

TOWARDS A SUSTAINABLE AND JOB-ORIENTED PENSION SYSTEM IN FINLAND

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1 Introduction¹

A social security system with a wide coverage and a generally high level of benefits in the Nordic welfare states has meant that, in order to cover expenditures, tax rates have become very high. This, together with social insurance that gives little incentive for work, causes substantial labour and production losses, which in the long term can become a threat to sustainable public finances. Social security also has its advantages; a universal safety net reduces social tension and crime in society and increases security and opportunity for “reasonable” risk-taking. Properly addressed and allocated, social insurance can bolster sustainable economic growth and welfare in the whole society.

The nature of social security has changed considerably in the course of time. Nowadays only a fraction of social security in welfare states consists of transfers from the “rich to the poor”. In fact, monies in the social security system are now mostly being transferred from one well-to-do person to another, maintaining a high level of public expenditure and taxation. Where is the sense in such a system?

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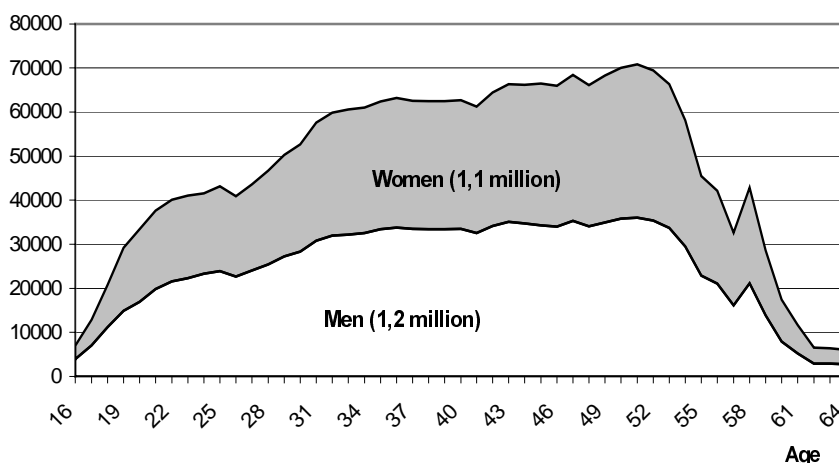
¹ This article is based on a paper ‘Citizen’s account in the Finnish context’ by Urpo Hautala and Jorma Tuukkanen (Research Institute of the Finnish Economy, Series B 157/1999).

Social insurance is one element that plays a role in the functioning of the labour markets and social insurance contributions constitute one factor in the tax wedge on labour. If the tax wedge is wide, it tends to have a damaging effect on employability. Finland's current tax rate is one of the highest in the EU.

One of the greatest challenges in Finland in the next few years is how to succeed in keeping ageing workers in working life longer and employers interested in keeping older workers on the payroll. Only 45 per cent of older workers (aged 55 to 64) are in employment. The remaining 55 per cent are economically inactive, having either left or been transferred from working life to various early retirement or unemployment schemes.

The key long-term challenge is how to fund the sharp rise in pension and health care expenditure arising from the ageing of the population without unreasonable rises in taxation or an excessive government debt burden. Debt-financing is efficiently constrained by the EMU criteria, and, moreover tax harmonisation pressure reduces room for manoeuvre in fiscal policy and growth in public expenditure in today's global economy.

Chart 1. Numer of Employed in Finland in 1999 by Age



Source: The Central Pension Security Institute

The shortage of labour is foreseen to slow down the future economic growth. Solutions to the problem of production resources could be found in measures which aim at increasing the labour force. Raising the effective retirement age from the current 58-59 years closer to the statutory 65 years could be an efficient way to do that.

2 Economic dependency ratio threatens to sharply deteriorate

The public sector pay burden caused by the changes in the age structure of population threatens to grow already within 5-10 years, when the baby boom generations of those born between 1945 and 1951 reach an age when various early retirement arrangements become viable.

Should the effective retirement age, currently 58-59 years, not rise, the number of employed relative to the number of pensioners will fall sharply in Finland in the next three decades. While today there are almost two employed persons per pensioner, by 2030 there will be almost as many pensioners as there are employed people if the effective retirement age remains unchanged.

The crucial question in the Nordic welfare system is what will happen to the dependency ratio (economically inactive relative to the employed) and to the employment rate (employed people relative to population of working age). A low employment rate results in major problems in financing social security and welfare services. An example, which acts as a warning could be seen in Finland during the deep economic recession of the early 1990s. In order to be able to finance the welfare state, we need high employment.

The pension reforms carried out in Finland in the 1990s aim to reduce pressure on having to raise pension contributions. The purpose of the reforms is to improve the structural features in the pension systems, such as the work incentive effect, and to produce better returns on employment pension fund assets. The most recent changes in the pension system became effective at the beginning of 2000. These reforms, as changes implemented in the 1990s, are steps in the right direction, but more readjustment is still needed.

Calculations on the pressure to raise pension contributions made as recently as 2 or 3 years ago have become redundant as

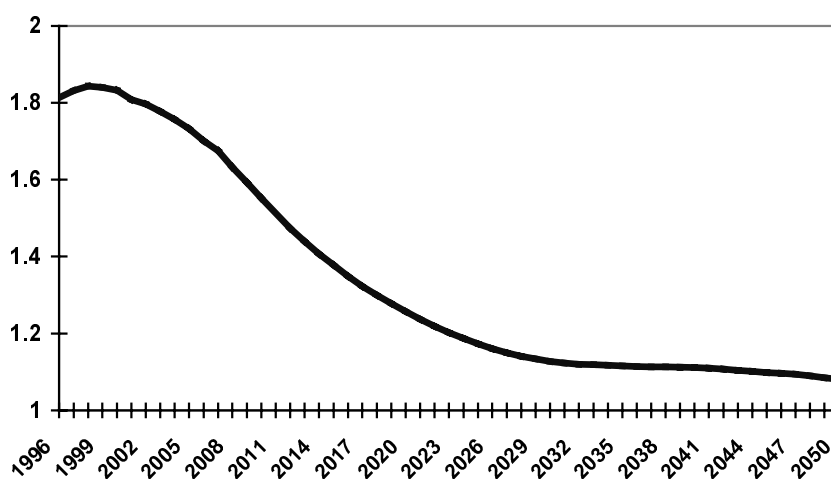
demographic studies now indicate changes in longevity projections. Earlier, longer life expectancies were estimated to cease by 2010, but are now expected to continue rising at least until 2050. Longer life expectancies will have a dramatic impact on public finances, unless the systems are revised. Entirely new thinking and measures are now needed to ensure that the sound fundamental structure of the welfare state can be secured.

The problems the Finnish welfare system faces are by no means unique; all OECD countries are wrestling with the same questions. Finland, however, will be exceptionally hard-hit because the change in Finland's age structure will be the fastest in Europe over the next two decades.

3 Main features in the Finnish pension scheme

- The Finnish public pension system consists of two pillars:
- a minimum basic benefit (incomes-tested national pension) and
 - an obligatory employment-based, earnings-related pension.

Chart 2. Number of Employed per Pensioner



Source: Ministry of Finance

Table 1. Elderly dependency ratio (percentage of 65-year-olds relative to working age population, ages 15–64) in EU Member States between 2000–2020

	2000	2010	2020	Change 2000-2020
Germany	23.3	29.2	31.9	8.6
France	24.3	25.5	32.6	8.3
Italy	26.5	31.0	35.5	9.0
United Kingdom	24.0	24.7	29.8	5.8
Spain	24.4	26.5	29.8	5.4
Netherlands	20.6	22.5	29.8	9.2
Belgium	25.4	26.9	32.6	7.2
Sweden	26.8	27.9	33.4	6.6
Finland	21.9	24.7	35.0	13.1
Denmark	22.1	24.3	30.1	8.0
Austria	22.6	25.6	28.5	5.9
Ireland	17.8	20.5	29.2	11.4
Greece	25.5	29.3	32.3	6.8
Portugal	22.5	24.3	27.3	4.8
Luxembourg	21.5	23.5	27.9	6.4
EU-15	24.1	27.1	31.7	7.6

Source: Eurostat 1997

Voluntary pension insurance has so far played a minor role in Finland due to the relative high net replacement ratio of public pensions, the lack of any pension ceilings and the full coverage of the systems.

The compulsory schemes are closely linked, with the amount of the basic national pension depending on the size of the earnings-related pension benefits. Increases in the earnings-related pension reduces the national pension by 50 per cent. In 1998 payments in statutory pensions amounted to 11.6 per cent of GDP, of which the employment based, earnings-related pensions accounted for three quarters and the basic national pensions for the rest.

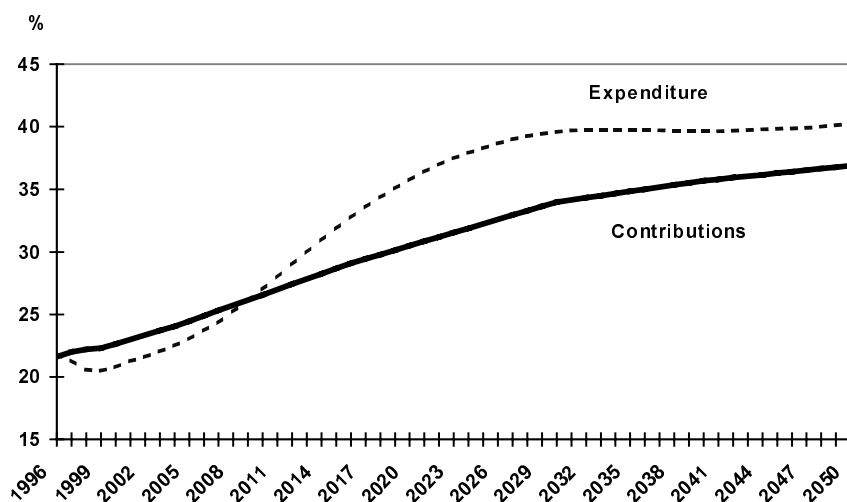
Roughly 85 per cent of public pensions (pillars 1 and 2) are funded through a pay-as-you-go system by adjusting social security contributions and taxes to running expenses. The first pillar is financed entirely through the pay-as-you-go system. Pillar 2, employment-based

earnings-related pensions, are financed through a partially pre-funded system designed to counter future expenditure pressures. The funded scheme covers approximately one quarter of employment pension outlays.

Pension funding based on a the pay-as-you-go system often tends to make the link between pension contributions and benefits very weak at the individual level, so that economic incentives to work and save fail to function properly. By means of a partially pre-funded system in pensions it is possible to clearly ease the pressure to raise pension contributions. Notwithstanding, substantial pressure to raise contributions still exists unless new effective measures are taken. Indeed, employment pension contributions will have to be raised from the current 21.5 per cent by over 10 percentage points by the year 2030 (Chart 3).

Despite the partially funded system in pensions, Finland's pension system is totally of the defined benefit-type. The pre-funding is collective in the sense that it has no effect on the size of the pension, and the sole purpose of the funding is to cut the peak of the pension contributions in the coming years.

Chart 3. Employment Pension Expenditure and Contributions
(in percentage of Wages)



Source: Ministry of Finance

Theoretically, the best funding system from the viewpoint of sustainable financing and economic incentives would be a defined contribution system that is fully funded. When there is a direct link between contributions and benefits on the individual level, pension payments are no longer construed as tax but as saving. As a result, no income transfers are made through the public sector either between cohorts or between people in the same cohorts. It is, of course, also possible to create imputed personal accounts in the pay-as-you-go pension system so as to improve work incentives without any actual money being accumulated in the accounts to be invested on the markets.

4 The direction of future pension reforms

The pension schemes need to be revised so that there are more incentives for older people to stay in work longer. This can be achieved by means of creating a closer link between pension contributions and pension benefits on the level of individuals, in other words by increasing the actuarial fairness of the system (See Appendix; Actuarial fairness in the pension system). The result is that the savings aspect of contributions is highlighted, reducing the tax aspect of the payments. If the system were to reward work better than at present, people would be more inclined to stay in work longer, the effective retirement age would rise and the economic dependency ratio would decrease. Deferring retirement to later years would reduce the pay burden in two ways: the time spent retired would become shorter, the number of pensioners would be lower and the number of employed people would grow. This means that public expenditure would increase slower and GDP would grow faster, clearly reducing pressure on raising the tax rate.

The pressure to raise the tax rate would be reduced in two ways:

- Where systems encourage work, people tend to work more and retirement occurs at a later age.
- Where the link between pension contributions and benefits on the individual level is close, pension payments are construed as saving instead of a tax levy.

5 Proposal for a pension system that improves work incentives and sustainability of public finances

The questions of work incentives, the expected labour force shortage and the problem of public financing can be addressed by increasing actuarial fairness in the defined-benefit pensions system and through the adoption of personal accounts in pension schemes. Personal pension accounts could be used to reduce the "unnecessary" circulation of funds via the public sector between the well-to-do.

The overall pension would consist of two tiers:

- an actuarial defined-benefit pension and
- a defined-contribution account pension.

The defined-benefit pension would be accumulated for 30 years, whereby 45 per cent of the pension would be accrued from the pensionable income, as in current regulations (according to the principal rule, pension accrues at the rate of 1.5 per cent of the wages for each year in work). After 30 years of work history, the employment pension system would automatically open an individual old-age pension account for the employee, in which the person could collect assets through pension contributions and returns on assets until the age of 68.

The size of the pension account would have no upper limit. Thus, the later the person retires and the more successful the investments, the larger the overall pension of the employee. The earliest age of retirement would be 61 years.

The new scheme would draw on the advantages in both the defined-benefit and defined-contribution systems. The defined-benefit pension would continue to form the major part (about $\frac{3}{4}$) of statutory pension security. The new system would provide a suitable trade-off between insurance that balances out risk (defined-benefit) and saving (defined-contribution), increasing personal responsibility and encouraging work.

5.1 Introducing flexible old-age pensions (defined-benefit) determined on an actuarial basis

It would be worth considering the adoption of a flexible old-age pension system where pensions would be determined on an actuarial

basis, becoming bigger the longer the person works and the older they are when retiring. The old-age pension would be determined on the basis of the number of years in work, the level of earnings and the expected number of years on pension. All earnings throughout the person's work history would be taken into account when computing the pension. The defined-benefit pension would be accumulated for 30 years. The earliest age for retirement would be 61 years, if the person has a work history of at least 35 years.

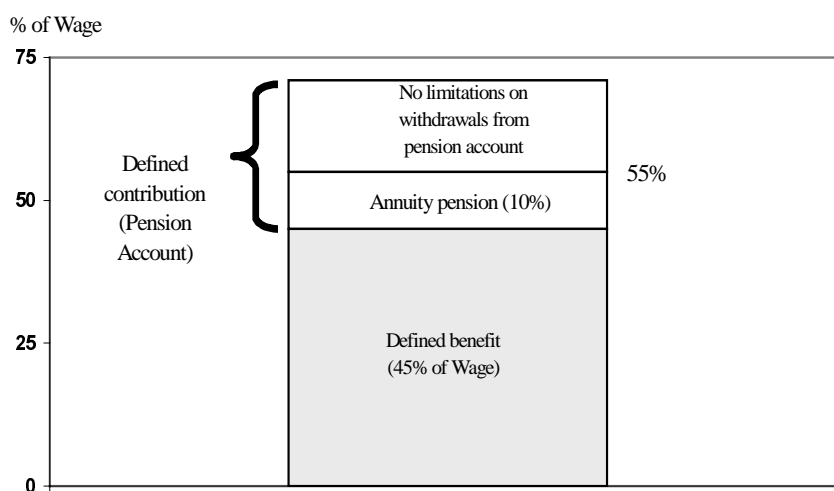
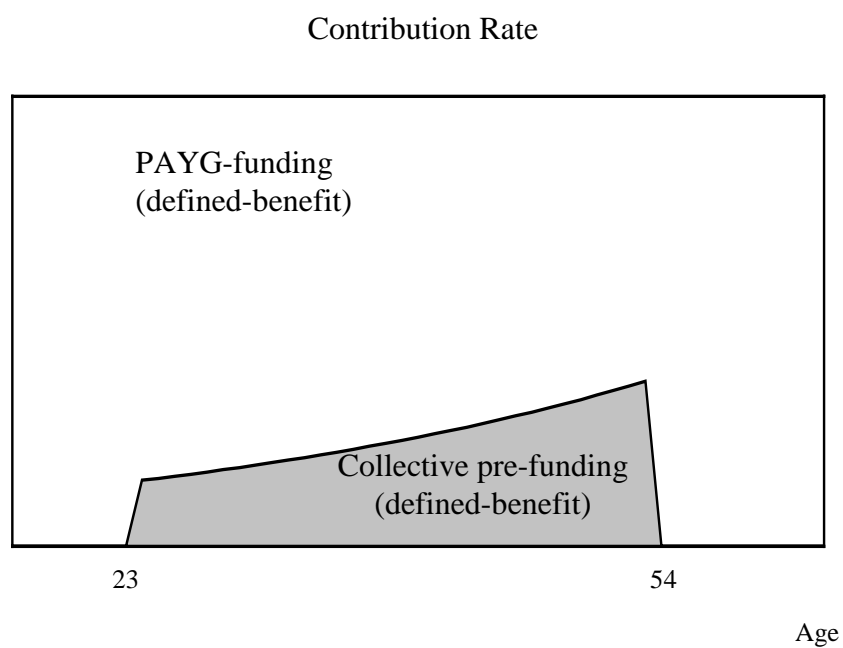
Various early retirement options – unemployment pensions and individual early retirement options – could be gradually phased out. The existing early retirement schemes are not based on an actuarial basis. By increasing actuarial fairness in the defined-benefits scheme, the system would move closer to a defined-contributions scheme. This would improve incentives to work, because the longer a person works and the longer their work history, the larger the pension becomes.

5.2 *Introducing personal defined-contribution pension accounts*

Following 30 years of work history, the employment pension system would automatically open a pension account for employees, accruing old-age pension and returns on investments. The account would operate in the form of account statements to the beneficiary until the age of retirement, showing the amount of assets and yield on the account.

The general duration for vesting funds in the pension account would be 10 years unless the beneficiary chooses to flexibly retire earlier or optionally prefers to continue working and vesting funds in the account until the age of 68. Part of the account would be paid on an annuity basis and part of the assets could be freely withdrawn in the course of retirement (Chart 4).

There are good reasons for opening the pension accounts at the latter end of employees' work history. Firstly, funds for old-age pensions in Finland are currently being pre-funded only for age groups between 23 and 54 years. Pension rights earned between the ages of 55 and 64 are financed entirely on a pay-as-you-go basis (Chart 5). The pre-funding period thus covers about three quarters of a full working career. It should also be noted that only 1/3 of the pension right for employed people aged 23-54 is pre-funded.

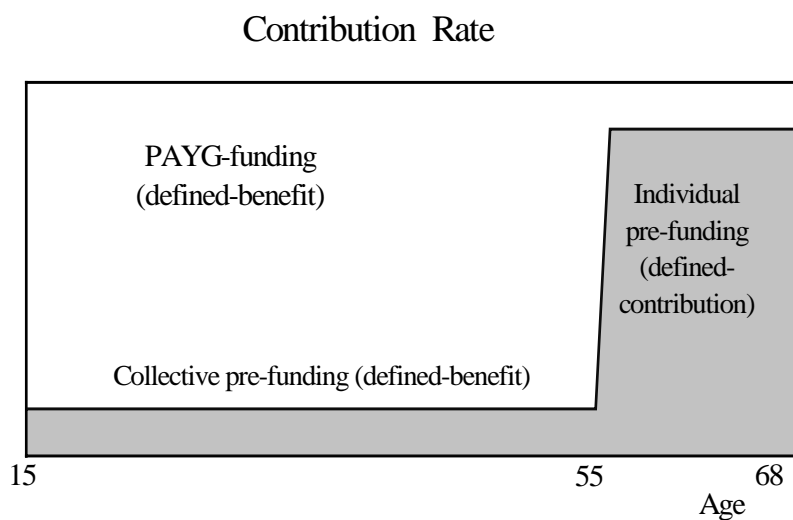
Chart 4. Components of Total Pension**Chart 5. Present funding system on earnings-related old-age pensions**

The aim is to move from collective pre-funding towards individual defined-contribution funding (Charts 5 and 6).

The adoption of a funded system usually raises pension contributions significantly because both pensions currently being disbursed and future pension must be funded. By creating a pension account at the latter end of employees' work history, it becomes possible to almost fully avoid raising pension contributions even during the transition period, because the accounts can be created on an almost "empty table". The number of people aged between 55 and 64 paying pension contributions is relatively low in Finland, as in practice only 45 per cent of those aged 55 to 64 are working.

The adoption of a fully funded account system "in one go", in other words, opening an account for all those aged 55 to 64 and still working would mean that employment pension contributions (presently 21.5 per cent of wages) would rise at most by 1½ percentage points of wages in the short term. In the long term, the account system would ease impending increases in employment pension contributions as the number of insured would grow and part of the pensions would be funded from accounts in the future.

Chart 6. "Future" funding system on earnings-related old-age pensions



A second important reason for creating an account system at the latter end of employees' work history is that people show interest in pensions most in the older age groups, when the work-incentive effects in the pension system are also at their greatest. A pension account system would bring badly needed transparency to the system. By means of the account, each employee could better perceive how strongly retirement age affects the level of pension.

A third crucial reason for introducing an account system at the "older end" is that there is little time left to resolve impending serious problems. The baby boom generations will begin to retire in a few years' time on various early retirement schemes, and this requires immediate action.

The basic principles in the account system would clearly differ from the system adopted in Sweden, for instance. Although the accounts would be personal, they would include characteristics of a collective system. The accounts would not be hereditary, meaning that in cases of death, the funds are redeemed to the pension scheme. Investment decisions on the assets in the accounts would not be granted to individual employees; instead, the assets would be invested collectively, as is the case at present. Employers would be responsible for the choice of employment pension fund, as is current practice. With the assets in the fund being invested collectively, the system would be administratively light and cost-effective.

6 Conclusions

Should this model be implemented, it would mean that pension systems would reward work better than at present in the form of higher pensions. Ageing workers would remain in work for longer than currently is the case, raising the employment rate and decreasing the economic dependency ratio. With public expenditure thus being lower and GDP increasing, pressure to raise the tax rate would ease substantially. The tax rate would also decrease because deposits in the pension accounts would no longer be treated as tax levies or equivalent contributions but would be considered private saving since the link between the pension contributions and the benefits would be closer to the individual.

The introduction of pension accounts would raise the funding rate of pensions as well as pension contributions in the short term. In the long term, the rise in the funding rate would significantly reduce pressure to raise pension contributions. If collective funding is reduced when personal pension accounts are opened at the latter end of employees' work history, pension contribution rates need not rise even in the short term.

By adopting a funding system that is principally personal instead of a collective buffer fund scheme, incentives to work and save would clearly improve.

APPENDIX

ACTUARIAL FAIRNESS IN THE PENSION SYSTEM

In order to ensure actuarial fairness in the pension system, the following equation (1) should apply on the level of the individual under the simplifying assumptions that pensions are adjusted by the index of wage and salary earnings and that the interest rate equals the annual change in the index of wage and salary earnings (per cent):

$$(1) A / B = c / d$$

where A = pension contribution (per cent of wages)

B = gross replacement rate (pension, per cent of wages)

c = duration of retirement (years)

d = duration in work (years)

A funded system is actuarially fair if the present value of pension payments equals the present value of contributions.

The pension contributions in Table 2 are fixed at 22.5 per cent of wages. The gross replacement rate is calculated in different combinations of work duration and pension duration. For example, a person retiring at the age of 60 (with a work history of 35 years and a projected 20 years of retirement) would be entitled to a pension of 39.4 per cent of their wages. If that person were to remain in work until the age of 70, the gross replacement rate would rise to 101.3 per cent. The ratio between the years in retirement and those in work (c / d) thus has a dramatic effect on the gross replacement rate as calculated on an actuarial basis.

The calculations that follow (Table 3) were made with parameters (rules of pensionable wage and post-retirement index adjustment) equivalent to those used in the Finnish employment pension scheme. The calculations are based on the following assumptions:

- The person has only one job, which starts at the age of 25 and lasts without interruption until retirement,
- The person's real earnings grow by 2 per cent a year,

- The person is expected to live till the age of 80,

Table 2. At constant contribution rates (22.5 per cent)

Age	c	c	c / d	A	B
55	25	30	0.83	22.5	27.0
56	24	31	0.77	22.5	29.1
57	23	32	0.72	22.5	31.3
58	22	33	0.67	22.5	33.8
59	21	34	0.62	22.5	36.4
60	20	35	0.57	22.5	39.4
61	19	36	0.53	22.5	42.6
62	18	37	0.49	22.5	46.3
63	17	38	0.45	22.5	50.3
64	16	39	0.41	22.5	54.8
65	15	40	0.38	22.5	60.0
66	14	41	0.34	22.5	65.9
67	13	42	0.31	22.5	72.7
68	12	43	0.28	22.5	80.6
69	11	44	0.25	22.5	90.0
70	10	45	0.22	22.5	101.3

- The 'pensionable wage' is calculated by the rule of the last 10 years' earnings using the existing pension index (fifty-fifty index = 0.5 x consumer price index + 0.5 x index of wage and salary earnings),
- Post-retirement index adjustments are made until the age of 65 with the fifty-fifty index and after that with the old-age pension index (= 0.8 x consumer price index + 0.2 x index of wage and salary earnings),
- The pensions are defined-contributions.

The pension contributions in the calculations are fixed at 22.5 per cent of wages. Real interest (=rate of return on the fund) and the age

of retirement were allowed to vary in order to see the effect they have on the gross replacement ratio as calculated on an actuarial basis. The actuarial gross replacement rate (=pension, % of wages) is determined so that the fund exactly covers the pension expenditure. At the death of the pension beneficiary at the age of 80, the value of the fund is nil. The pensions in these calculations are determined on the basis of current provisions (cf. above assumptions). Both the ratio of the duration of work and retirement (c/d) and real interest rate relative to the rise in real earnings have a dramatic impact on the gross replacement ratio as calculated in actuarial terms (Table 3).

Table 3. Gross replacement ratio when the pension contribution is fixed at 22.5 per cent of wages and real growth in wages and salaries is 2 per cent per annum

	Real interest rate		
	2%	3%	4%
Retired at age 55			
(=worked 30 yrs and retired for 25 yrs)	32.2	41.9	54.7
Retired at age 60			
(=worked 35 yrs and retired for 20 yrs)	45.5	59.8	78.7
Retired at age 65			
(=worked 40 yrs and retired for 15 yrs)	70.4	93.1	124.4