National Strategy Report on the Future of Pension Systems

- Sweden

Table of contents

Plan
The following report is divided into three chapters: Adequacy of pensions, Financial sustainability of pension systems and Modernisation of pension systems. It is based on the eleven objectives set forth within the framework of the open method of coordination in the area of pensions (doc. no. 14098/01 SOC 469 ECOFIN 334). As Sweden has recently implemented a major reform of the pension system, this report is more descriptive than strategic in character. Three appendices are attached. Appendix A describes the pension arrangements from 2003 onwards, Appendix B contains projections of the financial status of the PAYG system, and Appendix C contains indicators for poverty, income redistribution and incentives to continue working. The report begins with a brief account of the Swedish pension reform.

General account of the pension reform
The guidelines for the Swedish pension reform were adopted by the Riksdag in the summer of 1994. The new system was brought in by broad political agreement in 1999 and will come into full effect in 2003. Like the previous system, the reformed pension system is mandatory, i.e. all people working or living in Sweden are covered and the state's pension commitments remain extensive. One fundamental principle that applies throughout the new public pension system is that pension rights are credited at a rate of 18.5 per cent of a person's pensionable income during the whole of her or his working life (the "lifetime earnings principle"). The reform has entailed a shift from a defined benefit to a defined contribution system. Thus, the pension any individual receives should be equivalent to the value of all contributions paid into the system in the course of her or his working life. The contributions are paid into two different components of the reformed system, which in combination constitute the income-related pension. The lion's share – 16 percentage points – goes to the pay-as-you-go (PAYG) system and yields corresponding pension rights (a notional pension capital). The remaining 2.5 percentage points are invested in an individual account in the premium pension system. The income-related part of the pension system is separate from the central government budget; if persistent deficits arise in the system automatic rules exist for restoring the balance between liabilities and assets without any need to resort to political decisions or interventions in the regulatory framework. The reformed pension system incorporates basic protection provision in the form of a guarantee pension that tops up pensions received by individuals who are covered by the system but have low income-related pensions or none at all. The basic protection provided by the new pension system is financed out of tax revenues. The guarantee pension is further supplemented by a means-tested housing allowance.

The principal purposes of the reformed pension system are to promote greater justice both within and between generations and to comply with economic and demographic developments. Its design is intended to ensure socially efficient insurance, while satisfying the conditions that the system must be financially stable and must encourage an augmented supply of labour and raise the total level of savings in the economy.

1. Adequacy of pensions

Objective 1

Ensure that older people are not placed at risk of poverty and can enjoy a decent standard of living; that they share in the economic well-being of their country and can accordingly participate actively in public, social and cultural life[1].

From the point of view of distribution policy, one argument for a coherent system is that this better guarantees a generous level of basic protection. It enhances the legitimacy of a pension system if all people, regardless of their income, receive a substantial part of their pension from it. Accordingly, one essential feature required of the reformed pension system has been that it should be able to provide comprehensive basic protection for people who have had low pensionable incomes or none at all. One general objective of the Government's economic policy for the elderly (the part of the pension system financed out of tax revenues) is to offer an inflation -proof basic protection to people with a low income-related pension or none at all.

Guarantee pension
From 2003 on, the guarantee pension will replace the previous system consisting of a basic pension, a pension supplement and, as part of the tax system, a special basic income tax deduction for pensioners. Unlike the basic protection provided in the past, the guarantee pension will be subject to tax just as other incomes are.

The guarantee pension will be payable to pensioners who are at least 65 years old, as a top-up to their income-related pension. If an individual has begun to claim an income-related pension at an earlier age, the guarantee pension will be calculated on the basis of the public income-related old-age pension she or he would have received on retiring at the age of 65. No income other than the (estimated) public income-related pension will be taken into account. The top-up function of the guarantee pension means that a single pensioner will be guaranteed a pension income of approximately SEK 82 200 per year in 2003. For a married pensioner, the corresponding figure will be approximately SEK 73 300. The guarantee pension is expressed in terms of the price base amount, which in turn is adjusted upwards annually with reference to the consumer price index.[2]

In order to receive a "full" guarantee pension, 40 years of residence in Sweden will be required in principle, counting from the age of 25. If the beneficiary has 39 years of residence, the guarantee pension will be computed as 39/40 of the "full" guarantee pension. The general rule is that the guarantee pension is payable only to people who are domiciled in Sweden. However, there are exceptions, in part to ensure compliance with the provisions of Council Regulation (EEC) 1408/71.

Maintenance support for elderly persons
Maintenance support for elderly persons is a completely new form of basic protection that is being brought in in 2003. In so far as it replaces earlier forms of support, it is the social

[1] In this respect, benefits and tax advantages other than pensions should also be taken into account where appropriate.

[2] The price base amount will be SEK 38 600 in 2003.

allowance that is being replaced. Maintenance support for the elderly is a means-tested allowance intended to guarantee people who are aged 65 or older a reasonable standard of living. The definition of a “reasonable” standard of living is the same as is used in calculating the special housing supplement for pensioners. All individuals over the age of 65 will be eligible for maintenance support for the elderly but the majority of those who will receive this benefit are people who have immigrated to Sweden too late in life to have had time to earn an old-age pension in Sweden and who also lack sufficient years of residence to qualify for a guarantee pension that they can live on. The introduction of maintenance support for the elderly establishes a minimum economic standard for persons aged 65 or older who are domiciled in Sweden.

Housing supplement and special housing supplement for pensioners
Housing allowances will undergo some changes in connection with the introduction of the new system of basic protection in 2003. The housing supplement for pensioners will come to at most 91 per cent of housing costs up to a maximum eligible level of SEK 4 500 per month for a single person. The cost of housing for a person who is married or co-habiting will be calculated as half of the couple’s joint housing costs up to a maximum eligible level (per individual) of SEK 2 250 per month. Hence, the maximum supplement payable will be SEK 4 095 per month. The housing supplement payable will decline from this highest possible level in accordance with special regulations, depending on the individual’s wealth, income from pensions, income from capital, income from work (if any), etc. The sum is tax-free. In addition to meeting the income criteria, an old-age pensioner must be fully retired and 65 or older to be eligible for the housing supplement. If the pensioner’s income after deducting reasonable housing costs is below the income required for a reasonable standard of living, a *special housing supplement* may be payable. A reasonable cost for housing will be at most SEK 5 700 per month for a single person and SEK 2 850 for a pensioner who is married or co-habiting. The income required for a reasonable standard of living after paying housing costs will be approximately SEK 4 160 per month for a single person or SEK 3 490 per month for a married or co-habiting person in 2003.

Over and above the benefits provided by the pension system, there are also other features intended to enable elderly people to enjoy a tolerable standard of living. These are described below.

Transport service for disabled persons
The municipalities provide a transport service for people who are unable to travel on public transport because of disabilities. This service enables people with disabilities to travel by taxi or specially adapted vehicle at prices that are in line with the fares on public transport. Eligibility for the transport service is subject to a needs test. Regional and national journeys can also be made within the framework of this service. In 1999 about 21 per cent of people aged 65 or older qualified for the transport service; among those 80 or older the figure was 48 per cent.

Home adaptation grants
To enable people with disabilities to live independently in their own home, municipalities are required by law to make grants available for home adaptation, if this is necessary to make the home suitable for the disabled person. Adaptation may involve, for example, the removal of thresholds or bathroom conversion.

Care charges for elderly and disabled people

Elder care is heavily subsidised and elder care beneficiaries pay only a fraction of the real cost. Each municipality sets its own charges for elder care. Consequently, the charges paid by beneficiaries receiving the same care input can vary, both within a municipality and between municipalities. In most municipalities the fees are linked to income and input. Elder care is financed predominantly (about 80 per cent) by taxes that the municipalities levy from their residents. A small part of the financing for elder care comes from government grants to municipalities.

From 1 July 2002 there has been a statutory ceiling on individual charges for elder and disabled care and on charges for residence in special service homes. Elderly and disabled individuals who pay charges for the care they receive are to be entitled to retain a certain amount of money of their own. This means that single pensioners must have at least SEK 4 087 left to live on each month after care charges have been deducted from their income. The figure for married or cohabiting pensioners is SEK 3 424 per person per month. The monthly levels, being linked to the price base amount, will rise to SEK 4 160 for single people and SEK 3 490 for cohabiting people in 2003.

Pharmaceutical benefits
The present cost ceiling in the pharmaceutical benefits system is set at SEK 1 800. The patient pays the whole cost of pharmaceuticals for the first SEK 900. After this point, costs to the patient are gradually cut back. After the total cost reaches SEK 4 300, the patient receives a free pass for the remainder of the twelve-month period and pays nothing further for pharmaceuticals during this time. The patient pays at most SEK 1 800 in the course of a twelve-month period.

Dental support for elderly people
On 1 July 2002 a cost ceiling was brought in for people aged 65 or older. The cost ceiling means that the patient shall not be required to pay more than SEK 7 700 for a single course of treatment. In addition, elderly people receive subsidised basic dental care.

Cost ceiling for health and medical care
The cost ceiling means that a patient is not required to pay more than a certain total amount in patient's fees during the course of a single year. These fees include both fees due to public (county council) clinics and fees payable to private care providers who have contracts with the county council. After paying care fees to a total cost of no more than SEK 900 or a lower amount set by the county council concerned, patients are exempt from further fees for the rest of the one-year period dating from the first occasion on which they paid a fee.

Objective 2

Provide access for all individuals to appropriate pension arrangements, public and/or private, which allow them to earn pension entitlements enabling them to maintain, to a reasonable degree, their living standard after retirement.

Most of the income received by Swedish pensioners comes from the public pension system. Besides this income, almost everyone receives an occupational pension. Thus, the public system and the occupational pension system based on collective agreements combined ensure that a large part of the individual's income is spread over her or his life cycle. Individuals are free to take out private pension insurance to supplement the coverage provided by the public and occupational pension systems.

Public pension
The highest pensionable income for which old-age pension rights are credited in the public pension system is 7.5 income base amounts (SEK 291 000 in 2002).[3] The ceiling limiting the income that gives a person old-age pension rights was linked to the price index from 1960 until 2001. Since, on average, incomes have risen faster than prices, the linking of the ceiling to the price index has led to a decline in the income covered by the public pension system from around 97 per cent of the sum of all incomes in 1960 to barely 90 per cent in 2000. By and large, the system of occupational pension scheme agreements has compensated for this decline in the coverage given by the statutory system. As a result of the linking of the ceiling to changes in the average income from 2002 onwards, the proportion of the sum of incomes covered by the public system will remain the same, regardless of income growth trends.

Similarly, the reformed pension system means that pension rights earned (the "income pension") will be adjusted upwards to reflect changes in the average income in society. In the defined benefit national supplementary pension system (ATP), the value of pension benefits earned was linked to the consumer price index. The basic rule was that income from ATP was 60 per cent of a person's average income during her or his best 15 years of earnings. Although this guaranteed the purchasing power of pension benefits, the fact that real income growth was not followed meant that the relative value both of the pension points earned during those years and the pensions that were subsequently paid fell relative to the general rise in the standard of living. One feature of the new pension system is therefore that the pensions paid out are to be linked to the growth of average earnings ("flexible indexation").[4] This is likely to lead to a stronger link between income growth for individuals in working life and pensioners.

Occupational pension
A very high percentage of workers – approximately 90 per cent, at a rough estimate – are covered by some form of collective pension scheme agreement. The market is characterised by a high degree of centralisation, with the four largest collective agreement areas covering some 80 per cent of workers. For workers with incomes up to the qualifying ceiling in the social insurance system (7.5 income base amounts after deduction of basic pension contributions, or SEK 291 000 in 2002), these occupational schemes function as a supplement, in the first instance to the public old-age pension system. For portions of income up to the qualifying ceiling, the occupational pension scheme can be estimated to yield a pension relative to the final wage (replacement rate) of about 10 per cent for income earners with 30-40 years in working life (depending on the scheme). For portions of income above the qualifying ceiling in the public system, the occupational pension scheme constitutes the main insurance coverage. Income over the qualifying ceiling generates compensation worth approximately 60-65 per cent of the individual's "final wage". The occupational schemes thus play a more major role for incomes that is not covered by the public old-age pension system. For an overview of the largest occupational pension schemes, see Appendix A. To varying extents, the occupational insurance schemes also incorporate survivor coverage (a sum payable at death or repayment insurance) and sickness insurance benefits payable in the event of protracted illness.

Private pension plans

[3] The income base amount is adjusted upwards each year with reference to the change in the income index, i.e. average income growth. The income base amount for 2002 is SEK 38 800.
[4] Flexible indexation involves adjustment upwards in line with average income growth in society, minus 1.6 percentage points.

Private pension savings – whether in insurance schemes or pension savings accounts – differ from other forms of private savings in that they are tax deductible. The maximum deduction allowed is half a price base amount plus 5 per cent of the portion of earned income exceeding 10, but not 20, price base amounts. Depending on the individual's earned income, the deduction allowed therefore amounts to between SEK 18 950 and SEK 37 900 in 2002. The tax deduction for private pension savings thus makes it easier for individuals to even out the discrepancy in their income before and after retirement and puts them in a better position to supplement their public and occupational pensions by private insurance. The number of people who have opted to save in private pension plans has increased in recent years (see Table 2.1).

Since self-employed people, whose economic activity takes the form of a private business or partnership, are not employed by their company – a necessary condition for an occupational pension – the regulations governing their pension savings come under private pension savings rules. A tax deduction of half a price base amount plus 35 per cent of business income is allowed. The total deduction may not exceed 10.5 price base amounts.

Table 2.1 Tax deductions for pension savings 1996–2001

Year of taxation	Number of people, thousands	Average deduction, SEK thousands
1996	1 363	6.7
1997	1 478	6.6
1998	1 576	6.6
1999	1 678	6.6
2000	1 803	6.8
2001	1 947	6.6

Source: National Tax Board, *Tax Statistics Yearbook 2001*

Objective 3

Promote solidarity within and between generations.

The concept of solidarity can be defined in several different ways. When describing a pension system, moreover, this concept must be applied in two temporal dimensions, within and between generations. This multiplies the number of meanings with which the concept of solidarity can be invested. In order to limit the discussion, just two of a range of possible meanings of solidarity are used here; in what follows these are designated egalitarian and actuarial solidarity. What is meant by egalitarian solidarity is that the pension system, in the broad sense of the term, evens out income differentials among those covered, both within and between cohorts. What is meant by actuarial solidarity is that the relationship between the current value of pension contributions and pensions received is constant for all individuals and cohorts.

One principle that the egalitarian and actuarial interpretations of solidarity share is that the point of a pension system is to provide insurance against the "risk" of living without being able to support oneself, as a result of advanced age. The egalitarian and actuarial interpretations of solidarity normally lead to differences in the distribution of risks between individuals and between cohorts in a pension system.

The choice of discount rate

For the sake of comparison between the outcome of a pension system for different cohorts, it is necessary to select a discount rate. If a pension system aims to compensate individuals for the loss of income they suffer when they stop working and retire, there is good reason to use the rate of growth of average incomes as the discount rate. The use of the average income as the discount factor puts individuals belonging to different cohorts who have the same relative income and same relative pension in the same position. Discounting using the rate of average income growth is an expression of the assumption that individuals compare their income with the general level of income in the society in which they live.

Pension rights earned equal contributions paid (defined contribution system)
A one-to-one link between contributions and nominal pension rights gives both the PAYG system and the premium pension system a certain degree of actuarial solidarity within and between generations. Low lifetime earnings for an individual or a cohort lead to low pensions for that individual or cohort. The relation between contributions and benefits is not affected by differences in lifetime earnings. In systems with a weaker link between contributions and pension benefits, differences in the sum of contributions paid need not lead to corresponding differences in pensions, which means there is less actuarial solidarity.

However, the actuarial solidarity resulting from the strong link between contributions and benefits entails a low degree of solidarity when this concept is interpreted in egalitarian terms. It is obvious that significant income differentials exist within cohorts, and consequently the link between contributions and benefits will lead to a low degree of egalitarian solidarity. It is less obvious that significant differences exist between the lifetime earnings of different cohorts. Consequently, when the analysis turns to the relationship between cohorts, actuarial solidarity may not need to arise at the expense of egalitarian solidarity.

Average income growth as a basis for indexing notional pension capital and pensions (PAYG system)
The "interest rate" or index used in a pension system has great significance for its character as regards solidarity within and between cohorts. The basic rule in the PAYG system is that notional pension capital and pensions are adjusted at the same rate as average income growth. If the contribution is kept constant and if indexing to the average can be maintained (i.e. if the "balancing mechanism" does not need to be activated), a defined contribution system has very good qualities in terms of intra- and intergenerational actuarial solidarity. Ignoring effects arising from the design of the annuitization divisor,[5] each individual and each cohort can, in principle, expect the same ratio between contributions paid and benefits received. From the point of view of egalitarian solidarity too, indexing to the rate of change in average incomes is "perfect" where the relation between cohorts is concerned. Within cohorts, however, indexing to average incomes does not help to even out incomes.

The existence of a buffer fund in the PAYG system
A buffer fund means that the PAYG system accumulates capital in certain periods which the system can later make use of to help finance pension expenses. This enables the PAYG system to finance pensions indexed to average incomes, i.e. to maintain the value of the average pension relative to income growth, on the basis of a fixed contribution in considerably more scenarios than would be possible without the fund. This enhances the solidarity of the system in both actuarial and egalitarian senses.

[5] The annuitization divisor is based primarily on the expected number of years of life remaining when an individual begins to draw a pension. For an account, see Appendix A.

Automatic balancing mechanism
The automatic balancing mechanism consists of rules for estimating the assets and liabilities of the PAYG system. The rules entail that if the estimated liabilities of the system exceed its assets, the interest paid on notional pension capital and pensions will be based not on the rate of growth of average incomes but on a value approximating the internal interest rate of the system (i.e. the interest rate that enables pension liabilities to grow at the same rate as the system's assets). Initially this will mean a lower index will be applied for notional pension capital and pensions. The rules are designed so that after a period of lower indexing, the balancing mechanism can later allow higher indexing which will automatically restore the value of pensions and pension assets.

One ambition in designing the PAYG system has been to create a pension system that is characterised by solidarity between generations, in the sense that the expected ratio between the current value of each cohort's pensions and contributions is intended to be constant for all cohorts. This result is achieved by means of a pension system in which every contribution yields corresponding pension rights and which converts pension capital or notional pension capital into pensions according to remaining life expectancy at retirement. Given that the reasonable discount rate for discounting the pensions and contributions of different cohorts to current values is the rate of average income growth, this growth rate must serve as the interest rate in the system in order to achieve the objective of a constant benefit-contribution ratio.

The problem in this design is that the internal rate of interest in the PAYG system differs from the rate of average income growth. The internal rate of interest in the system is the rate of pension liabilities growth that makes the current value of the system's pension disbursements and contribution revenues zero. The internal rate of interest depends, in part, on changes in the system's contribution base, which in turn depends on such factors as the birth rate and labour force participation. Other factors affecting the internal rate of interest include changes in working patterns and mortality, and, to some extent, the returns earned by the buffer fund.

At certain times, the average income will grow more slowly than the system's internal rate of interest. This will happen, for example, if large cohorts reach working age or labour force participation increases. Since the system as a rule uses the average income as its index, the system will be strengthened financially at such times: the buffer fund will grow. The surplus generated in these periods will make it possible to continue to index pension liabilities to average income growth at times when average incomes are growing more rapidly than the system's internal rate of interest. This will make it possible to avoid passing on temporary variations in the system's internal rate of interest to variations in the indexing of pension liabilities. However, it is impossible to carry on increasing the liabilities of the pension system at a rate exceeding the system's internal rate of interest indefinitely. Sooner or later this will cause the current value of the system to become negative and the buffer fund to be emptied.

In a defined contribution system, this risk can essentially only be avoided by lowering the index so as not to allow the liabilities of the system to become greater than its estimated assets.

A defined benefit system normally places the burden of adjustment on people in working life, by adjusting the contribution levied; as a result, younger people end up with a lower benefit-contribution ratio than older people. In the defined contribution system used in Sweden the automatic balancing mechanism will spread the burden of adapting to any development that is detrimental to the financial status of the pension system over all the members of the insurance system. All those who have a claim on the system will obtain a lower rate of return on their claim. Because the claims of both pensioners and working people are adjusted upwards more slowly, the average deterioration in the benefit-contribution ratio will turn out lower than would have been the case if only the gainfully employed had been required to bear the burden. This therefore enhances intergenerational solidarity.

Adjustment of the monthly pension to trends in average life expectancy up to the age of 65
A higher average life expectancy will lead to lower monthly pensions in both the PAYG system and the premium pension system for cohorts who have not yet reached the age of 65 when the increase in life expectancy occurs. The fact that these cohorts will receive a lower monthly pension does not imply any intercohort variation in the ratios between the estimated current value of pensions and contributions. This is because a higher average life expectancy means that the benefit will be paid out over a longer period of time. If the pension is calculated perfectly in actuarial terms, the current value of pension payments will be independent of trends in average life expectancy. Changes in average life expectancy do not entail any problems from the actuarial point of view where intergenerational solidarity is concerned, if the pension is calculated on the basis of expected remaining life. In practice, of course, there is no getting away from the problem that it is impossible to foresee the exact average life expectancy.

The design of the annuitization divisor in the reformed pension system means that changes in average life expectancy will lead to differences in the size of pensions received by different cohorts *if* cohorts do not adjust the amount of labour they supply so as to keep the relation between the time spent in working life and time after retirement constant. The lower monthly pensions younger cohorts will receive due to the design of the annuitization divisor if average life expectancy increases (and the retirement age does not change) could perhaps be regarded as contravening the principle of egalitarian solidarity.

Gender neutral annuitization divisors
The annuitization divisors in both the PAYG system and the premium pension system are calculated on the basis of common life expectancy tables for men and women. Since women on average live longer than men, women can be expected to receive a larger pension relative to the contributions they have paid than men do. In this respect, neither the PAYG system nor the premium fund system meets the actuarial definition of solidarity within cohorts. As the proportions of men and women are essentially equal in all cohorts, the gender neutral annuitization divisor does not, however, have any effect on the intercohort actuarial solidarity of the systems. Since women on average have lower incomes, the gender neutral annuitization divisors promote egalitarian solidarity within cohorts *if* the alternative for comparison is gender specific annuitization divisors.

Pension rights financed via transfer systems
Since a considerable proportion of pension rights with which people are credited reflect various types of social assistance and unemployment benefits (approximately 11 per cent in 2001), fairly substantial income equalisation takes place within generations. This enhances the egalitarian solidarity of the system. Given that contributions to the social assistance and unemployment insurance systems are not computed on an actuarial basis, pension rights financed via such transfer systems detract from actuarial solidarity.

If social assistance and unemployment benefits represent a constant proportion of total lifetime incomes, pension rights financed via transfer systems will have no effect on the intercohort actuarial or egalitarian solidarity of the pension system. If, on the other hand, it is the case that different cohorts receive different amounts of income from transfers, the existence of pension rights financed via the transfer systems will mean increased egalitarian and reduced actuarial solidarity between cohorts.

Pension rights for pensionable amounts (financed out of general tax revenues)
Pension rights for "pensionable amounts" made up 6 per cent of all pension rights credited in the pension system in 2001. These pension rights weaken the link between the individual's contributions to the system and the benefits with which he or she is credited (the pensionable amounts do not, however, break the link between total pension rights credited and total contributions within the system). This reduces the intracohort actuarial solidarity of the system. Since pension rights for pensionable amounts have an income equalising effect, they increase the intracohort egalitarian solidarity of the pension system.

Guarantee pension
For persons who have a very low income-related old-age pension (less than 1.26 price base amounts for a single person), the guarantee pension completely reverses the distribution of risk between pensioners and people paying contributions or taxes that otherwise characterises the income-related old-age pension system. These people's total pension is fully shielded from the effects of weak growth in average income, sharp rises in average life expectancy and the automatic balancing mechanism. If the income-related pension received by such pensioners declines by SEK 1 as a result of negative average wage growth (or because the balancing mechanism has been activated), the guarantee pension they receive will go up by the same amount.

Pensioners with an income-related old-age pension in the range of 1.26 to 3.07 price base amounts are 48 per cent protected by the guarantee pension from the effects of any development that lowers the value of their income-related pension. For individuals in this range, a decline of SEK 1 in their income-related pension will be met by a rise of SEK 0.48 in their guarantee pension. Individuals with an income-related old-age pension over 3.07 base amounts are fully exposed to the risks inherent in the two parts of the pension system.

Weak average income growth, a sharp rise in average life expectancy or any development that activates the balancing mechanism will therefore mean higher tax costs to pay for guarantee pensions. Part of the risk of weak income growth and/or major increases in average life expectancy, etc., is therefore borne by the state (taxpayers), on account of the design of the guarantee pension. The guarantee pension reduces actuarial solidarity and increases egalitarian solidarity.

Since the guarantee pension is linked to the price index, this income redistributing feature of the pension system will decline in scope in the event of positive real wage growth. In view of the high marginal effects resulting from the guarantee pension and housing supplement combined, where elderly people on low incomes are concerned, it has been considered reasonable to allow income growth to gradually reduce the role played by the guarantee pension.

Concluding comments
Because of its index-linking to average income growth, it can be said that the PAYG system has been designed to maximise solidarity within and between generations. By and large,

intergenerational actuarial solidarity is obtained automatically as long as the automatic balancing mechanism is not activated. Refraining from balancing rules would, however, be no solution to the problem of promoting actuarial justice/solidarity.

The existence of pension rights financed via transfers and taxes and of the guarantee pension system reduces actuarial solidarity and enhances egalitarian solidarity within cohorts. These features of the pension system have an impact on intercohort actuarial and egalitarian solidarity only in so far as different cohorts have lifetime incomes that differ in level or composition.

Table 3.1 attempts to provide a summary overview of the types of solidarity resulting from the design of the rules. The table necessarily reduces a complex state of affairs to a greatly simplified form.

Table 3.1 Summary of the effects of the public pension system on intra- and intergenerational solidarity

Feature of rules	Promotes actuarial solidarity		Promotes egalitarian solidarity	
	Within generations	Between generations	Within generations	Between generations
Pension rights credited equal contributions paid (defined contribution system)	Yes	Yes	No	No
Average income indexing as basis for adjustment (PAYG system)	Yes	Yes	No	Yes
Existence of buffer fund in the PAYG system	-	Yes	-	Yes
Automatic balancing	-	Yes	-	No
Adjustment of each cohort's monthly pension to change in average life expectancy up to age 65	-	Yes	-	No
Gender neutral annuitization divisors	No	-	Yes	-
Pension rights financed via transfer systems	No	No	Yes	Yes
Guarantee pension	No	No*	Yes	Yes*

* Because the guarantee pension is linked to the price index, egalitarian solidarity between generations declines and actuarial solidarity increases in the event of positive average income growth. In principle, housing support is also "price index-linked", which has the same effects, but this support largely follows changes in housing/rental prices.

2. Financial sustainability of pension systems

Objective 4

Achieve a high level of employment through, where necessary, comprehensive labour market reforms, as provided by the European Employment Strategy and in a way consistent with the BEPG.

Sweden has good experience of setting economic policy targets. The argument for quantitative targets is to direct economic policy towards a more healthy development in the medium and long term, this being essential for future prosperity. In 1996 a target was set of halving open unemployment to 4 per cent in 2000, a goal that has been achieved. The Government has also set an employment target to be achieved by 2004, when the proportion of the population aged 20-64 in regular employment is to be 80 per cent.

Employment

In international terms, Sweden has a high employment rate, in spite of a weak trend in the mid-1990s. In 2000 the employment rate was 73 per cent, as against 63 per cent for the EU as a whole. There has been strong employment growth over the past three years. Between 1997 and 2001, the number of people in employment rose by approximately 317 000. It is above all the high employment figures for women and older citizens that make the Swedish employment rate one of the best in the EU. The employment rate in the 55-64-year-old labour force was 64 per cent in 2000.

The position of elderly people in the labour market

The labour market situation of the relatively young and relatively old differs from that of the population at large on account of their low rate of participation in the labour force. Among the relatively old, the disparity is especially tangible among those aged 60-64. By international standards the average age for leaving the labour market is high in Sweden, especially among women. The supply of labour from the relatively old has, however, declined over the past decade as a result of increased labour market exits via disability pensions and negotiated retirements. In 2001, for example, just 55 per cent of the population aged 60-64 was participating in the labour force. The effective retirement age, i.e. the age at which people exit the labour force, is over 63 years in Sweden's case (see Table 4.2). A future shortage of labour, however, makes it a matter of some importance to increase the labour supply in the 60-64-year-old group and to encourage this population to remain in the labour market longer.

Table 4.1 Labour force participation, percentage of the population in 2001

Age	Both sexes	Men	Women
16-64	78.4	80.5	76.2
20-64	81.9	84.4	79.2
55-64	69.9	72.9	66.8
60-64	54.4	58.9	50.0

Source: LFS, Statistics Sweden

Table 4.2 Effective retirement age (average age for leaving the labour force), 2001[6]

[6] The following formula is used in calculating the effective retirement age.

$$((P_{45-49} - P_{50-54}) * 50 + (P_{50-54} - P_{55-59}) * 55 + (P_{55-59} - P_{60-64}) * 60 + (P_{60-64} - P_{65-69}) * 65 + (P_{65-69} - P_{70+}) * 70 + P_{70+} * 72) / P_{45-49}$$

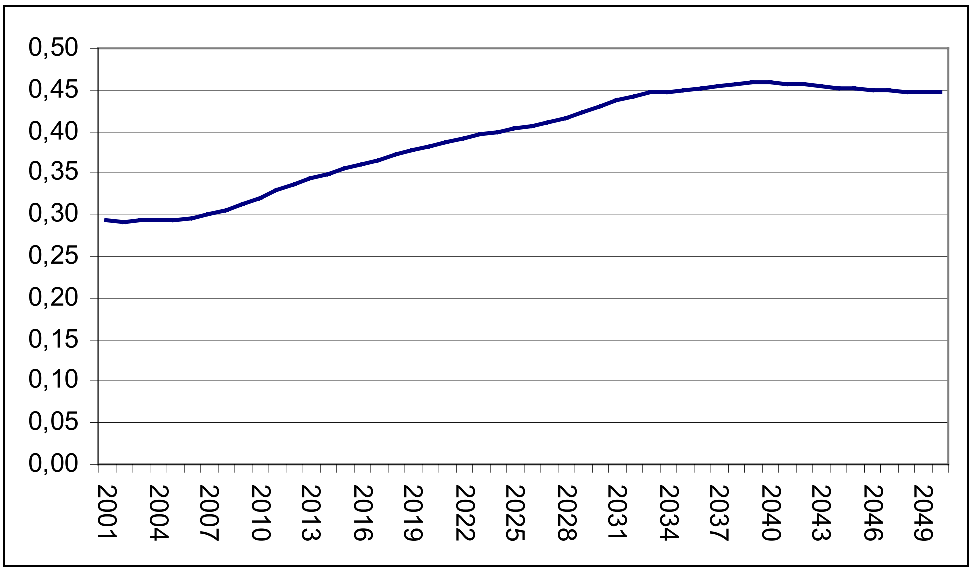
Where P_i is the percentage of each age category participating in the labour force.

	Men	Women
Effective retirement age, years	64.0	62.8

Source: Ministry of Finance calculations based on LFS, Statistics Sweden

Future labour supply
As in many other EU and OECD countries, demographic developments in Sweden will lead to an increase in the proportion of elderly people in the population during the first few decades of the 21st century (see Figure 4.1). This development will make increased demands on both the economy and the welfare systems and will require them to adapt. The labour market will need to adjust in response to the shrinking of the labour force and the rise in its average age. An increase in the proportion of elderly people in the population will have an impact on both pension disbursements and the demand for health care and social services. In the light of these changes, it will be important to make the most of unexploited resources in the labour force and in the population outside the labour force. These labour force resources consist primarily of people born in other countries who have a weak attachment to the labour market at present, and of young people and people aged 55-64 who currently have a low employment rate by comparison with the labour force in general.

Figure 4.1 Number of people aged 65 or older divided by the number of people aged 20-64, 2001-2050



Source: Statistics Sweden's population forecast, 2002

The Government's programme for better health in working life
The demographic challenge is exacerbated by the problem of increasing numbers of people on long-term sick leave, particularly among older workers and in professions dominated by women. An average of 41 per cent of all those aged 60-64 had a disability pension or were on long-term sick leave in 2000, as against 33 per cent in 1990. Long-term sick leave increases the risk of a person leaving the labour force through retirement by disability pension. Between 1997 and 2001, the number of people on sick leave for more than 365 days went up from

45 000 to 120 000. The number of disability pensioners rose from 423 000 to 450 000 during the same period.

With a view to breaking the trend of an increasing number on long-term sick leave in recent years, the Government has presented an 11-point programme for better health in working life. This is a broad strategic commitment to improved working conditions and good health in working life. The programme includes measures to promote a better working environment and more clearly defined employer responsibility, measures to speed up a return to work after illness, commitments to enhance access to health and medical care and efforts in the area of statistics, research, etc.

Tax and benefit systems must encourage people to work
One important consideration for efforts to augment the supply of labour and raise the employment rate is that tax and benefit systems must encourage people to work. As a step towards the objectives of increased employment, lower unemployment and reduced dependence on benefits, the Government is making active long-term efforts to strengthen the incentives to work. In 2001 and 2002 a number of measures have been taken in both the tax and benefit systems.

There has been a reform of the income tax, implemented in several stages and resulting in lower average and marginal taxes for low and medium wage earners. Further steps in the income tax reform will be considered if the public finances offer scope for doing so.

New rules were introduced in the unemployment insurance system in February 2001, with most of the important changes aimed at bringing about greater justice and clarity. The rules have been changed to improve the structure of the job-seeking process, reduce circulation between labour market programmes and open unemployment, increase requirements for occupational flexibility and geographical mobility and make it clear that unemployment insurance is intended to be readjustment insurance. In an attempt to increase incentives for the unemployed to seek work, the ceiling for benefits in the unemployment insurance system is now lowered after the first 100 days.

To enable people with disability pension to return to work, regulations were introduced on 1 January 2000 to the effect that approved entitlement to disability pension is permitted to be dormant. This gives people on disability pension the opportunity to try out a return to work for up to three years without losing their entitlement to the disability pension.

Efforts to reduce the risk of ill health among the long-term unemployed include the "activity guarantee" initiative, which aims to give individuals meaningful, individually designed activities to put them in a stronger position to return to working life.

The implementation of the system of maximum charges in child care, i.e. a ceiling on the income-based fee for child care, has brought a reduction in the marginal effects felt by parents of small children on low incomes in particular.

Active labour market policies and efficient job-matching
A series of far-reaching changes in labour market policy has accompanied the fall in unemployment. Labour market policy now focuses on quality rather than quantity. Particular attention is being paid to those unemployed people who have the greatest difficulty in getting

into the labour market: the long-term unemployed, occupationally disabled people and those born in other countries.

In the attempt to promote efficient job-matching and to prevent and counteract inflationary bottlenecks, individual action plans for jobseekers are an important tool. Action plans are intended to help shorten periods of unemployment by means of targeted initiatives on the part of both the jobseeker and the employment office.

Active measures prevent individuals from being knocked out of the labour market because their qualifications fail to match the skills requirements for which there is demand. Continuous efforts are being made to improve labour market policy programmes and enhance their efficiency, so as to ensure that all programmes meet the quantified targets set by the Government. One important change that has been made to increase the efficiency of labour market policy programmes is that participation in a programme no longer entitles a person to a new period of benefits in the unemployment insurance system.

Quality in work
Improved quality in work has a positive effect on both the employment rate and the labour supply and helps to prevent sick leave. Sweden is pursuing efforts to bring about working life that is sustainable in the long term and that enables people of working age to enter, remain in and develop on the labour market. Policies in this area must serve to stimulate growth, employment, productivity and the development of a competitive business sector. The task is to create favourable circumstances for working, in the form of a good working environment, flexible working organisation, worker participation and influence, job security and lifelong learning. When preventive measures in the area of the working environment and working conditions are made strategic elements of long-term action, a more sustainable working life and better results can be achieved.

Education and lifelong learning
Employers are responsible for the work-related continuing professional development (education and practical training) that employees require in order to perform their working duties. In a labour market in which steadily increasing skills and qualifications are demanded of the labour force, employers need to be committed to continuing professional development if they want to retain their workforce and promote staff development. In many industries it is difficult to find time for continuing professional development, and this is the case in particular for small enterprises. This makes it important for individuals themselves to take greater responsibility for their own development. Sometimes it is difficult to determine whether a course that an individual wishes to take is relevant to his or her present activity or whether it is the type of course that will give him or her broader skills outside the present area of expertise. The Government has recently presented a system for stimulating individual learning and skills development. The proposal entails giving all individuals the opportunity – subject to certain quantitative limits – to claim tax deductions for deposits in their own learning and skills development saving account. In connection with withdrawals from these accounts for the purpose of learning and skills development, they will receive a special stimulus in the form of a premium.

Objective 5

Ensure that, alongside labour market and economic policies, all relevant branches of social protection, in particular pension systems, offer effective incentives for the participation of older workers; that workers are not encouraged to take up early *retirement and are not penalised for staying in the labour market beyond the standard retirement age; and that pension systems facilitate the option of gradual retirement.*

One fundamental of the reformed pension system is the lifetime earnings principle. According to this principle, a person's final pension shall be based on all pension rights earned in all qualifying years. The pension system and its associated rules are characterised by flexibility as regards the transition from gainful employment to old-age pension. A person can retire from the age of 61 and onwards, and can elect to draw a full or a partial (¼, ½ or ¾) pension. This means it is individuals themselves who determine the point in their life at which they begin to draw a pension and the degree in which they retire. Hence, the retirement age is very flexible and it is possible to combine part-time work and a pension. The longer the individual chooses to continue to work, the higher the monthly pension will turn out. The decision on when to retire becomes a matter of the importance that the individual assigns to leisure and income respectively. The stronger link between contributions paid and actual benefits is regarded as an important element in the structure of incentives encouraging people to work to a more advanced age.

There are two reasons why a person will receive a higher income pension when continuing working. Firstly, continued work means continued contributions and hence more pension rights. Secondly, a person's pension rises if he or she continues to work after the age of 61 because the expected number of years in which the pension benefit will be claimed (the remaining life expectancy) declines. This will be reflected in a lower annuitization divisor. The annuitization divisor is based on the remaining life expectancy at retirement and a notional future growth factor (norm) of 1.6 per cent. The notional pension capital divided by the annuitization divisor gives the annual income pension. The later a person retires, the lower the annuitization divisor becomes, which in turn yields a higher annual pension. For computations of incentives to continue working under the new body of regulations, see Appendix C, Objective 5. As shown under Objective 4, the effective retirement age in 2001 was 63. Labour force participation is also presented under Objective 4.

Thus, the pension system rewards work to an advanced age. A change in employee rights recently approved by the Riksdag aims to make it possible for people to continue working even until the age of 67. Prior to the introduction of this legislation, virtually all employees in the Swedish labour market were required to retire at the age of 65 under the provisions of collective agreements. The right to continue in gainful employment is very important in a pension system in which the retirement age is flexible and pensions are calculated on an insurance basis. Moreover, the age 67 rule may serve a psychological purpose by weakening the image of 65 as the mandatory point for retirement: given that average life expectancy is increasing and health improving, the number of years in working life should also grow.

In the reformed pension system, the individual never ceases to earn pension rights, as long as he or she has an income above the qualifying threshold, which is also the limit for filing an income tax return. This means that an individual can accumulate pension rights from birth till death. If a pensioner who has started drawing a pension continues in gainful employment, his or her pension will be updated two years after the qualifying year to take into account the newly accrued notional pension capital. Thus, it is possible for individuals to influence their pension by continuing to work, even after beginning to claim a pension.

As mentioned in the section *Adequacy of pensions*, the existence of a comprehensive system of basic protection plays an important role in strengthening the legitimacy of the pension

system. This type of basic protection represents a departure from a pure application of the principle of loss of income, a departure that is both deliberate and well motivated by distribution policy. One problem that arises on account of the existence of generous basic protection for people on low incomes or with no income at all, is what are known as marginal effects. Situations do occur in the Swedish system where an increase in the amount of labour supplied brings little or no improvement in terms of pension. Means-tested benefits give rise to marginal effects, influencing, for example, the housing supplement for pensioners. The guarantee pension in the reformed system is cut back as the income-related public pension increases, falling in a certain interval by 100 per cent. For a person who has accumulated very low pension assets, additional contributions therefore need not necessarily mean a higher final pension. A further factor that may reinforce this effect is any rise that might occur in the average life expectancy. In that event, the annuitization divisor would be raised, dividing income pension rights over more years and thus yielding a lower annual pension. This would then increase the risk of people with low pension rights falling into the interval in which the guarantee pension is scaled back. Having said that, the number of people receiving the guarantee pension is expected to decline in the longer term as the reformed pension system matures, i.e. as the number of people receiving a sufficiently high income-related pension increases. This will occur if good future growth is achieved, combined with a high employment level. The majority of those who will be eligible for the guarantee pension from 2003 onwards are women. The income-related pension will be more common and on average higher among women pensioners in future than is the case at present.
Another type of marginal effect where the public pension is concerned, comes into play for income earners with incomes above the qualifying ceiling of 8.07 income base amounts. The employer pays contributions of 10.21 per cent even on incomes over this limit. These contributions accrue to the central government budget and are therefore to be regarded as a tax.

Objective 6

Reform pension systems in appropriate ways taking into account the overall objective of maintaining the sustainability of public finances. At the same time sustainability of pension systems needs to be accompanied by sound fiscal policies, including, where necessary, a reduction of debt,. Strategies adopted to meet this objective may also include setting up dedicated pension reserve funds.

The income-related old-age pension schemes in the public pension system, i.e. the PAYG system and the premium pension system, are separate from the central government budget and constitute a freestanding branch of insurance. The income-related pension is financed totally by the specially designated contribution of 18.5 per cent of pensionable income. The level of contributions is to remain constant and any financial adjustments that are needed in these systems will be dealt with on the benefits side.
Since the risks of deficits are dealt with internally in the income-related system itself, this in turn enables the income-related pension system to function independently of developments in central government finances. The existence of an income-related old-age pension system that is financially stable regardless of economic or demographic developments gives the central government budget and the pension system a high degree of mutual insulation. This enhances the credibility and value of pension commitments and reduces the risk of unforeseen income redistribution between generations.

One objective of the PAYG system has been to give the pension system the best societal characteristics possible within the framework of a financially stable system with fixed contributions. It is this objective that has motivated the principle that, as far as financially possible, pension rights should be adjusted upwards using an index reflecting average wage growth. The same objective has underlain the rule that the annuitization divisors based on remaining life expectancy should not be modified for cohorts over the age of 65. These features, however, bring a risk that persistent deficits may arise. This may occur, for example, if the sum of contributions grows more slowly than the average income in society – a probable development if the population in active working life diminishes. In order to avoid persistent deficits, which would empty the buffer fund, the PAYG system has been equipped with automatically operating rules that ensure that the commitments of the pension system can be fulfilled.

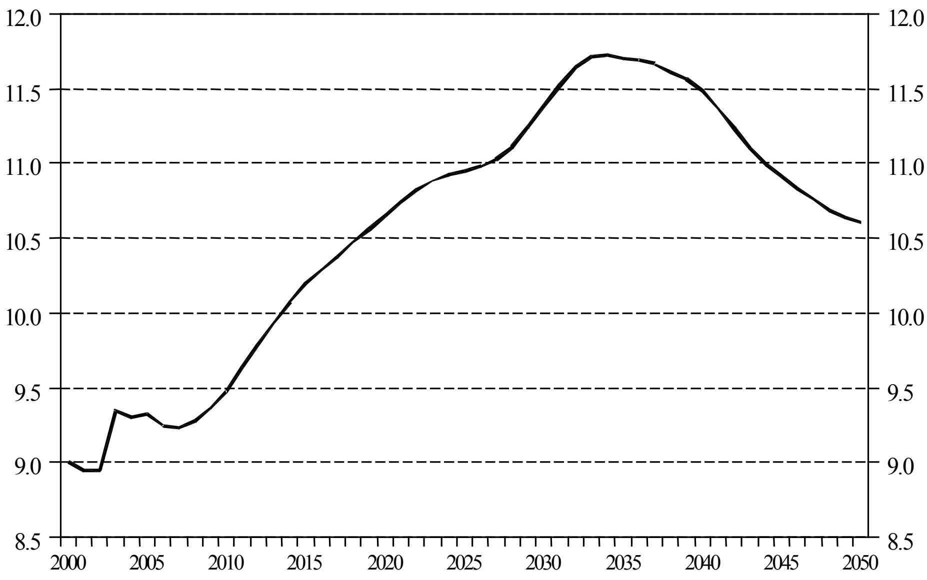
The financial stability of the PAYG system is guaranteed by the rules for automatic balancing. Automatic balancing consists in part of a method for estimating the assets and liabilities of the PAYG system. This provides the PAYG system with a balance sheet. The rule in the PAYG system is that notional pension capital earned are pegged against the income index, i.e. against average income growth in society. Furthermore, flexible indexation (percentage change in the income index minus 1.6 percentage points) applies to all outgoing supplementary and income pensions. The automatic balancing rules mean that if pension liabilities exceed total assets, deviations will occur from the normal indexing of accrued pension rights and payable supplementary and income pensions. This means that the indexing – i.e. the interest rate applied to pension liabilities – will be modified to take into account the relation between the liabilities and assets of the system until the balance between them is restored. Accordingly, the burden of debt in the PAYG system cannot exceed the system's assets other than temporarily. Projections of the balance ratio, which shows whether a long-term financial gap is emerging, are given in Appendix B. The same appendix also describes the size and investment profile of the buffer fund.

The reform of the public old-age pension system brings a considerable redistribution of revenues and expenditures in the public sector. Among other changes, the responsibility for paying disability pensions and survivor's pensions has been transferred from the buffer fund in the PAYG system to the central government budget. In overall terms, the pension reform therefore leads to a weakening of the central government budget. A decision has therefore been made to transfer resources from the buffer fund to the central government budget. During the 1999–2001 period, a series of transfers have been made to a total value of some SEK 245 billion. Whether further resources shall be transferred from the buffer fund to the central government budget will be decided at a review in 2004. Transfers from the buffer fund reduce the assets of the PAYG system. If the financial status of the PAYG system allows a further transfer without this entailing any forecast activation of the automatic balancing mechanism before 2050, and provided certain other conditions are fulfilled, such a transfer shall take place on 1 January 2005.

The development of expenditure on old-age pensions as a proportion of GDP up to 2050 is shown in Figure 6.1.[7] The figure shows that pension expenditures will account for a growing share of GDP until the mid-2030s, and will then fall back. The increase between 2000 and 2050 will be 1.6 percentage points of GDP.

[7] The data are taken from Sweden's convergence programme update, November 2001.

Figure 6.1 Old-age pension expenditures as a proportion of GDP.



Objective 7

Ensure that pension provisions and reforms maintain a fair balance between the active and the retired by not overburdening the former and by maintaining adequate pensions for the latter.

The Swedish pension system has predominantly consisted of a PAYG system and this will continue to be the case. This system redistributes the scope for consumption in society from the economically active population to the retired. Underlying this redistribution there is a pledge, a kind of contract, extending between successive generations. The Swedish pension reform, however, means that the contract between generations will now be more equitable than was the case in the previous pension system. Firstly, future pensions will be based much more closely than previously on the extent to which those receiving the pensions have contributed to the financing of the system, in the form of contributions paid in. Secondly, the indexing of pension rights earned and pension payments with reference to average wage growth in society will mean that the economically active population and pensioners will share in both advances and setbacks and will allow conformity to the development of the economy as a whole. Thirdly, the reformed pension system is financially stable and has a fixed rate of contributions – pension commitments cannot exceed the system's assets. Consequently, coming generations will not be made to bear too great a burden on the basis of a social contract approved by preceding generations. One important characteristic for a pension system is that it is designed so as to avoid intergenerational conflicts about the distribution of incomes and resources.

The reformed pension system has involved the replacement of a defined benefit system by a defined contribution system. Hence, it may be said that risk has been transferred from the pension system to the individual. Essentially, the new income-related benefits in the reformed system can be said to correspond to the pension that the individual would have received under the old ATP system, assuming the following conditions are fulfilled:

- An average working career of 40 years,
- The same average life expectancy as in 1994 when the regulatory framework for the reform was established,
- An average annual growth rate of two per cent, and
- Average real returns of two per cent on premium individual accounts.

The use of the annuitization divisor in computing an individual's annual income pension means that – unlike in the old defined benefit system – expenditure increases due to increasing average life expectancy will be averted at least in part. If average life expectancy increases, the individual will have to earn additional pension rights by continuing to work, in order to attain as large a monthly pension as he or she would have received if life expectancy had remained constant. However, the annuitization divisor can never be adjusted after the age of 65, so that if average life expectancy does increase, this will not affect cohorts over the age of 65.

Objective 8

Ensure, through appropriate regulatory frameworks and through sound management, that private and public funded pension schemes can provide pensions with the required efficiency, affordability, portability and security.

The Swedish pension reform has brought the introduction of a fully funded component, the premium pension, as part of the public system. Funded resources also exist in the PAYG system in the shape of the buffer fund that smoothes out variations in contribution revenues and disbursements over time. The following sections describe the regulations for funded resources in the public system, occupational pension schemes and private pension plans.

The premium pension system

The premium pension system is a pre-funded component of the Swedish public pension system, within the framework of the first pillar. 2.5 per cent of the pension contributions made by any person covered are transferred to an individual premium pension account. The premium pension saver subsequently has the opportunity to invest these resources in up to five different funds. There are more than 600 funds with varying risk profiles to choose between in the system. Participants are also entitled to change funds at any time, at no cost. If a saver refrains from choosing a fund, the resources are instead invested in the state Premium Savings Fund, a special fund managed by the Seventh AP Fund as part of the National Swedish Pension Fund system (AP).

The total assets of the funds within the premium pension system amounted to 3.0 per cent of GDP on 31 December 2001.The volume of assets will increase as the reformed pension system is phased in.

The premium pension system is administered by the Premium Pension Authority (Premiepensionsmyndigheten, PPM), which handles premium pension accounts and ensures that the investments chosen by each saver are carried out. In this respect, PPM resembles an insurance company handling unit-linked insurance. It is only PPM itself, not the individual fund managers, that has information about the fund choices made by pension savers. The authority's activities are financed by a fee of 0.3 per cent (at present) that is deducted each year from the balance of each premium pension account. The fund managers deduct fees for the management of the affiliated funds from the resources of each fund. Under a cooperation agreement with the fund managers, PPM is entitled to a rebate on these fees, which are therefore lower in the premium pension system than on the open market. PPM returns the rebate to premium pension savers.

For inclusion in the premium pension system, funds must be registered by PPM. Registration is conditional on the fund meeting the requirements set out in the UCITS directives and on the fund manager entering into a cooperation agreement with PPM. PPM is required to provide information to savers before they select their funds, as well as information about the performance of the funds the savers have chosen.

As a general rule the assets in the premium pension system can only be used for pension disbursements. Accordingly, when a pension saver dies, the remaining assets in his or her account are divided between the other savers as a survivor bonus. Certain opportunities do, however, exist to take out survivor's coverage to benefit a protected circle of survivors.

PPM is subject to the supervision of the National Social Insurance Board (Riksförsäkringsverket) and the Financial Supervisory Authority (Finansinspektionen).

The buffer fund in the PAYG system

The buffer fund consists of the accumulated contributions that have been paid in and continue to be paid in to finance the pension systems for supplementary pensions and income pensions. The buffer fund is included among the assets of the PAYG system and smoothes out fluctuations in the flow of pension contributions and disbursements. The buffer fund is also expected to contribute to the long-term financing of the pension system.

The buffer fund is managed by five public pension funds (AP Funds), namely, the First–Fourth AP Funds, which manage most of the capital in listed and tradable financial instruments, and the Sixth AP Fund, which has a specialised mandate to manage private equity. The First–Fourth AP Funds have identical mandates, requiring them to manage balanced portfolios consisting of Swedish and international shares and bonds. In addition, they have a certain liberty to invest the funds' capital in unlisted property shares and indirect investments in private equity via venture capital companies. The Sixth AP Fund has a broader mandate to invest its capital in unlisted companies but is restricted to invest domestically.

The total capital in the buffer fund amounted to SEK 565.2 billion at the turn of the year. For an overview of the assets in the buffer fund in 2001, see Appendix B, Table B.2.

The original AP Fund was established as early as 1960. The First–Fourth AP Funds were set up in their present form in 2000 and have been applying the new regulation since 1 January 2001. The new regulation allows greater scope for investments in shares and in foreign assets. Transitional rules are, however, in force regarding exposure to foreign exchange risk. One reason for changing the regulation in these respects was to improve the prospects of achieving higher returns while allowing risks to be controlled by giving broader opportunities for diversification. The changes are expected to promote greater stability in the pension system.

Regulatory framework for Swedish occupational pensions

Occupational pension agreements are generally entered into after collective bargaining between the social partners and are legally binding on all parties covered by the agreement in question. The legislation does not advance any particular requirements regarding the substance of these pension agreements. Defined benefit solutions have hitherto dominated the market, but a clear trend is now in evidence towards defined contribution occupational pensions.

Employers must safeguard their pension commitments in a satisfactory manner. By taking out an occupational pension insurance or by making contributions to a friendly society, the employer can transfer his or her responsibility for pension payments to a life insurance company or a friendly society respectively. Other ways of safeguarding pension commitments are to use book reserves combined with an economic guarantee, such as credit insurance, or to allocate funds to a pension foundation.

Occupational pension insurance is treated as equivalent to life insurance and is therefore subject to the same regulations that apply to life insurance activities. The Swedish regulations in this area have been brought in line with the three generations of life insurance directives.

A friendly society is a type of mutual benefit society founded in order to manage a funded pension scheme and to provide pension benefits according to the scheme. It is thus a type of institution for occupational retirement provision (IORP), in the sense referred to in the proposal for a directive on the activities of institutions for occupational retirement provision. Employers and employees enjoy equal representation on the society's governing board. Friendly societies are subject to special procedural rules and to investment rules on assets held to cover the technical provisions. Since these rules have been considered too rigid – investments in equities, for example, are not permitted – the legislation does allow friendly societies to apply for permission to implement the same investment rules that apply to life insurance companies instead. Such permission has been granted to virtually all major friendly societies.

The assets in a pension foundation constitute no more than a pledge for the employer's pension commitments and so do not release the employer from personal responsibility for pension payments. It is employers themselves that decide when contributions are to be made to the foundation and how large these contributions are to be, and in general it is also the employers who take care of pension payments. Employers are entitled to compensation from the foundation's resources for pension payments they have made, on condition that the total assets held by the foundation always match total pension commitments. Employers and employees enjoy equal representation on the foundation's governing board. The foundations are subject to special procedural rules. However, there are no general investment rules for foundations, nor are foundations required to establish technical provisions.

In general, occupational pensions will be paid out from the age of 65. They are taxed according to the ETT principle. In 2000, the sum of all occupational pensions paid out came to approximately 14 per cent of total pension disbursements from the public pension system and occupational pension systems combined.

The life insurance companies and friendly societies come under the supervision of the Financial Supervisory Authority (Finansinspektionen). Where book reserves are concerned, the Financial Supervisory Authority exercises indirect supervision via the credit insurance policies taken out in non-life insurance companies. Supervision over pension foundations is carried out by the county administrative boards (länsstyrelser), depending on in what county the foundation has its registered office.

The rules governing transfer of occupational pension rights are described under Objective 9. The coverage and replacement rates provided by the occupational pension agreements are described in Appendix A.

Regulatory framework for private pension plans
Over and above pensions under the first and second pillar, there are also private pension arrangements within the framework of the third pillar. Private pensions are pre-funded, and the terms that apply vary depending on the type of agreement. Agreements designed to yield pension payments in the future can be signed with insurance companies or banks or directly on the securities market. Saving can take the form of traditional life insurance, unit-linked insurance or so-called individual pension savings.

Under the Swedish Act on Individual Pension Savings, a person, acting through the assistance of an institution licensed as a pension savings institute, can put personal pension savings in a bank account, or invest them in Swedish mutual funds or UCITS or any other market papers.

Private pension plans are taxed according to the ETT principle. Private pension disbursements in 2000 came to a total of some 5 per cent of total pension payments from the public pension system and occupational pension systems combined.

All types of institutions mentioned above are subject to supervision by the Financial Supervisory Authority (Finansinspektionen).

Information about the number of private pension savers and the average tax deductions claimed is given under Objective 2.

3. Modernisation of pension systems in response to changing needs of the economy, society and individuals

Objective 9

Ensure that pension systems are compatible with the requirements of flexibility and security on the labour market; that, without prejudice to the coherence of Member States' tax systems, labour market mobility within Member States and across borders and non-standard employment forms do not penalise people's pension entitlements and that self-employment is not discouraged by pension systems.

Social security benefits in the event of sickness, unemployment, parental leave, etc., is pensionable. In so far as such benefits entitle the recipient to pension rights, these must also be financed by a contribution paid into the pension system. Where appropriate, the state assumes responsibility for part of the contribution paid into the pension system, paying state old-age pension contributions, while the individual pays the public pension contribution.

In certain phases of life, an individual may have a low pensionable income or none at all. This is a problem where pensions are concerned when the final pension is based on total lifetime earnings. With a pension system based on lifetime earnings, a palpable need arises for special compensation where pensions are concerned for absences from the labour market that should not reasonably be reflected in diminished pension rights due to lower lifetime earnings. Accordingly, certain groups in society are credited with supplementary pension rights, known as “pensionable amounts”. These pensionable amounts are financed entirely out of public tax revenues. They are awarded to four groups: parents of young children, people on compulsory military service, students and disability pensioners.

Apart from the pensionable amounts mentioned above, there are no provisions in the public pension system that cause particular occupational categories or groups to be treated differently where pensions are concerned. The type of employment contract a person has is irrelevant to the earning of old-age pension rights. People on part-time contracts earn pension rights according to their income, following the same rules as apply to those on full-time contracts, i.e. simply on the basis of their pensionable income. With regard to the self-employed, the pensionable income is based on the salary the person receives from his or her company. The self-employed person will pay personal social insurance contributions on this salary in the form of public pension contributions, while the company will pay payroll taxes on the salary (including the old-age pension contribution). Thus, total pension rights credited to the self-employed in the public system amount to 18.5 per cent of pensionable income, the same level as for all members of society covered. Special rules exist on tax deductions for private pension savings by self-employed people, as described under Objective 2.

When a worker changes employment, he or she may also come under a different occupational pension agreement than before. In this connection it should, however, be emphasised that the Swedish occupational agreements are very broad, i.e. the area covered by a single agreement may embrace a range of industries. When a person changes area and comes under a different agreement, coordination takes place, in principle by the issuing of a paid-up policy for pension rights earned and credit for the period worked in the previous position. Hence, a person does not lose occupational pension rights when he or she changes employment.

Objective 10

Review pension provisions with a view to ensuring the principle of equal treatment between women and men, taking into account obligations under EU law.

The social insurance system is not to be used to compensate for gender differences on the labour market. Using such forms of compensation to promote equality will merely serve to reinforce traditional gender roles. Instead the pension system aims to level the playing field for women and men where pensions are concerned.

Parents of young children are credited with pensionable amounts for the child’s first four years of life. This extra pension right is credited each year to one of the parents, and if no wish is expressed to the contrary it is automatically credited to the parent who has the lowest pensionable income in the year in which the pensionable amount applies. As previously stated, this provision compensates parents of young children where pensions are concerned for absence from the labour market during the first four years of the child’s life. It can apply to men and women alike.

Women and men who have earned equal rights in the income-based pension system shall also receive equally large annual income pensions, in spite of the fact that women have a higher average life expectancy than men. Since the application of the annuitization divisor makes the size of the annual income pension partially dependent on remaining life expectancy, this would mean lower pensions for women if separate annuitization divisors were set for women and men. For this reason the annuitization divisor is set independent of sex, i.e. there is a single annuitization divisor per cohort.

A survivor's pension has been payable to men and women alike since 1990, in the shape of an "adjustment pension". The purpose of this pension is to provide the survivor with reasonable economic support for a certain period following the death of a partner, to help them adjust to the new situation. The adjustment pension is payable to surviving spouses under the age of 65 for a period of 10 months (beginning in 2005, 12 months). The proportion of women participating in economic activities increased sharply in the 1970s and 1980s. This is one reason why the widow's pension, which is payable only to women, has been abolished. The widow's pension will, however, be phased out over an extended period by means of transitional rules. In general widows who married before 1990 will be eligible for a widow's pension.

Up to a point, spouses can opt to transfer their pension rights. In the pre-funded part of the public system (the premium pension), premium pension rights can be transferred to the saver's spouse. The restrictions that apply are that the premium pension rights have been earned while the spouses were married, that the transfer is made on a current, year-by-year basis, that it is voluntary and that it includes all the premium pension rights earned that year. All costs for the transaction are deducted from the premium pension rights transferred. The thinking here is that savers who do not transfer premium pension rights should not bear the costs of transfers requested by others. Transfer costs are calculated on a current basis and have the same insurance effects for men and women. The present charge for transfers is 14 per cent.

Objective 11

Make pension systems more transparent and adaptable to changing circumstances, so that citizens can continue to have confidence in them. Develop reliable and easy-to-understand information on the long-term perspectives of pension systems, notably with regard to the likely evolution of benefit levels and contribution rates. Promote the broadest possible consensus regarding pension policies and reforms. Improve the methodological basis for efficient monitoring of pension reforms and policies.

One important feature of a defined contribution old-age pension system, in which the individual's final pension depends on lifetime earnings, is that those who are covered by the system receive information on a continuous basis about the pension rights they have earned and how large they can expect their future old-age pension to be. All those covered by the new pension system have received annual information since 1999 in the shape of a package sent by the National Social Insurance Board (the "orange pension envelopes"). This package includes information to the person covered about the income and premium pension rights he or she has earned during the previous year, the total accumulated notional pension capital, and, further, a forecast of the future pension on a range of different assumptions about the growth rate and the rate of return, as well as retirement age. The annual provision of such information, even to relatively young people, allows the individual to foresee his or her expected economic situation after retirement. This also gives those insured the opportunity to decide for themselves whether they want to build up voluntary supplementary pension provision. One important effect of the pension reform and the orange pension envelopes has been to make the general public more aware of pension-related issues.

Another part of the endeavours to make the pension system as transparent as possible consists of the annual reports on the system's assets and liabilities. The first of these annual reports was compiled and presented in 2002. As the public pension system is a very extensive economic undertaking, the financial status and development of the system are of great interest to many groups in society, one reason being that developments in the system's assets and liabilities may come to affect the level of supplementary and income pensions.

Since a pension system is a long-term commitment, its design must ensure that the system is not only financially but also *politically* sustainable. The design of the pension system can influence many plans and decisions made by individuals during the professionally active part of their life. Individuals must therefore know, long before retirement, what sort of pension they can expect in different circumstances, which means that the conditions affecting the earning of future pension entitlements must be clear. The rules of the pension system must accordingly be stable and subject to revision only in exceptional circumstances. The Swedish pension reform is marked by an aspiration to achieve the broadest possible political consensus about the design of the pension system. The political agreement across party blocs that underlies the Swedish pension reform serves to guarantee the political sustainability of the system. Five of the seven parties represented in the Riksdag have endorsed the final agreement: the Social Democratic Party, the Moderate Party, the Christian Democrats, the Centre Party and the Liberal Party.

A working group consisting of representatives of all parties drew up the proposal for a reformed pension system between 1991 and 1994. The working group's proposal contained principles for a reformed system and guidelines for continued work but no direct legislative proposals, and it left certain details open for further discussion. The Riksdag approved the proposed guidelines in June 1994. Since 1994, the "Implementation Group", made up of representatives of the five parties endorsing the pension reform, has served as a forum for ongoing efforts to win a consensus for each remaining detail in the reformed pension system. The task of the Implementation Group has been to draft proposals for legislation to which all the parties involved could give their backing. After further preparation in 1994–1998, the Riksdag voted to adopt a reformed pension system in June 1998. The Implementation Group is still operational and is monitoring the implementation of the agreement.

Appendix A The public pension system and occupational pension agreements

Description of the public pension system from 2003 onwards

Background
The national supplementary pension (ATP) system, which was introduced in 1960, was designed as a PAYG system, with a buffer fund being gradually built up for the purpose of evening out contribution revenues and expenditures over time. The amount of compensation a person received from ATP depended on income during the 15 best years of working life. To receive a full ATP, the individual was required to have earned ATP points for 30 years. Basic security was provided within the framework of the pension system by a basic pension and pension supplement. There were several reasons why the defined benefit ATP system was reformed. Firstly, and above all, it lacked financial stability and its design entailed a weak link between the individual's lifetime earnings and pension. Pension points earned were made inflation-proof by linking them to the consumer price index. Moreover, the rules for earning ATP points were unfair. Because of the 15-year and 30-year rules, the ATP system was biased in favour of people who had uneven income growth or worked for a limited part of their life. Conversely, the ATP system placed individuals who had a smooth income progression and worked for a large part of their life at a disadvantage. Two people who had equal lifetime earnings could end up with very different pensions, even though the total contributions each had paid to the system were equal. The reformed pension system, in contrast, is defined contribution and the final pension is based on all lifetime earnings. The pension, that is, is now decided by the total value of contributions paid into the system in the course of a person's economically active life.

Income-related pension

The income-related part of the reformed pension system consists of two components, a PAYG system and a premium reserve system. A total contribution of 18.5 per cent of pensionable income up to 7.5 income base amounts[8] per year is paid into these two parts of the system. This total contribution of 18.5 per cent of pensionable income is paid in partly by the person insured and partly by the employer. The public pension contribution of 7 per cent is paid by the person insured on income up to 8.07 income base amounts. The public pension contribution is deducted from the individual's pensionable income. Hence, the maximum pensionable income is 7.5 income base amounts (8.07*[1-0.07]=7.5). The contribution paid by the employer to the pension system (the old-age pension contribution) comes to 10.21 per cent of the payroll and is payable even on incomes over 8.07 income base amounts. The person insured is credited with income pension rights equalling 16 per cent of his or her pensionable income, plus premium pension rights corresponding to 2.5 per cent.

16 per cent of pensionable income, i.e. a maximum of SEK 46 560 in 2002, is set aside for the PAYG system. These contributions are transferred to the system's buffer fund, where they are used wholly or in part to finance pension expenditures during the same period. According to the principles of the system, the 16 per cent contribution is supposed to be a fixed rate. 2.5 per cent of pensionable income, i.e. a maximum of SEK 7 275 in 2002, is assigned to the

[8] The income base amount is SEK 38 800 in 2002 and is adjusted upwards with reference to the change in the income index, i.e. average income growth.

premium pension system. This contribution is transferred to the funds (at most five funds) in proportions chosen individually by the insured person.

Certain groups in society are credited with supplementary pension rights, known as “pensionable amounts”, over and above the pension rights earned by income from work. The purpose of these pensionable amounts is to compensate the people in question, as far as their pension is concerned, for the income they have missed by their absence from working life. These pensionable amounts are financed entirely out of public tax revenues. Pensionable amounts can also be credited for years before the new pension earning rules entered into force in 1999 (rights for years with children from 1960 on, studies and military service from 1995 on). From 2003 onwards, pensionable amounts will be awarded to those who have performed compulsory national service, people who have received study support (e.g. for university studies) and parents of young children (“child year rights”).

Pensionable income consists mainly (83 per cent) of income from wages and salaries and income drawn by the self-employed from their business activities. Other components include taxable social assistance and unemployment benefits (11 per cent) and pensionable amounts (6 per cent). The state makes the annual contributions to the relevant parts of the pension system that are payable on such incomes.

The PAYG system and the premium reserve system both function in the same way: each contribution paid in by or for an individual produces corresponding nominal pension rights which are credited to that individual’s “pension account”. In the PAYG system the “interest rate” paid on the account during the saving phase is generally equal to the rate of change in the average income in Sweden (the income index). In the premium reserve system the interest rate during the saving phase is equal to the rate of return to capital in the funds selected by the individual. In both systems insured parties receive “survivor’s bonuses” – i.e. pension assets that have belonged to people who have died before retiring – on top of interest on their own capital. The cost of administering the insurance systems is covered by annual deductions from the individual’s PAYG and premium reserve accounts. Those insured receive annual information about the growth of each account, accompanied by a forecast of their future pension.

A pension can be claimed from the age of 61. 25, 50, 75 or 100% of the full pension may be claimed. If an individual continues to work after beginning to claim a pension, he or she will earn new pension rights irrespective of age. Income from work and pension income are taxed essentially according to the same rules.

The pension from the PAYG system – the income pension – is calculated when first claimed by dividing the notional pension capital, i.e. the sum of credited pension rights plus “interest”, by a “annuitization divisor”. The annuitization divisor reflects the observed gender neutral remaining average life expectancy at the age the pension is first claimed, plus interest credited at 1.6 per cent. Throughout the retirement period, the pension is recalculated at the turn of each year applying the change in the income index (based on the growth of average incomes in society) minus 1.6 per cent. This deduction of 1.6 per cent is made to compensate for the interest credited when the pension was first calculated. This form of annual indexing is known as “flexible indexation”.

The pension from the premium reserve system – the premium pension – can be claimed either in the form of a life annuity with a guaranteed nominal rate of interest of 3 per cent or as a variable annuity. In the former case, the pension will increase each year by a nominal annual rate of 3 per cent. If PPM's fund management achieves better results than expected it will be possible to pay a bonus. If the insured person chooses a variable annuity his or her pension capital will remain in a maximum of five (freely chosen) funds. The pension will then be recalculated each year taking into account changes in the value of the shares in these funds.[9]

The reformed pension system is being brought in gradually. People born in 1937 or before are covered solely by the supplementary pension system (i.e. the old system). The intermediate generation, i.e. those born between 1938 and 1953, earn both pension points towards the supplementary pension and rights in the income pension system (from 1960 at the earliest) and the premium pension system, on a continuous basis. The extent to which a person belonging to this intermediate generation is affected by the new or old system depends on year of birth. People born in 1938 receive 4/20 of their pension from the reformed system and the remainder according to the old rules. Those born in 1939 will receive 5/20 from the new system, and so on. People born in 1954 or later are thus covered entirely by the reformed pension system.

From 2003 onwards, the supplementary pension will consist of the previous national supplementary pension (ATP) and the national basic pension derived from ATP. The supplementary pension is calculated on the basis of the number of qualifying years and income during these years. For each qualifying year, pension points are determined. Pension points are calculated as the ratio between the individual's pensionable income after deduction of one higher base amount, and this higher base amount (SEK 38 700 in 2002). The 30-year rule means that at least 30 years of points are required to obtain an unreduced pension. Points can be earned up to and including the year in which a person is 64.[10] The supplementary pension has two components:
- 60 per cent of the product of the price base amount and the average of the 15 highest annual points, and
- a sum equivalent to 0.96 price base amounts for single people or 0.785 price base amounts for married people (this is known as the basic pension supplement).

The supplementary pension is payable to people born in 1937 or earlier, and, in set fractions, to people born in 1938-53. The pension can be claimed from the age of 61 but claims can also be delayed until after the age of 65. Early claims reduce the pension by 0.5 per cent each month until the age of 65, while postponed claims increase the pension by 0.7 per cent each month until the age of 70. The pension amount is linked to the price index until the year in which the individual is 65. From the year in which the insured person is 66 onwards, the supplementary pension is subject to flexible indexation following the same flexible indexation rules as apply to the income pension, i.e. to keep pace with average income growth minus 1.6 per cent.

Basic protection benefits

Guarantee pension

[9] In the premium pension system, the pension can also be drawn for two people's lives. In this case the pension will be paid out as long as either of the two remains alive. How much lower the monthly pension will be if it is paid out to two people instead of one will depend on the relative ages of the beneficiaries.

[10] The rule for the intermediate generation, i.e. people born in 1938-1953, is that from the year in which they are 65 they will earn income and premium pension rights without any percentage reduction. Thus, income and premium pension rights equivalent to 18.5% of pensionable income will be obtained from the age of 65 on.

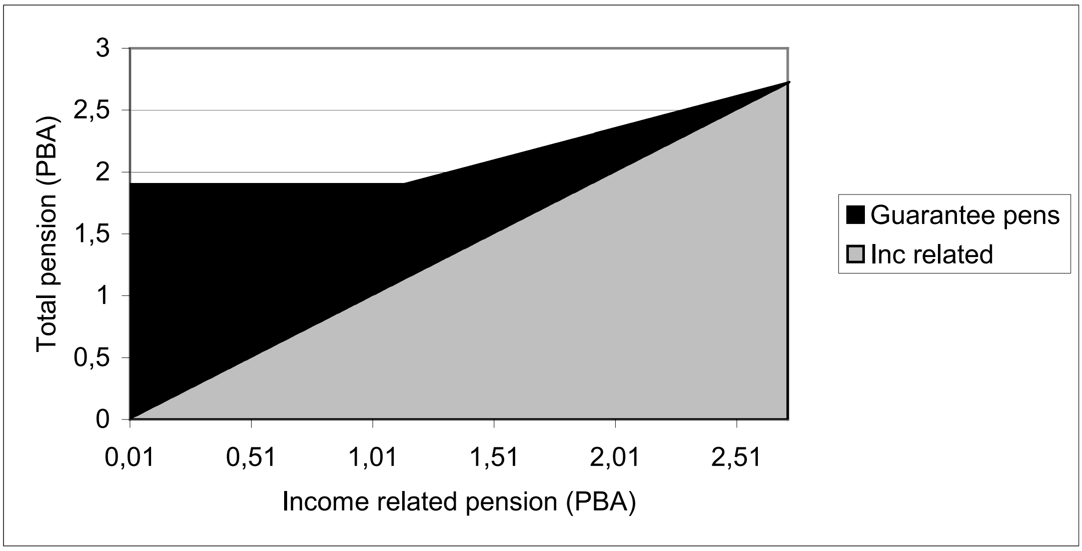
From 2003 on, the guarantee pension will replace the previous system consisting of a national basic pension, a pension supplement and, as part of the tax system, a special basic income tax deduction for pensioners. Unlike the basic protection provided in the past, the guarantee pension will be subject to tax in the same way as other incomes.

A person is eligible for the guarantee pension from the age of 65 at the earliest and if the individual begins to claim an income-related pension at an earlier or later age, the guarantee pension is calculated on the basis of the public income-related old-age pension she or he would have received if she or he had retired at the age of 65. No income other than the (estimated) public income-related pension is taken into account.

The guarantee pension is calculated, for single people, as 2.13 price base amounts[11] minus 100 per cent of any income-related old-age pension between 0 and 1.26 price base amounts and minus 48 per cent of any income-related old-age pension over 1.26 price base amounts. These rules mean that the guarantee pension is reduced to zero at an income-related old-age pension of approximately 3.07 price base amounts.

For married and cohabiting people, the guarantee pension is calculated as 1.90 price base amounts minus 100 per cent of any income-related old-age pension between 0 and 1.14 price base amounts and minus 48 per cent of any income-related old-age pension over 1.14 price base amounts. These rules mean that the guarantee pension is reduced to zero at an income-related old-age pension of approximately 2.72 price base amounts. Figure A.1 illustrates the principle of how the guarantee pension tops up income-related pensions.

Figure A.1 Total public pension consisting of guarantee pension and income-related pension for a cohabiting old-age pensioner, in price base amounts.



[11] The price base amount is SEK 37 900 in 2002 and is adjusted upwards by the rate of change in the consumer price index.

In order to receive an unreduced guarantee pension, 40 years of residence in Sweden are required in principle, counting from the age of 25. If the insured person has 39 years of residence, the guarantee pension is computed as 39/40 of the unreduced guarantee pension. The general rule is that the guarantee pension is payable only to people who are resident in Sweden. However, there are exceptions, in part to ensure compliance with the provisions of Council Regulation (EEC) 1408/71. The guarantee pension is protected against inflation by indexing, as the price base amount is adjusted upwards each year to keep pace with changes in the consumer price index.

Housing supplement and special housing supplement for pensioners
There will be some changes in housing allowances in connection with the introduction of the new system of basic protection in 2003. The housing supplement for pensioners will be at most 91 per cent of housing costs up to a maximum eligible level of SEK 4 500 per month for a single person. The cost of housing for a person who is married or co-habiting will be calculated as half of the couple's joint housing costs up to a maximum eligible level (per individual) of SEK 2 250 per month. Hence, the maximum supplement payable will be SEK 4 095 per month. The housing supplement payable will decline from this highest possible level in accordance with special regulations, depending on the individual's wealth, income from pensions, income from capital, income from work (if any), etc. The sum is tax-free. In addition to meeting the income criteria, an old-age pensioner must be fully retired and 65 or older to be eligible for the housing supplement. If the pensioner's income after deducting reasonable housing costs is below the income required for a reasonable standard of living, a *special housing supplement* may be payable. A reasonable cost for housing is considered to be at most SEK 5 700 per month for a single person and SEK 2 850 for a pensioner who is married or co-habiting. The income required for a reasonable standard of living after paying housing costs is considered to be approximately SEK 4 087 per month for a single person or SEK 3 424 per month for a married or co-habiting person.

Maintenance support for elderly persons
Maintenance support for elderly persons is a completely new form of basic protection that is being brought in in 2003. In so far as it replaces earlier forms of support, it is the social allowance that is being replaced. Maintenance support for the elderly is a means-tested allowance intended to guarantee people who are aged 65 or older a reasonable standard of living. The definition of a "reasonable" standard of living is the same as is used in calculating the special housing supplement for pensioners. All individuals over the age of 65 will be eligible for maintenance support for the elderly but the majority of those who will receive this benefit are people who have immigrated to Sweden too late in life to have had time to earn an old-age pension in Sweden and who also lack sufficient years of residence to qualify for a guarantee pension that they can live on. The introduction of maintenance support for the elderly establishes a clear minimum economic standard for persons aged 65 or older who are domiciled in Sweden.

Survivor's pension benefits

Survivor's pension benefits are financed via the central government budget, i.e. they are completely separate from the income-related pension system. The purpose of the survivor's pension is to give economic support to survivors to enable them to adapt to their new economic situation in the time immediately following a death in the family.

The adjustment pension will be payable to the surviving spouse for a period of 10 months after the death, from 2003 onwards (12 months from 2005 onwards), if the survivor has not reached the age of 65 at the time of the death. If the survivor has children under 12, an adjustment pension will continue to be payable until the youngest child reaches the age of 12. Survivors with children aged 12-18 will receive the adjustment pension for 22 months (24 months from 2005 onwards). The size of the adjustment pension will depend on what is known as the survivor's pension base, which is calculated on the basis of the old-age pension rights earned by the deceased, supplemented by assumed future income, so that it can be regarded as a "fictitious" old-age pension. The annual adjustment pension comprises 55 per cent of the survivor's pension base. The basic level of basic protection (guarantee pension) provided by the adjustment pension comes to 2.13 price base amounts per year, which is reduced in proportion as income-related adjustment pension rises.

A child's pension is payable to surviving children under the age of 18 (20 if a student). For a child under the age of 12, the child's pension is normally 35 per cent of the survivor's pension base, for those over 12 as a rule it is 30 per cent of the survivor's pension base. Basic protection to compensate surviving children is provided by child survivor's support. Child survivor's support is equal to 0.4 price base amounts per year and is payable only to the extent that the child's pension is less than this sum.

Certain women may receive a widow's pension. The widow's pension will be phased out over a long period under interim provisions. The interim provisions involve differentiated rules, depending mainly on the widow's year of birth, the date of death and date of marriage. Essentially, widows born before 1945 are entitled to a widow's pension if they were married before 1990. The widow's pension is payable at an annual rate of 40 per cent of the deceased's supplementary pension. Basic protection consists of a widow's guarantee pension set at a basic level of 2.13 price base amounts, which is scaled down against the income-related widow's pension. Widows born in 1945 or later receive a widow's pension based on the pension rights earned by the husband before 1990. For all widows born in 1930 or later, the income-related widow's pension is coordinated with the widow's own old-age pension when she reaches the age of 65.

Survivors born before 1945 are also entitled to the housing supplement and special housing supplement, under the same rules as apply to old-age pensioners.

Occupational pension agreements

Traditionally the Swedish occupational pension schemes, regulated by collective agreements between the parties to the labour market, have provided an extra income amounting to approximately 10 per cent of a person's final wages/salary. On portions of income above the qualifying ceiling in the public pension system, coverage has been provided against loss of income by a greater commitment from the occupational pension system. Most agreements have been renegotiated in recent years and have become defined contribution. In the main, agreements in four areas cover roughly 90 per cent of all wage earners in Sweden. A very schematic overview of these agreements is given in Table A.1.

The replacement rate is an estimate of the average pension relative to final wages for individuals with about 40 years of service and income growth following the general trend. A real return to capital of 4 per cent per year after costs has been assumed.

Table A.1. Rough summary of the major occupational pension systems in Sweden

Area of agreement	Name of scheme	Contri-bution (approx.)	Type of scheme	Repl. < 7.5 BA	Repl. > 7.5 BA	Pre-funding
Private sector manual workers, from age 21	SAF-LO occupational pension	3.5%	DC	10%	10 %	100%
Private sector non-manual workers, from age 28	ITP	5-10%	DB	10%	65%	100%
	ITPK	2%	DC	4%	4%	100%
Local authority employees, from age 28	PFA (and others)	3.5-4.5%	DC	10%	60%	Partially
Central government employees, from age 28	PA 91 (and others)	4-15%	DB	10%	60%	0%
	Kåpan	2%	DC	4%	4%	100%

Table A.1 describes the agreements as they are intended to function when fully in effect, i.e. when the older regulations have been wholly phased out. Virtually all present pensioners receive an occupational pension under an older agreement and these agreements differ substantially from the agreements now covering most people in working life. The older agreements, however, covered essentially the same groups on the labour market and had similar contribution and replacement rates.

During the 1990s several defined benefit occupational pension systems were renegotiated and replaced by systems that are defined contribution. This development has led to the complete replacement of the previous defined benefit occupational pension for private sector manual employees by a defined contribution system. Hence, the size of a person's pension will now depend on returns to capital and average life expectancy trends. A similar change has occurred in the area covered by the local public sector agreement.[12] Negotiations are under way to change the remaining defined benefit systems, ITP for private sector non-manual employees and PA91 for central public sector employees.

[12] Insured parties do, however, have the option of choosing a traditional defined contribution policy with a guaranteed nominal rate of return.

Appendix B Projections for the PAYG system

Basis for described projections for the PAYG system

The main purpose of the projections shown is to illustrate how the new Swedish PAYG system will function financially.

The most relevant variables in the Swedish PAYG system can be said to be:

1. Net contributions.
   Net contributions are the volume of revenues from contributions (calculated using the fixed contribution rate of 16 per cent) minus pension disbursements. Thus, the net contributions give a picture of the net result of the two major flows in the system: contributions and expenditures. The figure for net contributions provides no information at all, however, about the assets in the buffer fund or the interest revenue these assets generate. The existence of the buffer fund makes it possible to finance pension expenditures using a fixed rate of contributions in the event of persistent or even permanent negative net contributions.
2. Fund strength.
   Fund strength is calculated as the size of the buffer fund on 31 December divided by the pension disbursements each year. The fund strength variable provides information about the size of the buffer fund relative to the flow of disbursements.
3. Balance ratio.
   The balance ratio shows the relation between the estimated assets and liabilities of the system. The assets are made up primarily of the value of the flow of contributions and, to a lesser extent, of the assets in the buffer fund. The value of the flow of contributions is estimated using a method developed specially for the new pension system, which is based on a measurement of the volume of pension liabilities that the flow of contributions could finance under the demographic and economic conditions pertaining to the measurement period, i.e. the quantity summed up by the term "turnover duration". The assets in the buffer fund are valued at their market value. Pension liabilities are valued at their nominal value, or, if preferred, at their current value, whereby the indexing of pension liabilities is assumed to coincide with the internal rate of return in the pension system. Both methods give the same result.

The account below describes the development of the PAYG system in terms of primary saving in the system (net contributions), fund strength and balance ratio, in a number of economic and demographic scenarios.

Table B.1 Demographic assumptions in the projections

	Base	Low birth rate	High birth rate	Low mortality
Birth rate, children per woman	1.8	1.5	2.0	1.8
Rise in average life expectancy, average days per year 2000-2050	26	26	26	39
Rise in average life expectancy, average days per year 2050-2090	0	0	0	29
Inflow of 16-year-olds, annual average 2000-2050	103 800	92 000	103 800	103 800
Inflow of 16-year-olds, annual average 2050-2090	98 400	66 000	98 400	109000
Net immigration/year	12 000	12 000	12 000	12 000

Projections have been made for two different assumptions about the rate of average income growth, 0.5 and 2 per cent per year. If average working time is unchanged, the assumption regarding growth of average income is essentially equivalent to an assumption regarding productivity growth. Further, the projections have used three different assumptions about labour force participation. Labour force participation is defined as the proportion of people aged 16-64 with a calendar year income of more than 1 income base amount. Using this definition, labour force participation is estimated at 78 per cent in 2002. Estimates have been made for three alternative scenarios: Low=74 per cent, Medium=78 per cent and High=81 per cent. Finally, estimates have been produced for different assumptions regarding the real rate of return on the buffer fund. In the scenario with average income growth of 0.5 per cent the alternatives for the real rate of return are 0.5, 1.73 and 3.25 per cent. In the scenario with average income growth of 2 per cent the alternatives for the real rate of return are 2, 3.25 and 5 per cent. The base scenario in the projections is base demographic development, 2 per cent average income growth, 78 per cent labour force participation and a 3.25 per cent real rate of return on the buffer fund.

The buffer fund, which in practice consists of five funds, has had investment rules since 1 January 2001 that broadly conform to the rules applying to normal life insurance. At least 30 per cent of the assets must be invested in interest-bearing instruments, and the remainder can thus be invested in equities or similar securities. There are no restrictions on the proportion that can be invested abroad, though there are restrictions on the currency risk to which the funds may expose themselves. On 31 December 2001, 59 per cent of the capital in the fund was invested in equities, 40 per cent of which were designated as Swedish equities and 60 per cent foreign. Of the roughly 36 per cent of the buffer fund assets that were in bonds at that same point in time, Swedish issuers accounted for 63 per cent, with the main issuer being the Swedish state. Other assets accounted for about 5 per cent of the fund. The investment assets held by the funds are shown in Table B.2.

Table B.2 Investment assets in buffer funds, SEK billions, 31 December 2001

Public Pension (AP) Fund no.	1	2	3	4	6	*	Total
Equities**	**77 792**	**81 882**	**69 752**	**86 200**	**16 468**	**1 498**	**333 592**
Of which							
Swedish shares and participations*	19 630	31 885	26 848	36 619	16 468	1 443	132 893
Foreign shares and participations	58 162	49 997	42 904	49 581	-	55	200 699
Bonds & other interest-bearing assets	**56 636**	**48 172**	**57 151**	**42 972**	**1 302**	**0**	**206 233**
Of which Swedish issuers	34 404	44 630	31 579	18 530	1 302		130 445
Foreign issuers	22 232	3 542	25 572	24 442			75 788
Other	**3 127**	**3 737**	**5 868**	**2 638**	**142**	**18 669**	**34 181**
Total assets	137 555	133 791	132 771	131 810	17 912	20 167	574 006
Liabilities	6 767	298	47	225	1 184	314	8 835
Total fund capital	**130 788**	**133 493**	**132 724**	**131 585**	**16 728**	**19 853**	**565 171**

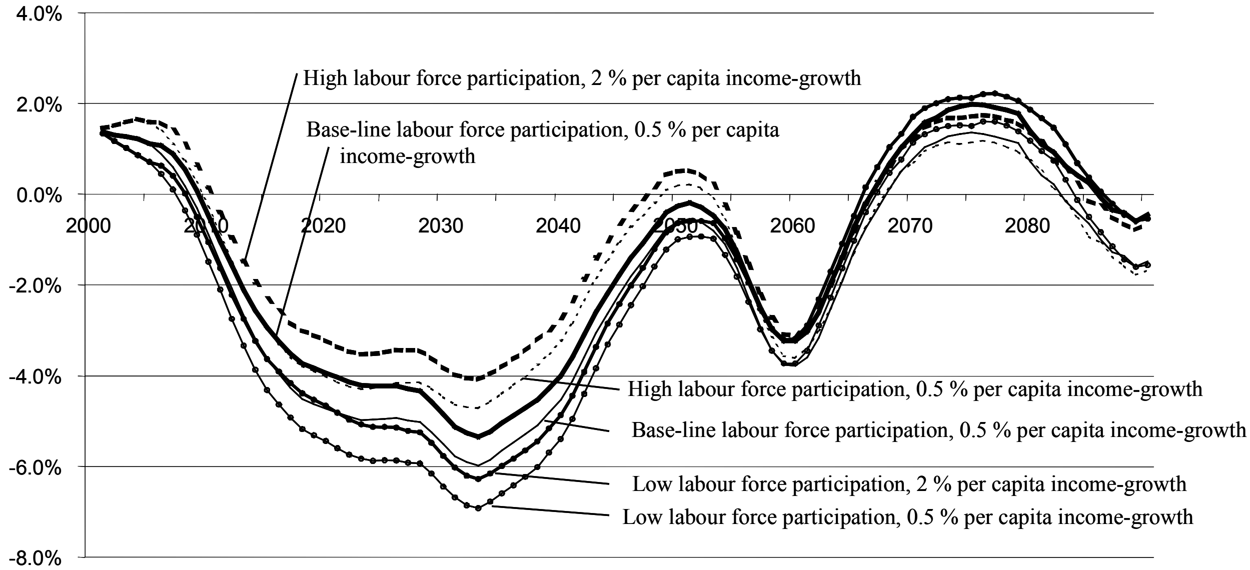
* Special management of First and Fourth AP Funds
** Equities are reported under the market where they were acquired

Projections for the PAYG system

Figures B.1 and B.2 describe the development of net contributions as a percentage of the contribution base in several different economic scenarios. Net contributions consist of contributions, calculated as 16 per cent of the contribution base, minus pensions paid out by the PAYG system. The net result is divided by the contribution base to make it possible to compare scenarios with different growth rates. In 2002, net contributions of +1 per cent represent surplus contributions of some SEK 10 billion. Net contributions are shown ignoring balancing rules. One reason for this is to give a picture of the underlying trend in the system.

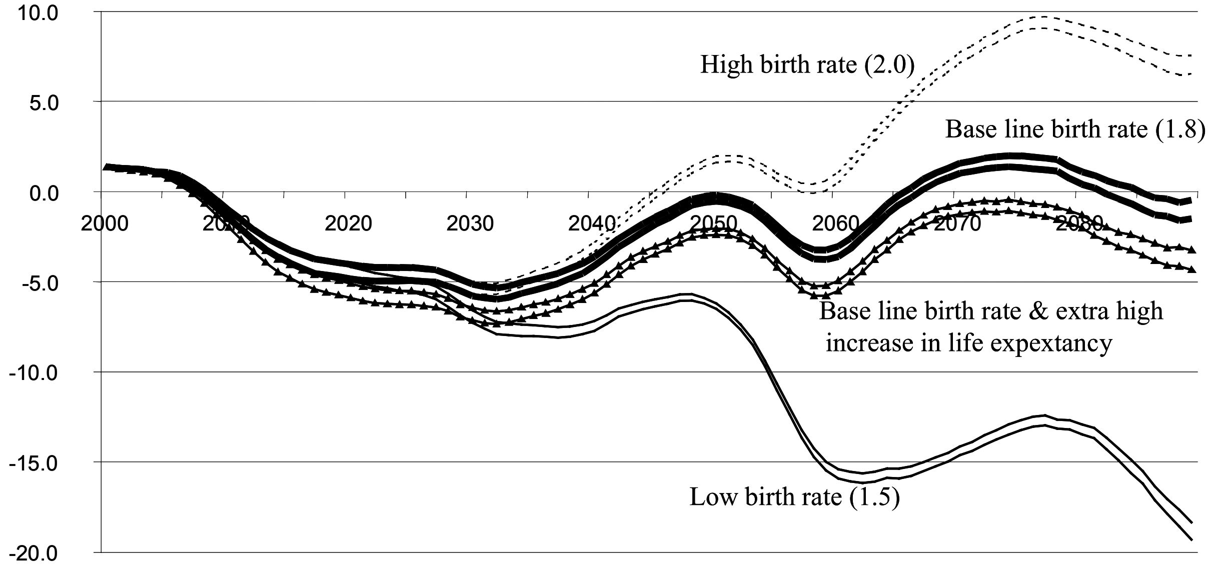
In Figure B.1 average income growth (the growth rate) and labour force participation are allowed to vary while keeping to the demographic base scenario. In Figure B.2 the demographic assumptions and growth rate vary while labour force participation is held constant. Figures B.1 and B.2 describe what would happen to net contributions in the absence of balancing rules. In most scenarios the balancing mechanism is not activated and net contributions are therefore not affected by these rules.

Figure B.1 Net contributions as a percentage of the contribution base (base line demography) in six different economic scenarios



Comments on Figure B.1. Initially and until about 2010, net contributions will be positive, but there will subsequently be persistent and substantial deficits until about 2050. During the phasing out of the ATP system, which can be said to continue until around 2020-2030, the net contributions will be better when the growth rate is higher. This is a consequence of the sensitivity of the ATP system to the growth rate. The sensitivity of net contributions to variations in the rate of growth will decline as pensions calculated according to the old rules are phased out and replaced by pensions calculated according to the new rules. As is also evident from the figure, the net contributions in the system are sensitive to variations in labour force participation. In the long term, however, a higher (lower) rate of labour force participation will entail correspondingly higher (lower) pension expenditures.

Figure B.2 Net contributions as a percentage of the contribution base in 4 demographic scenarios, at 2 growth rates (0.5% and 2%), employment=medium



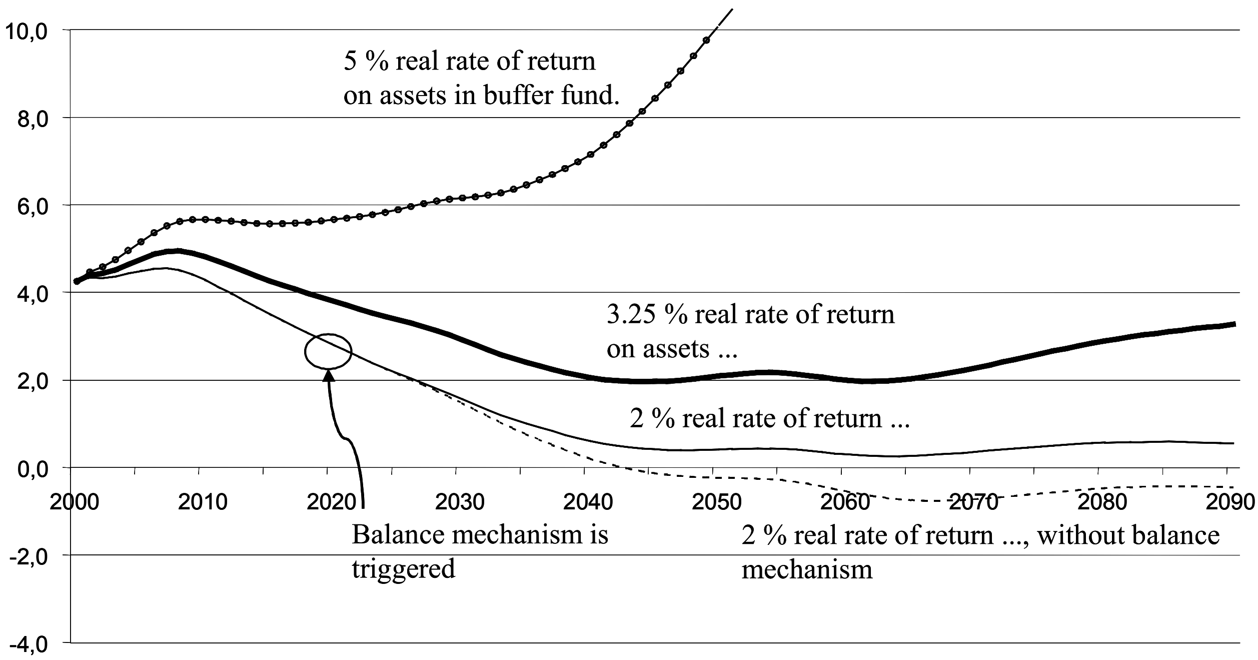
Comments on Figure B.2. This figure shows the sensitivity of the system to variations in the demographic assumptions. For each demographic scenario, the development has been calculated assuming growth rates of 0.5 and 2 per cent; the lower of each pair of curves represents the development assuming 0.5 per cent growth. The financial stability of the reformed system relative to the growth rate is clearly apparent. It is equally obvious how sensitive the system would be to demographic developments in the absence of balancing rules.

Given a high birth rate (2.0), the labour force will grow, albeit with a long time lag. The contribution base and contribution revenues will then grow more rapidly than average income. As liabilities are index-linked to average income growth, this means that the growth rate for pension liabilities (notional pension capital and pensions) will be lower than the rate at which contribution revenues grow. In time this will lead to large surpluses.

In the low birth rate scenario, the reverse is true. The labour force will gradually dwindle in size. The contribution base and contribution revenues will then grow more slowly than average income. Pension liabilities will grow at a more rapid rate than the rate at which contribution revenues grow. In time this will lead to large deficits. Note that the course of events described in the figure ignores balancing rules.

In the "low mortality" scenario average life expectancy rises even more rapidly than in the base scenario. The design of the annuitization divisor means that a large part (approximately two thirds) of the financial strain resulting from a higher average life expectancy will be countered by lower pensions (the calculations assume that the age for claiming an old-age pension remains constant). Since pensions, once approved, are not influenced by the development of average life expectancy, pension expenditures do still go up when average life expectancy increases, but the effect is limited.

Figure B.3 Fund strength in the base scenario, three rates of return



Note: Demography=base, employment=medium, growth=2%.

Comments on Figure B.3 The size of the buffer fund is traditionally expressed in terms of "fund strength", i.e. the size of the buffer fund at year end divided by pension expenditures in the same year. Expressed as a proportion of GDP, the size of the buffer fund on 31 December 2001 was about 25 per cent.

In spite of the large and persistent deficits that arise in all economic sequences in the base demographic scenario, the development of the buffer fund is relatively undramatic. Assuming a 3.25 per cent real rate of return, the fund's strength will fall by half by about 2040, after which it will remain roughly constant at 2 for an extended period and then increase towards the end of the period of estimation. The initial size of the fund and the assumed real rate of return of 3.25 are thus sufficient to finance the negative net contributions described in Figure B.1.[13] In estimates showing pension expenditures as an expected proportion of GDP, deteriorations in net contributions correspond to increased pension expenditures. It is important to note that these increased expenditures will be financed by reducing assets in the funds, not by raising contributions to the system. The system is designed so as to be able to finance its expenditures by a fixed contribution of 16 per cent combined with the assets in the buffer fund.

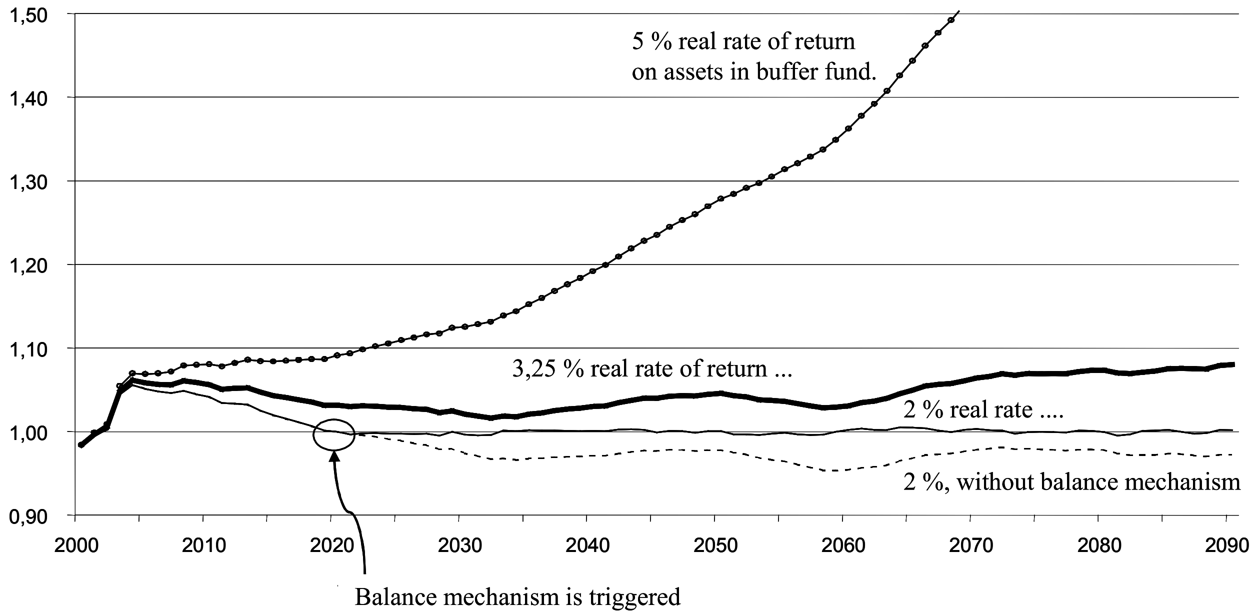
Given a real rate of return of 5 per cent, the fund's strength will grow at an accelerating rate.

If the rate of return is equal to the growth rate of 2 per cent, the initial fund will not be sufficient to compensate for the negative net contributions (see Figure B.1). Without balancing rules the fund would be empty by 2044. With balancing rules, deviations from income indexing will be made beginning about 2020, i.e. just over 20 years before the fund would be empty without balancing. These deviations will be modest in scope, the deduction from the index never being more than 0.1 per cent in any single year. The effect on pensions

[13] Based on the average annual rate of return over the past 100 years for the present allocation of resources in the funds (approx. 60% equities and 40% bonds), a rate of return of 3.25% may be considered a somewhat cautious assumption for long time horizons.

has been computed and balancing will mean a reduction of pension expenditures by about 3 per cent by 2050.

Figure B.4 Balance ratio, base scenario, three rates of return

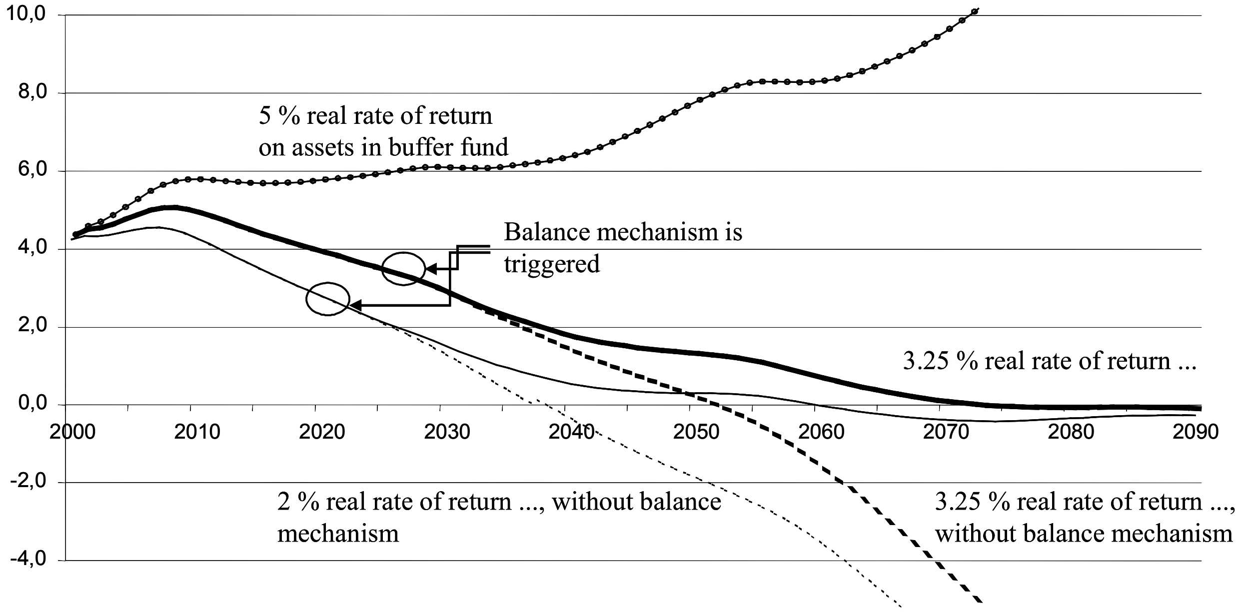


Note: Demography=base, employment=medium, growth=2%.

Comments on Figure B.4. This figure shows the expected development of the "balance ratio" in the same scenarios as are used in Figure B.3. The balance ratio shows the relation between the estimated assets and liabilities of the system. As shown in the figure, the ratio between assets and liabilities will fall below 1 some time after 2020 in the alternative with a 2 per cent real rate of return. When the balance ratio falls below 1, the balancing mechanism will be activated, which will lead to a lower rate of interest credited to pensions and notional pension capital. This will safeguard the long-term financial balance of the system and prevent the buffer fund, in this case, from falling below the SEK 0 level.

Figure B.5 Fund strength in the low birth rate scenario, three rates of return

Note: Birth rate= low, employment=medium, growth=2%.



Comments on Figure B.5. In the event of the more problematic development obtained with a low birth rate (1.5), a real rate of return of 3.25 per cent will not be enough to maintain the value of pensions relative to average income. The balancing mechanism will be activated even at this rate of return. In the single-year perspective, the effect on pensions of an activation of the balancing mechanism is limited in this scenario too, never exceeding 0.2 per cent. Over time, however, the effect becomes considerable. Pension expenditures in the PAYG system, and hence average pensions from this system, will have fallen by some 10 per cent by 2050. As mentioned above, compensation for the part of this reduction that affects people with very low income-related pensions will be provided in the form of a higher guarantee pension. An intermediate category will receive 48 per cent compensation from a higher guarantee pension. This means that the central government budget will be required to bear a part of the cost for the weaker demographic trend in this scenario. Note that the balancing mechanism will not prevent the buffer fund from being emptied. The balancing mechanism ensures that the current value of the system cannot be more than marginally negative, but it is no guarantee against temporary liquidity shortfalls. This design is a conscious choice and has been dealt with by giving the buffer fund a right to borrow. When the trend has stabilised, it will be possible to pay off the loan without raising the contribution rate.

Appendix C Indicators

Objective 1: Risk of poverty

Table C.1 shows the proportion of pensioners whose equivalised disposable income is below 60 per cent and below 50 per cent of the median for the entire adult population aged 20 or older. Comparative figures are given for corresponding categories in the entire population aged 20-64. It should be noted that the data refer to 1999.

Table C.1. Percentage of population with low economic standard, 1999

	Proportion below 60% of equivalised median income[14]	Proportion below 50% of equivalised median income
Population aged 20+		
Single men	10.1	6.7
Single women	7.3	4,3
Cohabitees[15]	9.3	4.7
All	8.6	4.5
Old-age pensioners		
Single men	6.1	2.7
Single women	11.4	3.4
Cohabitees	4.0	0.8
All	7.2	2.1

Source: Statistics Sweden, Income Distribution Survey data

Both with the 60% criterion and with the 50% criterion, the proportion of people with a low economic standard is lower among old-age pensioners than among the working-age population, which may reflect the fact that the pensioners have a guaranteed minimum income in the shape of the national basic pension combined with pension supplement, housing supplement and special housing supplement. As expected, pensioner poverty is more widespread among single women than among single men. In the working-age population the tendency is the reverse.

Another way of measuring poverty is to examine how large a proportion of people are able to cope with current expenses or to come up with a certain sum of money should this be necessary. The results below are taken from the living standards surveys conducted by Statistics Sweden. The living standards surveys have an upper age limit of 84, so it is not possible to report results for the oldest pensioners.

Table C.2 Difficulty coping with current expenses and coming up with cash

	Per cent unable to come up with SEK	Per cent who have had difficulty coping

[14] To make it possible to compare households of different size, disposable income is divided by an adult equivalent figure, which is related to the number of adults and children in the household. The scale is the one used by Statistics Sweden.
[15] Cohabitees are not broken down into men and women, as they share incomes equally and consequently come to have the same value for their equivalised disposable income.

	14 000 at a week's notice	with current expenses some time in the past year
Population aged 20-64		
Single men	21.5	21.1
Single women	29.0	30.0
Cohabitees	10.7	12.4
All	15.4	16.6
Pensioners aged 66-84		
Single men	15.6	3.6
Single women	24.4	7.5
Cohabitees	7.6	2.3
All	14.2	4.2

Source: Statistics Sweden, Living Standards Surveys

As a group, pensioners do not have greater difficulty coming up with SEK 14 000 at a week's notice than the working-age population. When individual household categories are studied, we find that whether single or cohabiting, pensioners have less difficulty in this respect than people of working age. The differences are very striking when we turn to difficulties in coping with current expenses. One reason for this may be that pensioners have more predictable expenses than young people and perhaps interpret the question of "difficulty in coping with current expenses" differently.

Cohabitees, moreover, have fewer difficulties than single people, which is natural since cohabitees have the resources of the entire household to take into account.

Objective 2: Pensioners' standard relative to that of the working population

Table C.3 analyses the gross incomes[16] and disposable incomes of pensioners relative to the incomes of the working population. Apart from comparing all pensioners with the working population, young pensioners are compared with old members of the working population. This gives an idea of how income changes when a person becomes a pensioner. Income from work is calculated per individual, while disposable income is equivalised.

Table C.3 Median income of pensioners and members of the working population. SEK (equivalised) per year, 1999

	All pensioners	All members of working pop.	Pensioners aged 66-74	Working pop. aged 55-64
Gross income				.

[16] Gross income includes income from work, sickness benefits, parents' allowances, labour market support and pensions.

Single men	133800	214800	148100	220800
Single women	97000	186000	124300	210400
Cohabitees	120360	205400	125100	215600
All	114400	202700	128400	216500
Disposable income				
Single men	88200	122400	93800	130100
Single women	81700	103100	85900	127600
Cohabitees	96200	117300	103400	148500
All	87500	114500	96500	141300

Source: Statistics Sweden, Income Distribution Survey data

It is a well-known fact that young pensioners have higher incomes than the pensioner category as a whole. The gross income of pensioners overall is 56% of that of the working population. If young pensioners are compared with old members of the working population, the ratio is somewhat higher (59 per cent).

When the analysis turns to disposable income we see considerable levelling. Pensioners have 76 per cent of the income of working people, while the corresponding ratio for young pensioners compared with old members of the working population is 68 per cent. A greater process of levelling occurs for "all pensioners" than for "young pensioners". This is connected with the fact that the category "all pensioners" includes a fairly large group of pensioners with low incomes. These pensioners enjoy a tax advantage as a result of the special income tax deduction, and can besides receive a housing supplement and special housing supplement, which are tax-free.

Objective 3: Intra- and intergenerational solidarity

Intergenerational solidarity can be illustrated by a comparison of standards of living, as shown in Tables C.1–C.3 above. To illustrate *intra*generational solidarity, the size of the sum of incomes of the top 20 per cent of income earners has been calculated relative to the bottom 20 per cent of income earners, measured in terms of equivalised disposable income.

Table C.4. Equivalised disposable income for the top 20 per cent relative to the bottom 20 per cent of income earners

	Ratio between top 20% and bottom 20% incomes
Population aged 20+	
Single men	4.16
Single women	3.06
Cohabitees	3.68
All	3.67

Old-age pensioners	
Single men	3.12
Single women	2.72
Cohabitees	3.32
All	3.15

Source: Statistics Sweden

Objective 5: Incentives to work longer

In the reformed pension system every contribution paid in corresponds to pension rights gained. Since the system is defined contribution, this means that the relative pension increase resulting from an extra year of paid work depends on a range of factors. The calculations in Table C.5 have been carried out based on the following assumptions: the individual begins to work in 2000 at the age of 25; the wages received by a 100% Average Production Worker (APW) in 2000 are SEK 224 464; the individual has a normal wage growth profile, real wage growth is 2 per cent per year, and the premium pension rate of return is 4 per cent per year; the annuitization divisor at age 65 is 17.68.

Table C.5. Increase in public pension (SEK/year) for 1 extra year of work

Original wages	Pension at age 65	Pension at age 66	Percentage rise in annual pension
75% APW	191709	208883	9.0
100% APW	255636	278538	9.0
150% APW	286086	311761	9.0
200% APW	286086	311761	9.0

An extra year of work results in a higher pension partly because the individual's notional pension capital increases because of the additional contributions paid in due to continued work, and partly because the annuitization divisor goes down. As shown in Table C.5, given the assumptions described above, the annual pension will be 9 per cent higher if claimed from the age of 66 than if claimed a year earlier. This is the case irrespective of which APW category the person in question belongs to. It should be observed that there is no difference between the public pension received in the 150% and 200% APW cases. The reason for this is that these cases have had an income level sufficiently high for them to have earned maximum pension rights in the public system throughout their active working life, i.e. their pensionable income has been 7.5 income base amounts every year.

Another way to analyse whether there is any incentive to continue working is to study how large part of the contribution paid is returned in the form of higher pension (table C.6)[17]. Even from this perspective, the incentive to continue working is stronger in the new public pension system. The average production worker (100% APW) receives the contribution paid in for an

[17] The indicator for incentives to perform one extra year of work has been calculated as follows. In the first alternative the individual retires at age 65 and in the second alternative one year later, at age 66. The current value of all future pension payments at age 65 is calculated and compared with the corresponding estimated current value in the second alternative. In the second alternative, however, the contribution paid during the final year of work is included in the calculation (negative flow). The discount factor used is 1.6 per cent. The difference in current values is then related to the contribution paid during the person's 65^{th} year. The result should be zero if the design of the system is actuarial and if the individual is to have an incentive to work for an extra year. If the figure is negative, e.g. -19, the individual loses SEK 19 for every SEK 100 he or she pays into the system in the event of continued work.

extra year's work back in full, i.e. the marginal effect is 0 per cent. The same thing is true for a 75% APW. In the 150% APW and 200% APW cases, the marginal effect is higher due to the fact that coverage is only provided for pensionable income up to 7.5 income base amounts, whereas a part of the contributions and taxes are paid on the whole income. The decision to work for an additional year is also influenced by other sets of regulations that have not been taken into account in the above calculation, such as taxation and occupational pension agreements.

Table C.6 Marginal return from work on pensions

Original wages	Incentive to perform one extra year of work
75% APW	0
100% APW	0
150% APW	-14
200% APW	-28