons together with those of no-occupation, the flat-rate contributions are levied for basic pensions. They are virtually poll taxes. The current drop-out rate is near 50 percent and a cherished dream for a universal pension is getting far- and far-reaching. For employed persons,

17.35 percentage contributions are currently levied for basic and earnings-related pensions. They are virtually wage taxes, doing harms to employees as well as their employers.

A universal pension can be attained by financing basic pensions not through contributions but through taxes. One alternative is an earmarked consumption-based tax. Earmarking will be required for a majority of people to accept its introduction as plausible. A consumption-based tax is less harmful than a wage tax, with spreading pension burdens to entire life stages. In the short-term, the funding shift will enable the contribution rate to decrease. It could be pulled down by 4.0 percentage point in 1998, with an introduction of the earmarked consumption-based tax (its tax rate: 3.3 percentage point). The monthly flat-rate contributions (13,300 yen per person) for non-employees might be entirely replaced by the above consumption-based tax. Through this change, almost all enrollees would lessen their pension burdens in net terms, while pensioners would be forced to begin to bear some part of pension burdens.

The rate of consumption-based tax for basic pensions is estimated to be 5.9 percentage point in 2025. It substantially decreases the contributions.

6.2 Introducing an Earnings-test for Those Aged 65-69

Currently, the earnings-test is applied for those employees aged 60-64, but workers aged 65-69 enjoy full social security pension benefits even if they earn considerably high income. Another earnings-test is to be applied to these workers aged 65-69 from fiscal 2002.

6.3 Changing Benefit-increases from Wage-indexation to CPI-indexation

Social security pension benefits, once received, are currently wage-indexed in net terms in Japan. They can be CPI-indexed, however. Benefit indexation is quite crucial for public pensions, but if wage-indexation is found to be too expensive and harmful to actively working generations, CPI-indexation will be an alternative. The UK, the US, France and many other countries are currently adopting CPI-indexation. Germany and Japan are major countries with

wage-indexation.

Changing benefit increases from wage-indexation to CPI-indexation will be estimated to decrease aggregate pension costs for social security by 11 percent by 2025. This change has been implemented by the 1999 pension reform.

6.4 Extending the Contribution Period for Full Benefits from 40 to 45 Years

In the current legislation, the normal contribution period for full benefits is assumed to be 40 years. It can be extended to 45 years.

According to the latest population projections, the life expectancy at age 65 will get longer. In 1995, it was 16.48 years for men and 20.94 years for women. In 2025, it is estimated to be 18.21 years for men and 23.15 years for women. A little more than 10 percent increases will be expected. Consequently, the period for receiving pension benefits would get longer in the future.

One can say that the contribution period should be extended proportionately for the pension system to be sustainable. The idea is that the contribution period for full pensions has to be changed step by step from 40 to 45 years. Note that this change will virtually pull down the benefit level in real terms for late comers into the labor market, while preserving the normal pensionable age. This change can save the aggregate pension costs by about 10 percent in 2025.

Combined with a funding shift to a consumption based-tax, together with other measures listed above, this can decrease the contribution rate of social security pensions to 17.35 percentage point in 2025. Through these measures, we can freeze any further increases in the contribution rate (see Figure 4).

Figure 4 about here

7 Promoting Private Initiatives: A Proposal of 4 Percent PRA¹³⁾

Overly generous public pension benefits in Japan should be further reduced, while the contribution rate can be frozen forever at the current level or be reduced through a partial funding shift to a consumption-based tax. At the same time, we should encourage private initiatives including a private, personal saving account for retirement, through the use of powerful tax-incentives.

How about creating personal retirement accounts (PRA) in which each individual would deposit 4 percent of monthly earnings from 2000? In examining the PRA effect, we assume that the expected rate of return on investment is 4 percent per annum and that the increases in CPI and wages are 1.5 percent and 2.5 percent per annum, respectively. All these figures are in nominal terms. Administrative costs will be assumed to amount to 1 percent of the funded reserve each year, and consequently the net rate of return on investment will be just 3 percent annually. The PRA contributions are assumed to be tax-deductible and no tax is levied on the earned income during accumulation. The participation will be from age 25. The contribution to the PRA will continue to age 65. At age 65, the PRA is converted to buy a constant benefit of lifetime annuity. It is payable from age 65¹⁴).

Then, the combined benefits with a slightly slimmed-down social security pensions which follow reforms just explained in Section 6, will enable the standard of living after retirement to stabilize at α even increase from the current level (see Figure 5).

Figure 5 about here

8 Concluding Remarks

Japan drastically reformed her social security and occupational pensions at the turn of the century. The pension system in Japan is under a never-ending process of revisions. Considerable efforts to slim down the social security and DB occupational pension benefits, together with replacing them with a private DC plan will still be expected to continue. All these are to mitigate the difficulties arising from declining populations with a downturn of the Japanese economy. There will be a political conclusion, sooner or later, as to whether the contributions are to be increased in the social security pension arena or in

the private-sector initiative.

Endnotes

- 1) See Takayama (1998) for demographic issues in Japan.
- 2) Takayama (1996a, 1998) gives a detailed explanation of the Japan's social security pension system.
- 3) 10,000 yen = US\$ 80.6 = EURO 93.7 = £ 57.0 = AUD 155.7 as at 27 June 2001.
- 4) There is another special arrangement for slightly disabled persons who are not eligible for the basic disability pension. They can be eligible for the earnings-related disability pension with a minimum of 48,750 yen per month at 1994 prices (i.e., three-fourths of the normal basic benefits).
- 5) This tax has been provisionally suspended since 1999.
- 6) See Beattie-McGillvray (1995) for defending the PAYG DB public pension system.
- 7) The generalized social contribution (the so-called "CSG") introduced in France can be viewed as the same line of this argument.
- 8) See Bravo, J. (2001) for more details.
- 9) See Asher-Karunaratne (2001) for more details.
- 10) In a funded public system, the so-called "political risks" in managing the funded reserve will be inevitable. Politicians and bureaucrats often misuse the reserve, with a quite inefficient allocation of the funded money. A typical example is given by the recent performance of the Japanese fiscal investment and loan program. More prefunding, therefore, should be done not in the public, but in the private scheme.
- 11) See Takayama (1996b) for more details.
- 12) It may be rather amazing that currently in Japan, the elderly are better-off than those aged 30 to 44 in terms of per-capita income after redistribution. See Takayama (1998) for the economic status of the elderly in current Japan.
- 13) Why 4 percent? It is assumed that the partial funding shift to an earmarked consumption-based tax will be introduced at the same time. Then 4 percentage points decreases in public pension contributions will follow. The combined net burden for the current, actively working generations will not increase, since the PRA is expected to induce a massive substitution effect on private savings. The twice-burden problem can be avoided, then. The philosophy behind this proposal seems to be basically the same as that of

Feldstein-Samwick (2000).

14) The assumptions of the PRA are of the present author's.

References

Asher, M. and Karunaratne, W. (2001), "Social Security Arrangements In Singapore: An Assessment," a paper presented at the International Seminar on Pensions, Hitotsubashi University, Japan, March.

Beattie, R. and McGillivray, W. (1995), "A Risky Strategy: Reflections on the World Bank Report Averting the Old Age Crisis," *International Social Security Review* 48(3-4).

Bravo, J. (2001), "The Chilean Pension System: A Review of Some Remaining Difficulties after 20 Years of Reform," a paper presented at the International Seminar on Pensions, Hitotsubashi University, Tokyo, March.

Diamond, P. A. (1996), "Proposal to Restructure Social Security," *Journal of Economic Perspectives*, 10(3).

Feldstein, M. and Samwick, A. (2000), "Allocating Payroll Tax Revenue to Personal Retirement Accounts to Maintain Social Security Benefits and the Payroll Tax Rate," NBER Working Paper 7767.

James, E. (1996), "Providing Better Protection and Promoting Growth: A Defense of Averting the old Age Crisis," *International Social Security Review* 49(3).

OECD (1996), *Aging in OECD Countries: A Critical Policy Challenge*, OECD.

Takayama, N. (1992), *The Greying of Japan: An Economic Perspective on Public Pensions*, Oxford University Press.

Takayama, N. (1996a), "Possible Effects of Ageing on the Equilibrium of Public Pension System in Japan," *European Economy: Reports and Studies*, No. 3.

Takayama, N. (1996b), "Gradual Retirement in Japan: Macro Issues and Policies," in Delsen, L. and Reday-Mulvey, G. eds., *Gradual Retirement in the OECD Countries*, Dartmouth Publishing Co. Ltd.

Takayama, N. (1998), *The Morning After in Japan: Its Declining Population, Too Generous Pensions and a Weakened Economy*, Tokyo: Maruzen Co. Ltd.

Figure 1 Main Income Sources of Japan's Central Government
(Fiscal Year 1999)

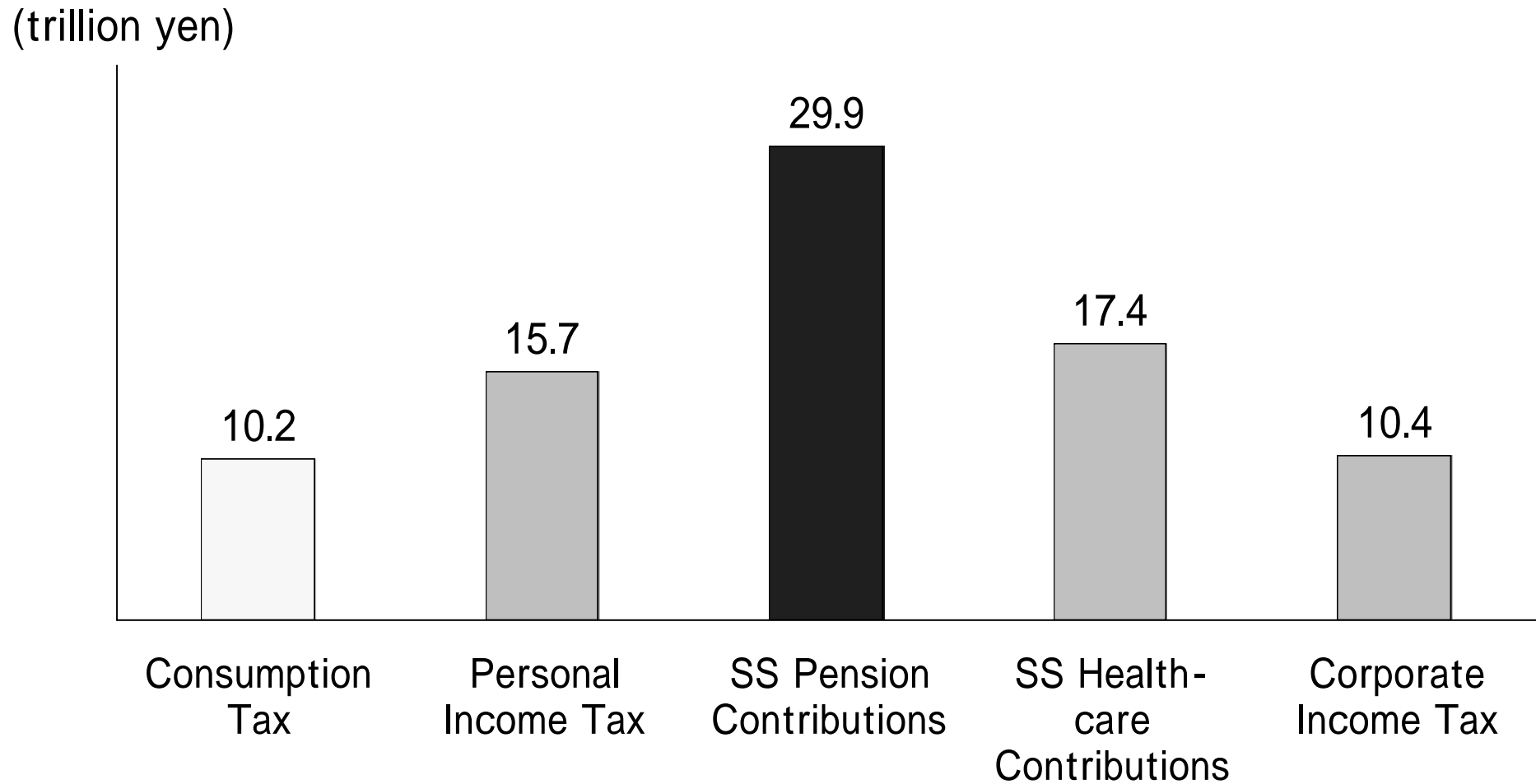
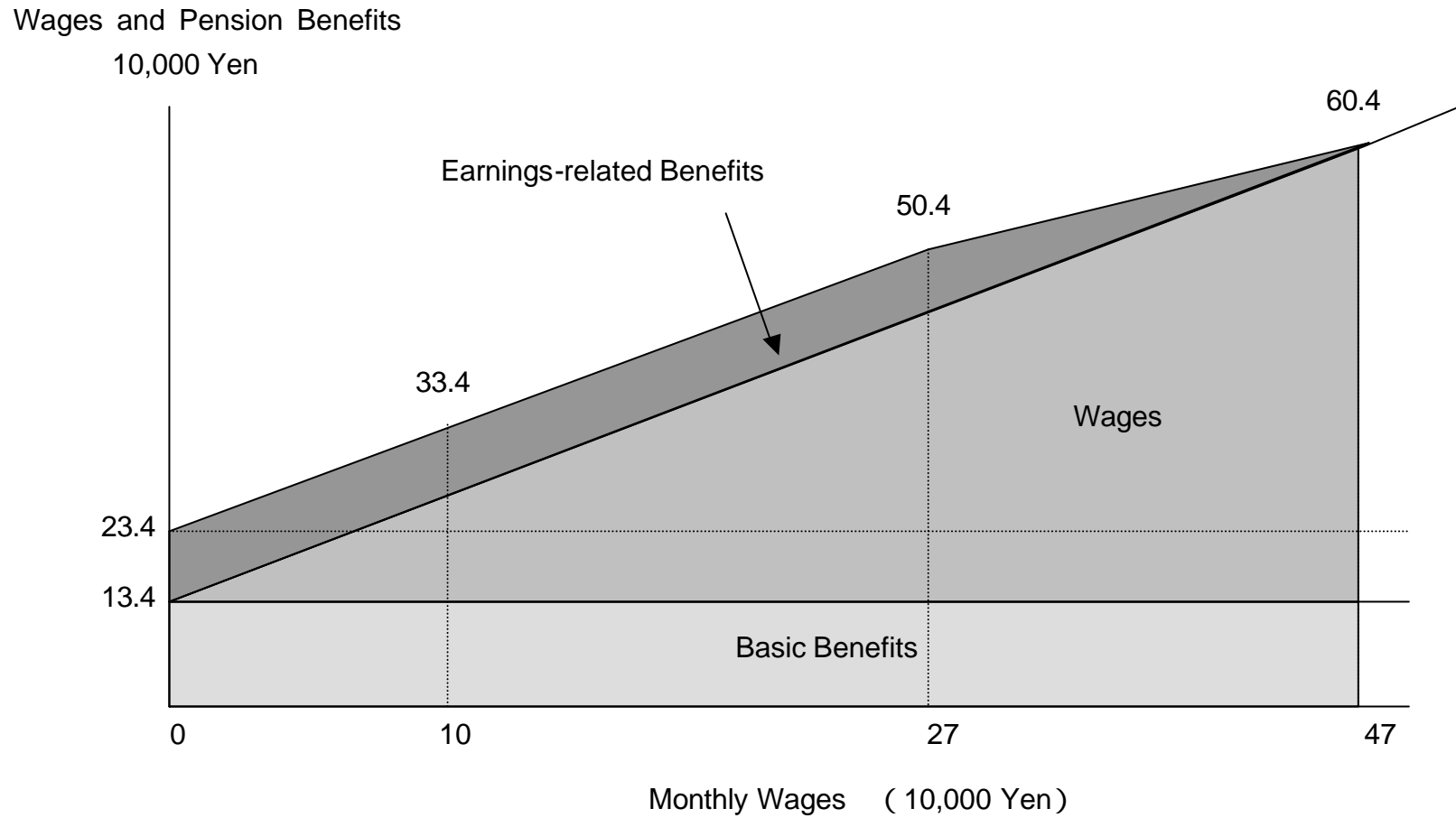


Figure 2 Earnings Test for Those in Their Late Sixties



Notes: Monthly basic benefits and full earnings-related benefits are assumed to equal 134,000 yen (for a couple) and 100,000 yen, respectively.

Figure 3 Flat-Rate Basic Benefits for Early and Delayed Retirement

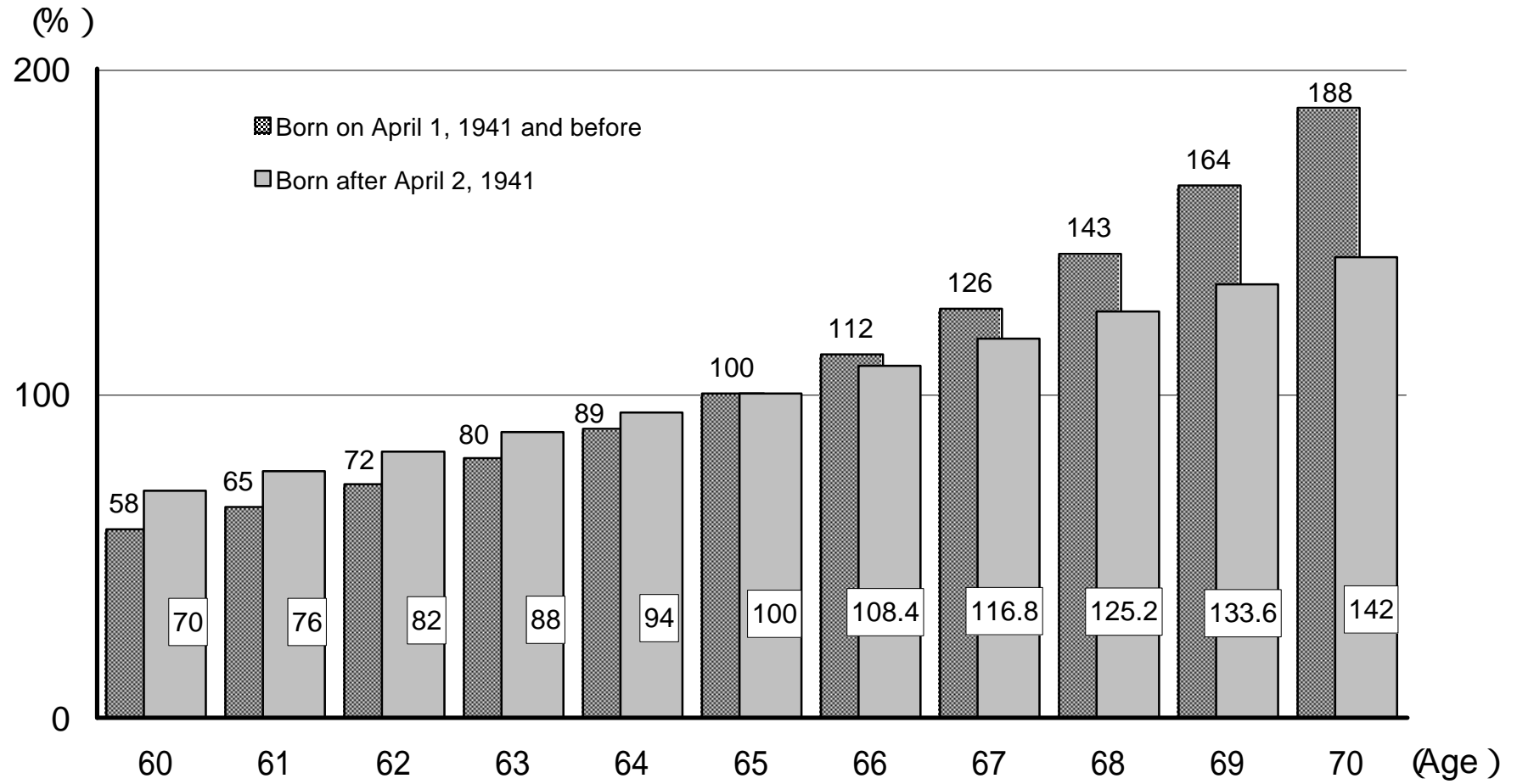


Figure 4 Future Contribution Rates by Alternative Policy Options

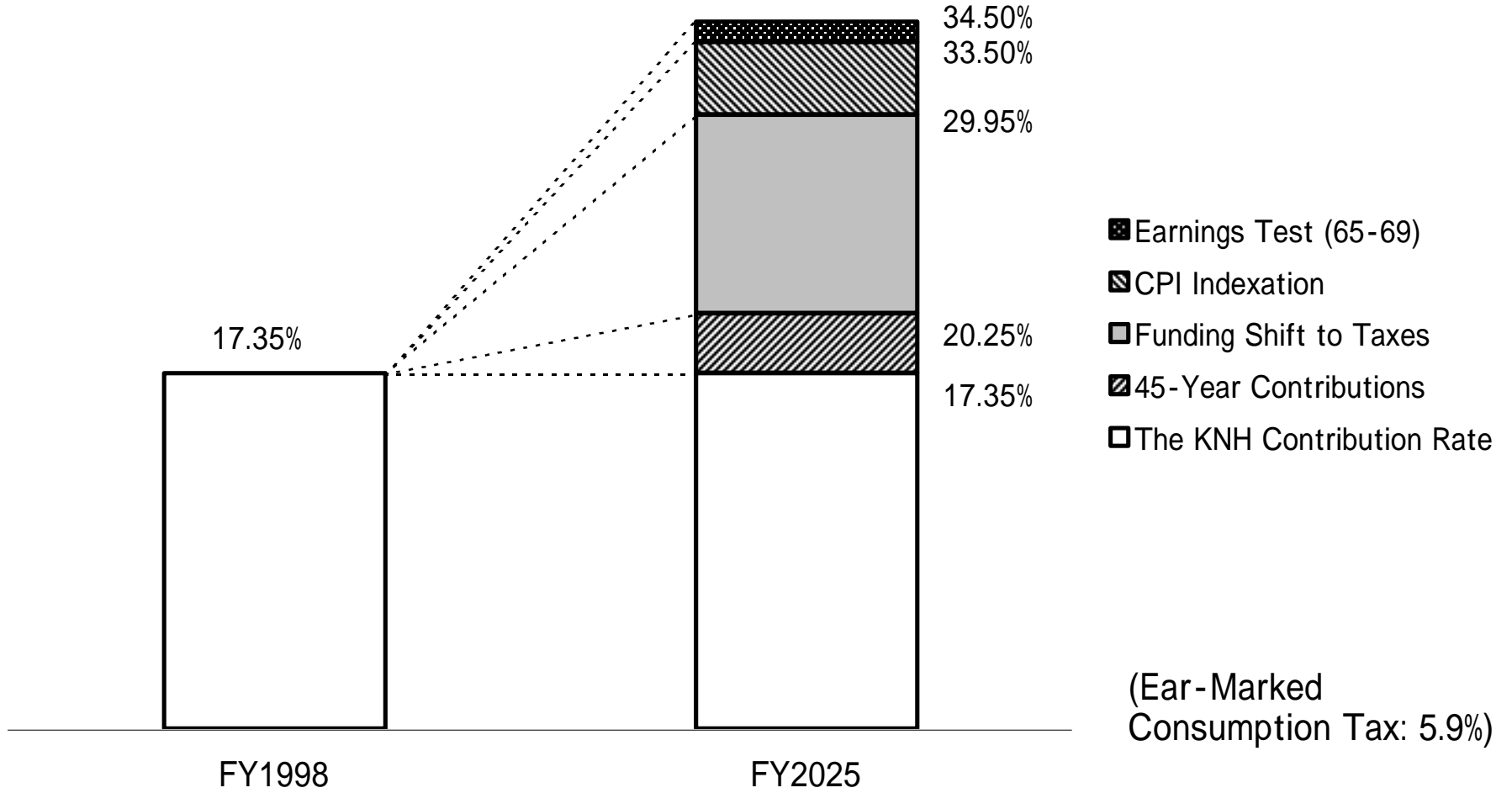


Figure 5 Replacement Rates Combined by Cohorts

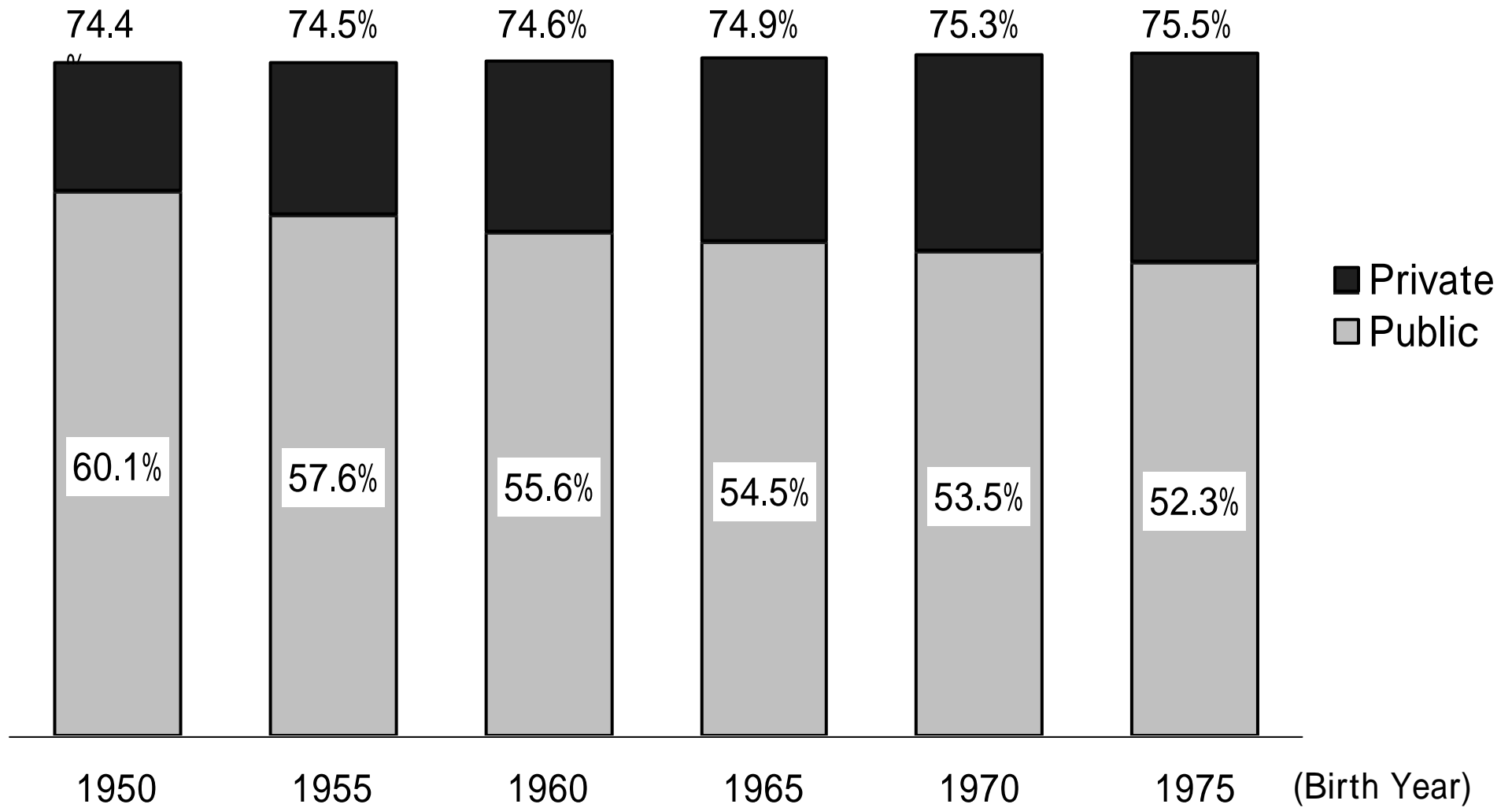


Table 1 Start Age of Full Old-age Benefits for Male Employees

Date of Birth	Basic Benefits	Earnings-related Benefits
Before 1 April 1941	60	60
Between 2 April 1941 and 1 April 1943	61	60
Between 2 April 1943 and 1 April 1945	62	60
Between 2 April 1945 and 1 April 1947	63	60
Between 2 April 1947 and 1 April 1949	64	60
Between 2 April 1949 and 1 April 1953	65	60
Between 2 April 1953 and 1 April 1955	65	61
Between 2 April 1955 and 1 April 1957	65	62
Between 2 April 1957 and 1 April 1959	65	63
Between 2 April 1959 and 1 April 1961	65	64
After 2 April 1961	65	65