

Ministry of Health and Social Affairs

A REFORMED PENSION SYSTEM

– Background, Principles and Sketch

Memorandum of the Pension Working Group

Ds 1992:89

Foreword to the English translation

Creating a pension system is a major task, and fundamentally redesigning an already established general pension system is difficult. Such efforts require much determination, ingenuity and broad support to succeed. The reformation of the Swedish pension system was characterised by a spirit of cooperation and a willingness to compromise that, in an international perspective, defined Swedish policies in the 1990s, and is often seen as being characteristic of the Swedish model.

In the 1990s, Sweden reformed its previous defined benefit pension system (ATP), which came into force in 1960. The reform was very far-reaching and brought about by the fact that the system at the time was economically and demographically untenable, which could ultimately have jeopardised the Swedish economy. The new contribution-defined system with fictitious pension rights in a distribution system was innovative, and this type of system even got its own name – Notional Defined Contribution (NDC).

The reform process started with an outline of how the system would be designed, drawn up by five Riksdag political parties. This outline of the new pension system was issued 25 years ago, published here in an English translation, and paved the way for investigation and reform work that continued throughout the 1990s. The pension system has now been in force for many years, and it can be noted that decisive and principle parts of the system coincide with the solution presented in the August 1992 document. It is fair to say that the approach of determining the principles of the new system across party lines at the outset turned out to be a recipe for success.

With nearly twenty years of experience of the new Swedish pension system, we can also conclude that, essentially, it is well-functioning. Its unique construction continues to attract international attention. Several countries have even reformed their pension systems, inspired by the Swedish system. The fact that the pension system lies outside the central government budget and disburses exactly the amount of pensions that there is money for makes the system financially sustainable, meaning it doesn't risk passing on debts to future generations. This, together with its political stability – the fact that a large majority of the Riksdag supports the system – provides good conditions for secure pensions.

However, no system is perfect, and both the world and values change over time. This also means new expectations. Endeavouring to build a sustainable and healthy pension system is a responsible act, but it is equally responsible to be humble and venture to further develop the same system as the rest of the world is changing and providing us with new insight. In the last few years, there has been a review underway in Sweden of the pension system's function, with the aim of changing what can and should be improved. The six political parties that support the pension system, on this basis, intend to continue to maintain the pension agreement by setting out a future focus for developing and modernising the pension system. A revised version of the outline presented in 1992, if you like. However, the fundamental and original principles, that have proven to be the strong points of the system, will remain unchanged, while other parts will be developed and adapted to new conditions.

The starting point for today's politicians, like those who laid the foundations of the pension agreement in the early 1990s, is to provide secure pensions. I remain strongly convinced that – as with so much else, and in particular with regard to long-term commitments – the best outcome comes from working together.

Stockholm, October 2017

Annika Strandhäll, Minister for Health and Social Affairs and Chair of the Working Group on Pensions

PREFACE

On the authorisation of the Swedish Government, a special working group was appointed at the end of 1991 with the task of drawing up proposed changes to the Swedish national pension system. This working group has adopted the name the Pension Working Group.

The Chair of the working group is Minister Bo Könberg (Liberal). The members are the member of parliament Leif Bergdahl (New Democracy), the economist Per Lennart Börjeson (Left), the member of parliament Margit Gennser (Moderate), the economist Anna Hedborg (Social Democrat), the party secretary Åke Pettersson (Centre) and the members of parliament Ingela Thalén (Social Democrat), Barbro Westerholm (Liberal) and Pontus Wiklund (Christian Democrat).

Inga-Britt Ahlenius, Budget Director, Ministry of Finance, Edward Palmer, Head of Division, National Social Insurance Board, and Bengt Sibbmark, Deputy Director, National Board of Health and Welfare, are appointed as experts. Ministry of Health and Social Affairs

The secretaries of the working group are Lars Göran Abelson, Judge of Appeal and Deputy Chair of the Department, Gudrun Ehsson, Principal Administrative Officer, Cecilia Gilljam, Associate Judge, Court of Appeal, and Hans Olsson, Director.

The aim of the working group is to use the Pension Commission's report (SOU 1990:76) The National Pension System and responses to the consultation regarding this as a basis in order to draw up proposals for a reformed national pension system, i.e. the basic pension and ATP systems. Basic premises for this work, as set out in the terms of reference, are that decisions concerning the pension system must be far-sighted and characterised by stability, and that the changes must strengthen the link between contributions and benefits so as to reduce the actual tax burden. Another important basic premise set out for this reform is the need for a higher long-term saving and an increased labour supply in order to achieve the increased economic growth required for purposes including financing pension payments.

The working group has now been working for just over six months. Over the course of this period, extensive background material has been read through and compiled in order to reveal how pension payments will develop in future and analyse what advantages and disadvantages are associated with current pension regulations. Furthermore, various principles that could potentially form the basis of a reform of the basic and supplementary pension systems have been discussed. In the light of this, an outline of the principles of a reformed pension system has been drawn up.

This outline only describes the basic structure of benefits and contributions in an altered pension system. In other words, no more extensive technical calculations have been performed. Further consideration and discussion is required in some – in certain respects also key – areas, on matters including the fact that there are differences of opinion within the working group on a number of issues. Consequently, various alternative routes along which to move forward in these respects are presented in the outline of principles.

Even though the Pension Working Group has yet to complete its work and there remains a lack of clarity concerning the direction of future proposals in a number of important areas, the group has realised that it is vital to report some of the results of its work so far to the general public. A report of this type can stimulate the public debate on this important issue and lead to the emergence of points of view and reactions that may be of value to the working group's future efforts.

The working group has therefore decided to publish now a memorandum entitled A Reformed Pension System – Background, Principles and Outline. What this memorandum covers are only preliminary standpoints and these are therefore not definitive positions on the part of the working group. In particular, forthcoming public debate might cause future proposals to be given a design in some respects different from those that are covered in the outline of principles being reported now.

Stockholm, August 1992.

THE PENSION WORKING GROUP

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1 INTRODUCTION

In the decades that follow, the national pension system, i.e. the basic pension and the ATP system, will come up against significant problems in terms of cost and financing. These problems are due to the demographic strains that are arising and the relatively low, historically speaking, economic growth in Sweden that is feared will prevail for several decades following the turn of the millennium.

The difficulties are also rooted in the lack of flexibility in relation to the development of the economy as a whole and consequently the instability that is a characteristic of the current pension system. The developments that have taken place in the more than 30 years that have passed since the introduction of the current pension system have also resulted in the emergence of other problems with the pension system in its present form and in the system now and in the future giving rise to unsatisfactory effects on both individuals and the economy as a whole. Consequently, a comprehensive reform of the national pension system should now be implemented with the aim of securing the financing of pensions for the pensioners of the future and also in order to bring about pension system rules that can be perceived as reasonable by both pensioners and those who are gainfully employed.

According to the terms of reference, one principal task for the working group is to create a pension system that is robust and financially stable. Important basic premises are that the changes made to the current national pension system lead to a stronger link between contributions and benefits, that they provide a stronger incentive for work and that they promote a higher long-term saving in society. These measures can improve the conditions for economic growth in Sweden so that we can be certain it is economically feasible to make good on the pension promises made to the pensioners of the future with a reasonable burden placed on the workers of future generations. The ambition should be to create a pension system that is able to create financial security for both pensioners and workers and is stable, regardless of the rate of economic growth in Sweden.

In principle, the changes made should not affect those who are already retired when the new rules come into force. People who will retire in the years immediately following the introduction of changes should, in principle, also continue to be covered by the existing pension rules. Accordingly, the reform should not focus on the pensioners of today, but on those of the future. The transition from existing to altered rules should also be made soft for those who are somewhat younger. This means that new pension rules may only apply fully in the long term and that only those who currently belong to younger generations may be encompassed by them in their entirety.

This memorandum sketches an outline of a number of principles that may form the basis of a reformed national pension system and sets out the main features of a possible design for such a system and for the rules governing the transition from the current system to the new. In general, what is covered is only the basic structure of benefits and contributions in a reformed national pension system. Further consideration is required on a number of important points. Naturally, this is also required with respect to the various aspects of the more detailed technical design.

By way of an introduction, the memorandum provides some background information to shine light on the current national pension system as regards its effects on individuals and society as a whole,

both now and in the future. In conjunction with this, a brief account is provided of the problems that are associated with the current rules and the burden on those in work that would result from leaving the rules unchanged. In this context, the requirement that could arise to increase contributions and taxes or reduce pension benefits is also covered. This memorandum also provides some outline examples of the economic outcome for individuals in a reformed pension system.

2 THE CURRENT PENSION SYSTEM

2.1 Introduction

Payments from the national pension system (basic pension, ATP and partial pension) amounted to SEK 164 billion in 1991. Expenditure on pensions therefore constituted 11.5 per cent of GDP. The pension costs for 1991 equated to 25.6 per cent of total wages. Pensions accounted for 18 per cent of total public-sector expenditure and approximately 51 per cent of public-sector transfers.

It can be predicted that in future there will be further sharp increases in, primarily, the ATP pensioners' share of total wages. The reasons for this are the gradual maturity of the ATP system, with increasingly large pensions on average to an ever larger proportion of pensioners, a growing number of pension recipients for each worker and lower economic growth. The burden of supporting the retired generation that is placed on the working generation will therefore increase substantially a short time into the 2000s and will remain high for several decades. If real economic growth were to average 1 per cent per annum in future, pension payments under unaltered pension rules would equate to as much as approximately 35 per cent of total wages in 2025. Contributions at such a high rate are unrealistic, partly because this would severely restrict the potential for increasing the real wages of those in work. Cuts in outgoing ATP pensions of around 30 per cent would need to be made in order to prevent the burden on those in work increasing.

2.2 Structure

The majority of those who retire today can expect to receive pension benefits from several different sources. The basis of an individual's pension coverage is the national pension system, encompassing the basic pension and national supplementary pension scheme (ATP). These are regulated through legislation and administered under the auspices of the public sector.

In addition to the national pension system, there are various occupational pension systems that are based on collective agreements between the social partners and that now encompass almost all employees in Sweden.

As time has passed, more and more people have also on their own initiative chosen to take out voluntary pension insurance with private life insurance companies and have thus secured supplementary pension benefits for their old age.

Naturally, people also save in other ways as a means by which to build up financial protection for their future retirement.

The national pension system, which is compulsory and, in principle, covers all those who live or work in this country, thus consists of both the basic and supplementary pension. The main benefits are provided in the form of old-age, disability and survivor's pensions. In addition, there are the separate basic pension benefits disability allowance and care allowance. Another example is pension supplement, which can be paid out to pensioners who have either no or only a low ATP pension. Besides this, there is municipal housing supplement, which is means tested and can be paid out as a contribution to a pensioner's housing costs.

Partial retirement also falls within the scope of the national pension system and provides an entitlement to compensation for people who have had a long association with paid employment and who gradually reduce their paid work after the age of 60 ahead of the transition to an old-age pension.

The basic pension provides a basic security in old age, chronic illness, severe disability, etc. Old-age and disability pension are paid at a flat-rate that is the same for all and is thus independent of the insured person's past earnings, contributions, period insured, etc.

In contrast, the ATP system is structured in accordance with something known as "the loss of earnings principle". This means that the pension benefits are determined in principle by the income the insured person has had over the course of their working life and by the number of years they were in paid work. Under the ATP system, pensionable income is that part of the income that exceeds the base amount for the year (SEK 33 700 in 1992), up to a maximum of 7.5 times this base amount (SEK 252 700 this year). The ATP pension constitutes 60 per cent of the average of the pensionable income in the 15 best income years. The general rule is that 30 years of pensionable income are required for someone to be entitled to a full supplementary pension. The pension is reduced proportionately in the event of fewer years of pensionable income.

The fact that the system's formal compensation rate (incl. the basic pension) is 65–70 per cent for an average earner does not, as indicated below, mean that the compensation rate will be at this level in relation to final salary. It will actually be lower than 60 per cent.

What counts as pensionable income for ATP is primarily income from employment. This can derive from employment or from other paid work, for example commercial activity that is undertaken in Sweden. Other benefits that compensate for income from employment are also equivalent to such income, for example sickness benefit, parental benefits, occupational injury compensation, unemployment benefit, educational grants, adult education grants and partial pensions. As of 1982, years in which a parent has been caring for a child under the age of three are also counted towards fulfilling the 30-year rule.

The base amount is of significance to the calculation of pension benefits within both the basic and supplementary pension systems. The majority of basic pension benefits are payable as a certain proportion of the base amount, and within the ATP system, the current pension benefits and the earned pension entitlement are indexed using the base amount. This is set by the Government for each year and is based on changes in consumer prices. Because of this link to the base amount, the value of pension benefits is secured against general changes in prices.

The special tax benefits, in the form of special basic deduction, are of significance to many pensioners. This means that an old-age pensioner who only receives basic pension and pension supplement is, in practice, exempt from income tax. As other income such as ATP pension increases, the special basic deduction is gradually reduced.

Alongside the national pension system, there are, as mentioned above, various *pension regimes regulated through collective agreements*. There is a long tradition of these among industrial salaried employees and among central government and municipal employees. Following the introduction of the ATP system in 1960, this partially took over the role of the collectively agreed pensions of

providing a pension that related to earnings during working life. There are now collectively agreed pensions for private-sector employees.

These have many features in common with the national pension system. They are compulsory for the individual and encompass all those who work in the area covered by the agreement in question. Collectively agreed pensions are funded essentially through employer contributions, and earned pension entitlements are transferable from one area of the labour market to another if the employee wishes to change their occupation.

Collectively agreed pensions generally have three functions. Firstly, they provide an entitlement to pension benefits in certain situations where there is no such entitlement within the national pension system, for example within occupations where the retirement age is lower than 65 years of age. Secondly, a supplement to the national pensions is often paid from the collectively agreed pensions. Typically, this supplement equates to 10–15 per cent of the pensioner's final salary for those who have been working for a longer period. Thirdly, the collectively agreed pensions – with the exception of the STP system that applies to workers employed in the private sector – also provide pension entitlement for that portion of earnings exceeding 7.5 base amounts.

To give an idea of the scope of the collectively agreed pension system, according to a report by the Pension Commission pertaining to 1989, an estimated total of SEK 20 million was paid out to approximately 1.2 million beneficiaries. The capital assets of the pension institutions have been estimated at c. SEK 280 billion for the same year (1989). It should be noted that public-sector employees' occupational pensions are not funded.

The Pension Commission also provides an estimate of pension savings in individual pension insurance policies at the end of 1989, which was calculated at the time as around SEK 80 billion. The total capital holdings of the AP fund (SEK 384 billion in 1989), collectively agreed pensions and individual pension insurance policies can therefore be estimated at a total of c. SEK 740 billion in 1989.

The following section contains an account of the cost trend in the national pension system.

2.3 Cost trend

The number of pensioners has increased over the course of the decades that have passed since the current set of rules governing basic and supplementary pensions were introduced. The number of people receiving an old-age pension from the basic pension system has increased from 851 000 in 1965, to close to 1.6 million at the end of 1991. The number of people receiving a disability pension has more than doubled in the same period and was 367 000 in December 1991. A total of approximately two million people were then receiving some form of basic pension. The increase in the number of old-age pensioners reflects the increase in the number of older people in the population that has taken place in recent decades. The reduction in the national retirement age from 67 to 65 on 1 July 1976 has also contributed.

An increasingly large proportion of pensioners have also earned an entitlement to ATP. In 1991, 76 per cent of old-age pensioners and 86 per cent of disability pensioners also received pensions from ATP. At that time, the total number of ATP pensioners was 1.5 million.

In addition to the increase in the number of pensioners with ATP entitlement, there has also been a marked increase in the size of the average supplementary pension. In 1991, an old-age pensioner received an average ATP pension of SEK 53 500, which meant that the average amount has doubled in real terms in the past 15 years.

Naturally, these circumstances have resulted in *the costs of the national pension system* rising substantially. Between 1965 and 1991, total payments of basic and supplementary pension have risen (in current prices) from c. SEK 5 billion to c. SEK 162 billion.

Basic pension costs (excl. housing support) have risen over the period indicated from c. SEK 4 billion to c. SEK 67 billion. Added to this are the costs of municipal housing supplement, which amounted to c. SEK 8 billion in 1991. What lies behind this trend is primarily the increase in the number of older people in the population, but also improved levels of benefits and successive reforms that expanded the number of participants.

The costs of ATP have risen even more. ATP expenditure amounted to SEK 0.2 billion in 1965. For many years, it remained significantly lower than basic pension expenditure. Beginning in 1988, however, ATP payments have been in excess of payments of basic pension benefits. In 1991, ATP expenditure amounted to a total of c. SEK 88 billion, while basic pension costs were then a total of c. SEK 74 billion (incl. housing support).

Furthermore, there were partial pension payments of c. SEK 2 billion. In total, the costs of the national pension system amounted to c. SEK 164 billion in 1991, which corresponds to 11.5 per cent of GDP.

2.4 Financing

In principle, both the basic pension and ATP systems are structured as redistributive systems. This means that one year's current payments are to be financed by the current pension contributions paid into the pension systems that same year by the working generation. At the present time, however, both tax revenue and other income streams are also utilised in order to pay for pension expenditure. These income streams have origins that include the AP fund. The ATP system is actually a modified redistributive system in that higher contributions were charged during the first decades the system was in operation than were required in order to pay the pensions payable at the time. The surplus was funded into the AP fund, which provides a return in the form of interest income, for example.

The ATP pensions are financed entirely with contributions received and the return from the AP fund. Contributions are paid by employers and insured persons with income from paid work other than employment. The contribution is currently 13 per cent of total wages or income. In 1991, the contribution revenue received covered 94 per cent of that year's ATP pension payments. The remainder were financed using the return from the AP fund.

Basic pension benefits, on the other hand, are financed entirely through the national budget even though basic pension contributions are paid by employers on the total wages paid out and by insured persons with income from paid work other than employment on their income for the year. This contribution is currently 7.5 per cent of the contribution base. Basic pension contributions equated to 72 per cent of costs in 1991.

One aim of the AP fund was that it would act as a buffer against temporary variations in contributions and/or pensions from year to year. This is a means by which to spread the costs of the ATP system more evenly over time. However, one further reason for the establishment of the AP fund was to counteract the decline in saving in the Swedish economy that was feared would be a consequence of the introduction of the ATP system.

At the end of 1991, the capital in the AP fund amounted to SEK 480 billion. At that time, the fund had a fund strength of 5.4, which means that the fund would have had sufficient capital to cover pension payments at an unaltered level of expenditure for 5.4 years if no new money in the form of contributions or interest were added to the fund. The return on the capital in the fund was SEK 51 billion in 1991.

2.5 Levels of compensation in the current pension system

The ATP pension constitutes 60 per cent of an individual's average – price index-linked – income between 1 and 7.5 base amounts for the 15 best income years, provided they have been in paid work for a minimum of 30 years. The basic pension (for single people) is 96 per cent of the base amount. Using this method to calculate supplementary pensions, two individuals with the same lifetime earnings may be entitled to completely different old-age pensions.

The levels of compensation in the pension system can be expressed in different ways, e.g. as the size of the pension as a percentage of final salary or as a percentage of the income of contemporary workers.

Due to the existence of the basic pension, the level of compensation varies with the size of income. When income is low, the first base amount, with its higher level of compensation from the basic pension system, constitutes a larger proportion of income. The total level of compensation will thus be – up to the ATP ceiling – higher in low income brackets than in those that are high.

The level of compensation as a proportion of final salary will thus, for a given number of pension points, vary in line with the real wage growth that takes place prior to retirement.

Table 1 below contains calculations of the size of the national pension as a proportion of the individual's final salary in three different income brackets. These calculations have assumed that the 15 best income years coincide with the final 15 working years prior to retirement, i.e. that they fall between the ages of 50 and 64. The individual is presumed to have had an even real wage development throughout this period. The pensionable income that is used for ATP (an average based on earnings between the ages of 50 and 64) will then equate to the income the individual had at around 57 years of age. The level of compensation is expressed in the table as pension as a proportion of final salary.

Table 1 Level of compensation as a proportion of final salary within the national pension system (basic pension and ATP). The ATP pension is based on the salary at 57 years of age. Real wage growth of 0 or 2 per cent per annum

Salary at 57 years of age in base amounts	Newly awarded old-age pension as a percentage of final salary	
	0 % real growth	2 % real growth
2.5	74 %	64 %
5.0	67 %	58 %
7.5*	65 %	56 %

* The ceiling has been increased at the same rate as the real increase.

The following applies when moving on to the level of compensation in relation to contemporary workers. The rules of the current pension system mean that outgoing pensions are revalued upwards in line with inflation, but not with real wage development. Changes in a pensioner's level of compensation in relation to contemporary workers' incomes are thus dependent on changes in the latter group's continued real wage development in the period following retirement. In the event of zero growth, the pensioner retains their level of compensation in relation to active workers. If the real wage development is positive, the level of compensation will gradually decrease, while it would rise in the event of a negative real wage development. For example, in the event of a real growth of 2 per cent per annum, the level of compensation for a person with an annual income at the age of 57 of 5 base amounts has decreased from 58 per cent at the time of retirement to 49 per cent after 8-9 years as a pensioner, which corresponds to half of the average retirement period. After another period the same length, i.e. at the end of the retirement period (on average), the pensioner's compensation as a proportion of active workers' earnings has decreased to 41 per cent.

2.6 Future developments

The number of pensioners who are entitled to ATP and the average size of the ATP pension are expected to continue increasing long into the future.

Labour force participation among women has increased substantially in recent decades and is approaching that of men. The proportion of women who have earned pension points for the year has increased gradually, from 32 per cent in 1960 to 84 per cent in 1990. The corresponding proportions for men are 83 and 88 per cent, respectively. In the age bracket between 20 and 50 years, 91 per cent of women and 93 per cent of men had earned pension points in 1990.

The *average number of pension points earned* for the year has also increased for both men and women. In the first half of the 1960s, women's pension points were, on average, half that of men's, but have increased in recent years to around 70 per cent of the average for men. However, significantly more men than women have earned the maximum number of pension points (6.5): 18 per cent of men, compared with 3 per cent of women in 1990. In the event of real wage growth, a growing proportion of the population will have incomes that exceed the ATP ceiling. As a result, more and more people will become successively entitled to the maximum ATP pension. In the event of 2 per cent real growth per annum, 75 per cent of men and 50 per cent of women will have income exceeding the ATP ceiling of 7.5 base amounts in 2025.

Accordingly, an increasing proportion of those who are 65 years of age and older will in future have *earned an entitlement to ATP*. In the event of real wage growth, the recently retired will have ATP

pensions that are increasingly large, even though the increase is limited in the longer term by the ATP ceiling.

Almost one quarter of today's old-age pensioners have no ATP pension at all, close to half have an ATP of up to two base amounts (SEK 67 400) and just over one tenth have over three base amounts (SEK 101 000). The size of the ATP pension that those who become old-age pensioners in the years 1995–2015 are estimated to have is set out in Table 2. For example, it is estimated that in 2015 as many as just over two thirds of the recently retired will have an ATP pension in excess of three base amounts. The table is based on an assumed real wage growth of 2 per cent per annum.

Table 2 Old-age pensioners distributed as a percentage by old-age pension from ATP

ATP pension in base amounts	Existing old-age pensioners year 1991	Recently retired*			
		year 1995	2000	2005	2015
0	24	6	3	2	2
0.01–2.00	48	40	30	22	21
2.01–3.00	17	27	33	32	21
3.01–3.90	11	27	34	44	68
Total	100	100	100	100	100

*) RFV's forecast 1987. Real wage growth of 2 per cent per annum. Excl. people who have received disability pension and those who are resident abroad.

Of major significance to the ability of workers to support pensioners is the relationship between the number of people of working age and the number of people who are 65 years of age or older. In the years up to the turn of the millennium, it can be expected that *the number of people aged 65 and older* will only increase by an insignificant amount. However, the size of this group is expected to increase significantly following the turn of the millennium. Up until 2025, this group is estimated to increase by 1 per cent per annum, while the population as a whole will be growing at a rate of approximately 0.1 per cent per annum. In total, the proportion of the population who are of retirement age is expected to increase from 17 per cent in 2000 to 21 per cent in 2025.

The *average lifespan* of women especially, but also of men, has increased substantially since 1950. In 1950, a 65-year-old could expect to live on average for another 14.3 years, while a 65-year-old now has an average remaining lifespan of 16.9 years. In the intervening period, the retirement age has been reduced by two years, from 67 to 65 years of age. This means that the *average period spent as an old-age pensioner has been extended by 4.6 years or just over 30 per cent*. According to the assumptions in Statistics Sweden's population forecast from 1991, this period will be extended by a further 1.5 years up to 2010 as a result of life expectancy continuing to rise.

Around two thirds of the increase in the number of older people that is expected to take place between the turn of the millennium and 2025 is due to the age groups turning 65 years of age or older being larger, and around one third is due to the longer life expectancy.

The trend described means that the number of old-age pensioners per 100 people of working age is decreasing somewhat over the next ten years, before rising significantly from 29.3 in 2000 to 37.7 in 2025. This means that the *dependency ratio* will decrease from 3.24 people aged 20–64 for every person aged 65 or older to 2.65 in 2025.

If the dependency ratio is to be a relevant metric, those aged 20–64 who receive disability pensions must also be taken into account as the majority of these are not working. If disability pensioners are excluded from the population aged 20–64 and this is then compared with those who are receiving old-age pensions or disability pensions, the calculations show a reduction in the dependency ratio from 2.38 in 1990 to 1.78 in 2025. Accordingly, in 2025 there will be 1.78 workers for every old-age or disability pensioner, or expressed in a different way, more than 56 pensioners for every 100 workers.

Information about the future development of the pension system's expenditure is reported in the following section.

3 REASONS FOR A REFORM

3.1 Requirements of a pension system

It must be regarded as having successfully fulfilled its sociopolitical task of providing an economically satisfactory standard in old age, but if the financial security that has been achieved is to be preserved in the years ahead, it is important that the financing of pensions can be secured in the long term.

It is therefore vital that the pension system is structured in a way that makes it strong and stable and able to cope with the strains it will be subject to in the next century, when demographic changes will lead to a slower rate of growth in the working-age population at the same time as requirements for transfers from workers to older people in the form of, e.g. pensions, elderly care and healthcare will increase.

This is of importance if the pensioners of the future are to be able to feel a sense of financial security ahead of their old age and are to be assured that they will receive the pensions promised to them and that pensions are paid out in accordance with rules that can remain unchanged from year to year. This provides clarity about what circumstances one can expect from old age in terms of pension, and provides a greater chance of gaining an overview and predictability in terms of what economic standard to expect as a pensioner.

It is also important that the pension system is perceived as reasonable and fair by the workers of the future and that they are therefore prepared to pay for the pensions of their parents' generation, trusting that subsequent generations will, in turn, be doing the same. This is a prerequisite if the workers of the future are to comply with the inter-generational social contract the pension system can be said to entail and are to be prepared to forgo the disposable income required in order to finance pensions, elderly care, etc.

The national pension system is extremely important to the development of the Swedish economy as a whole. It has a decisive impact on saving, capital formation and the labour supply. A high and stable rate of saving and a high labour supply are prerequisites for satisfactory real economic growth. In this way, the pension system has a major impact on economic growth in Sweden and thereby on the welfare of current and future generations. The pension system also plays a significant role in the public finances.

Consequently, it is important that the pension system has a design that improves rather than counteracts the conditions for economic growth in Sweden. The aim should therefore be for the pension system to develop so that it does not distort economic actors' decisions concerning, e.g. saving and the supply of labour.

3.2 Problems with the current pension system

3.2.1 Introduction

Our current pension system is beset with a number of weaknesses. These are largely linked to the economic and social developments that have taken place since the introduction of the ATP system around 30 years ago. The ATP system was designed in relation to the demographic, social and economic conditions of the 1950s. The system's current design does not allow for sufficient adaptation to changes in these conditions that have occurred and are expected.

The weaknesses of the pension system in its current form are expressed at both the individual level and in a more general economic respect. The problems can be summarised in the following way:

- The loss of earnings principle that was the guiding light when the system was put together has been eroded. The link between earned income and earned pension entitlement is becoming increasingly weak, leading to unsystematic and unintended redistributive effects.
- The system gives rise to very large marginal effects for many pensioners with lower incomes, close to 100 per cent in some income brackets, which means that they do not receive any real financial return from the ATP pension they have earned.
- The system is relatively complicated, which means that individuals find it difficult to gain a proper overview of their pension situation during the earning period and thus to know in advance how high their pension will be.
- The costs of the system are not directly related to the production and the earnings that will pay for the pension. This leads to the system being economically unstable and sensitive to negative growth, which can create uncertainty for both pensioners and workers. When there is low economic growth, the system becomes unsustainable in terms of costs.
- The weak direct link between lifetime earnings and pension outcome can have a detrimental impact on people's labour supply.
- The system provides weak incentives to save.

One concern that arises, regardless of how the pension system were to be designed, is the demographic strains. The proportion of pensioners in the population will, as mentioned previously, begin to rise shortly after the turn of the millennium and will remain high for at least a couple of decades thereafter. Unavoidably, this means the total result of production must be redistributed to a larger number of non-working people.

3.2.2 Redistributive effects

When the ATP system was introduced, the main idea was for everyone to receive a supplement to the basic pension that was in some way proportionate to the earnings they had during the portion of their lives when they were working, known as the loss of earnings principle. The circumstances that prevailed in the 1950s were seen as unfair since groups such as public-sector employees and industrial salaried employees had earnings-related occupational pensions, while manual workers and other groups only had a basic pension. The pensions regulated through collective agreements acted as a model for the ATP system.

However, the ATP system was, even at the time of its introduction, furnished with rules that restricted the loss of earnings principle in various respects. In a somewhat mixed way, these rules had a redistributive aim. For example, there was a desire to take into account the fact that some people had higher incomes for a relatively short part of their working lives, which was one aim of the rule to base the pension on the 15 highest-earning years. The 15-year rule has also come to compensate women who, to a large extent, worked in the home with children and household duties.

Societal changes in the third of a century that has passed since the ATP system was introduced have resulted in changes to several of the circumstances on which these rules were founded. In particular, there are few young women today who have the work and family patterns that were prevalent at the end of the 1950s.

At the same time, it is possible to assert that the 15-year rule is a very blunt instrument with which to meet the legitimate interest there is in allowing childcare in the home to provide pension entitlement. The rule favours many other economic behaviours that it was not intended to favour.

The basic security principle has been reinforced and the loss of earnings principle has been eroded through the increase in the basic level that took place with the creation of the pension supplement and other changes. It is only when the pensionable income approaches four base amounts (approximately SEK 135 000 in 1992) that an additional increase in income actually leads to a higher pension. When the income then rises over the system's ceiling, i.e. 7.5 base amounts, the link between pensionable income and pension falls away again. Furthermore, when someone has had their 15 best income years, further earnings have no significance from a pension point of view (provided the qualification period of 30 years can be achieved).

The outcome of the 15-year and 30-year rules primarily depends on how lifetime earnings are distributed over time. Individuals who have an uneven level of income over time and individuals who work for a short time get more in relative terms out of ATP than those who have an even income profile and work for longer. The rules for ATP, combined with economic growth in Sweden also favour those who have their best income years at the end of their working life. As a result of these rules, ATP tends to provide more benefit in relation to paid contributions to people in "social group 1" than people in "social group 3". This is because the former study for longer, the career element in their wage development is more marked and their income development in the final years of their working life is generally better.

The ceiling rule in the ATP system acts in the opposite direction. High earners are disadvantaged because contributions are also charged on income over 7.5 base amounts despite this income not being pensionable. Assuming economic growth, an increasing number of individuals will have an increasing proportion of their income that is above the ceiling.

There is also a significant – to some extent intentional – redistribution between generations. This is primarily due to the ATP system being a redistributive system. The first generation of ATP pensioners did not need to make contributions that were proportionate to their pension in the same manner as later ATP pensioners must do.

The ATP system in its current form thus has a weak direct link between benefits and contributions. The relationships between earnings during working life and pensions are unsystematic and can in

some cases have effects that are unpredicted or unjustified from the perspective of redistribution policy. The ATP system's 15-year rule means that the size of an insured person's pension is only determined by their earnings during the 15 years in which they have had the highest income. And while contributions are charged on all income, ATP pension entitlement is only earned on the portion of the income that is between 1 and 7.5 base amounts (SEK 33 700–252 000 in 1992). In this way, the pension does not reflect the individual's total lifetime earnings, only their earnings for a limited number of years and within a limited income interval. Correspondingly, the 30-year rule means – in the ATP system's fully functional stage – that, in spite of it being possible to earn pension entitlement under the age of 49, it is sufficient to have earnings exceeding 1 base amount for 30 years in order to obtain an unreduced supplementary pension.

This means that, when the system has reached full maturity, contributions can be paid into the pension system for up to 19 years without these resulting in any additional supplementary pension whatsoever and have a very limited significance for a further 15 years. Two people can be paid the same amount of ATP pension, even though one of them paid perhaps 50 per cent higher contributions and has had 50 per cent higher total lifetime earnings. Similarly, the same level of contributions and lifetime earnings can result in major differences in pension, depending on what the income profile has looked like through the individual's working life. As stated previously, this rule means that some people, for example those in career professions and those who have worked abroad for a long time, are favoured in terms of their pension ahead of those who have a long uninterrupted working life in Sweden and a more even income level over time, even though the latter have total lifetime earnings that are equally high or higher.

The weak direct link between contributions and pensions can result in unfavourable effects on the labour supply and also mean that an increasingly large proportion of the pension contribution can be regarded as pure tax (further information below).

3.2.3 Economic instability

The regulations for ATP contain a built-in instability in relation to economic growth that is difficult to manage. In principle, the pension system is set up with a view to a society with somewhat constant long-term economic growth.

The reason for the instability can be summarised as follows. From the pensioner's point of view, the regulations contain both favourable and unfavourable components. The reciprocal significance of these components varies depending on whether economic growth is high or low. The unfavourable component in the system consists in the fact that pension entitlements and pensions are revalued upwards in line with prices and not with wage development. In the event of a continuing general real growth in standards, pension entitlements and pensions will become increasingly lower in relation to workers' incomes. In the system, this is compensated for by ATP having a relatively short qualification period (30 years), the pension being based on earnings only in the 15 best years and a relatively high compensation rate.

On the other hand, the unfavourable element, price indexation, becomes less significant the lower the rate of real growth is, while the generosity of the influence of other rules remains unchanged. The explanation why the system constitutes a greater burden on the active portion of the population when growth is low rather than high lies in this imbalance between the rules' effects.

Thus, in the event of zero real growth, *the costs of basic pensions and ATP* would grow from the current level of approximately 25 per cent of total wages to close to 50 per cent in 2025 (see Table 3, which is taken from the Pension Commission's report SOU 1990:76 The National Pension System). Should these amounts actually be charged to wage-earners, this would involve sharply falling real wages, calculated after taxes and contributions.

In the event of growth of 1 per cent, the requisite contributions would reach approximately 35 per cent in 2025. Even so, this would mean that around one third of the scope for real wage increases would be lost to the wage earners.

Within the scope of the current set of rules, the only practicable route away from such a development would be to reduce the pension system's level of compensation or change the benefit rules in another way.

A *reduction in the size of pensions* can apply to only ATP or to both ATP and basic pensions. Table 4 contains an estimate of how much the ATP system's level of compensation would need to be reduced in the event of future growth of 0 or 1 per cent per annum in order to enable pensions to be financed within a cost framework of 23.3 per cent of the contribution base (i.e. within a framework that is a couple of percentage points under that needed for 1991) and the basic pension to be paid at the same rate. As can be seen, large reductions may be pertinent. In the alternative scenario of 1 per cent real growth per annum, ATP pensions would need to be reduced by approximately 30 per cent in the long term. Table 5 sets out what the estimated reduction in accordance with Table 4 would mean in concrete terms of kronor per month for ATP pensioners in various income brackets in the event of real growth of 1 per cent per annum.

An *increase in the retirement age* reduces pension costs, at the same time as it increases revenue into the pension system because more people are engaged in paid work and paying pension contributions. However, a large proportion of those who are approaching the national retirement age are already drawing a pension in the form of disability pension. Around 40 per cent of current 64-year-olds are disability pensioners. As a rough estimate, an increase in the national retirement age by one year, from 65 to 66, can be expected to reduce the pension contribution by around one percentage point. Further increases in the retirement age would gradually provide increasingly small real savings as the proportion of people who would instead be drawing disability pension would probably rise.

Table 3 Estimated costs of the basic pension (incl. municipal housing supplement) and ATP as a percentage of the current contribution base. Fixed ATP ceiling

Year	Annual real GDP growth		
	0 %	1 %	2 %
1990	24.3	24.3	24.3
1995	26.5	24.7	23.3
2005	32.5	27.1	22.9
2015	43.7	32.7	25.1
2025	48.1	33.1	23.3

Table 4 Estimated requisite reduction in ATP in a redistributive system with unaltered contributions

Year	ATP is reduced by		Compensation factor (curr. factor = 60%)	
	Annual real GDP growth		0 %	1 %
1995	12 %	3 %	53 %	58 %
2005	32 %	14 %	41 %	52 %
2015	52 %	31 %	29 %	41 %
2025	57 %	31 %	26 %	41 %

Table 5 Outgoing ATP pension per month in the event of a 1 per cent real GDP growth following a requisite reduction in accordance with Table 4. Average points earned 3, 4.5 and 6, 2005 and 2025

Average points in base amounts	Unreduced ATP pension, SEK/month	Reduced ATP pension, SEK/month		
		Year	2005	2025
3	5 055		4 347	3 488
4.5	7 582		6 521	5 232
6.5	10 952		9 419	7 557

The costs reported in Table 3 pertain to a system in which the *ATP ceiling* is fixed at 7.5 base amounts and pension contributions are charged on total wages. As pointed out previously, in the event of real wage growth, a growing proportion of workers will have incomes in excess of the current ATP ceiling. The ATP benefits will thus be limited by the ceiling for an increasingly large proportion of new pensioners.

If the ATP ceiling is index-linked, i.e. changed in line with real wages or, for example, real GDP, this does not happen. In principle, this would mean that the proportion of people with incomes above the ceiling remains constant. Indexing the ATP ceiling to wages would naturally lead to increased costs to the national pension system in the long term. However, the majority of employees are already receiving compensation for the portion of their income over 7.5 base amounts through the collectively agreed pensions. An increase in the ATP ceiling would therefore involve a transfer of future costs from the collectively agreed pension system to the ATP system. On the other hand, if the ATP ceiling remains unchanged, the collectively agreed pensions' costs will increase in the future.

Table 6 shows the estimated future costs of the pension system if the ATP ceiling is increased in line with real growth in GDP. The calculations are based on a situation in which contributions to the pension system are only charged on those parts of income up to (the index-linked) ATP ceiling, which is expected to involve an approximately 5 per cent (*not* percentage points) higher rate of contributions than if total wages form the basis of contributions.

Table 6 Estimated costs of the basic pension (incl. municipal housing supplement) and ATP as a percentage of the contribution base when pension contributions are only charged on portions of income up to the ATP ceiling. The ATP ceiling is increased in line with real GDP growth

Year	Annual real GDP growth	
	1 %	2 %
1990	25.5	25.5
1995	25.9	24.5
2005	28.7	24.4
2015	35.1	27.7
2025	36.1	27.4

As mentioned previously, one aim of *the AP fund* is that it is to serve as a buffer in the financing of the ATP pensions. Since 1983, a portion of the return on the fund has been used to cover annual pension costs. If the ATP contribution is not increased and the benefit side is not changed either, an increasingly large proportion of the AP fund's money will be needed to cover pension payments. In the event of a 1 per cent real GDP growth (and with a return from the fund that is equivalent to the rate of economic growth), it is estimated that the fund will be used up by around 2015. In the event of a higher rate of growth, 2 per cent per annum, the fund is expected to last around ten years longer, while it would be empty as early as 2010 in the event of 0 per cent growth.

By using the AP fund as a buffer when financing pensions, it is possible to distribute the requirement for contributions between years. Different strategies for this are set out in the Pension Commission's report (SOU 1990:76). Of course, if the AP fund is used to finance pensions, this means that the fund's contribution to public saving becomes negative.

When the ATP system was introduced at the end of the 1950s, there was a general expectation that long-term *economic growth* would be fairly high and sufficient for the system. However, experience from recent decades suggests that there can be relatively long periods of very low economic growth. Table 7 shows GDP growth over the past several decades and forecasts for the years ahead.

Table 7 GDP growth 1950–1993, per cent per annum

1950 – 1960	3.3
1960 – 1970	4.5
1970 – 1980	1.9
1980 – 1990	1.9
1990 – 1991	-1.1
1991 – 1992 forecast ¹	-0.4
1992 – 1993 forecast ²	0.8

Of course, the level of uncertainty about economic growth does become very substantial when looking so far into the future. The beginning of the 1990s has been characterised by a deep recession. However, one must not allow this to excessively colour the long-term assessment. It is

¹ According to the revised national budget 1992.

² According to the revised national budget 1992.

probable that periods of low or no growth will alternate with periods of good or even high growth. It is worth mentioning that the growth rate over the 100-year period 1870–1970 is estimated at 3 per cent per annum. The Pension Commission used a main option of 2 per cent per annum, which is a figure that may naturally be an over or underestimate. For example, given that there is expected to be no growth in the labour supply after 2000, a relatively high probability may perhaps be assigned to an outcome below 2 per cent per annum following the turn of the millennium. This was also the perception of the Long-Term Inquiry of 1990.

On the other hand, if economic growth were to be unexpectedly high, e.g. 3 per cent per annum or more, the current system leads to the inverse stabilisation problem, namely that pensions will appear unreasonably low in relation to workers' incomes. There would then be demands for more or less one-off measures to improve pensions.

To summarise, continuing with the pension system in its current form carries a tangible risk that the compulsory contributions to the system will have to be increased, or that the situation will necessitate a reduction in pension benefits or other changes to the rules on the benefit side. Instead, what is desirable is that the system be set up in a way that allows its regulations to remain intact for a variety of economic outcomes and that the burden of financing the system is not passed on to future generations.

3.2.4 Effects on the labour supply

The pension system can have an impact on individuals' choice between work and recreation. In its current form, it can be assumed that the labour supply is affected negatively by the fact that, in many cases, it makes no difference to the size of an individual's future pension if they choose to increase or decrease the amount they work. Economic growth also decreases as a consequence.

However, the size of this negative effect is hard to assess. In economics, they normally talk about how the tax wedge distorts the use of resources in the economy as a whole. This distortion also arises because what is profitable for the economy as a whole becomes less profitable or unprofitable to the individual and thus less likely to happen.

A very large proportion of the contributions to the current pension system does not directly correspond to any benefits linked to the contribution or to the income the contribution pertains to and is therefore to be regarded as pure tax. This applies not just to basic pension contributions, but also to a significant portion of the ATP contributions. This is what creates the infamous "wedge" between the personal financial gain from working more and the gain for the economy as a whole. All forms of taxation that provide the taxpayer with the opportunity to influence the amount of tax they pay have the potential to create a difference between the consequences of the decisions an individual makes for their personal finances and the consequences of these decisions for the economy as a whole.

It is vital for several reasons that the tax portion of pension contributions be reduced and replaced with contributions that are closer to insurance premiums paid into the social insurance system. Aside from providing individuals with the wrong incentives in terms of, e.g. the choice between work and recreation, a substantial taxation element in pension contributions can also impair the credibility and stability of the pension system. It is desirable for tax revenues to be used for vital

areas where other forms of financing cannot be considered and for financing using insurance premiums to be resorted to in sectors where this may appear justified.

It could be claimed that, in the current economic situation, with high unemployment, increasing the labour supply is not an urgent matter. Taking the longer view, however, long-term economic growth is determined fundamentally by changes in labour supply and the potential to improve productivity.

On the other hand, it should be pointed out that it is not beneficial to the economy as a whole to increase the labour supply using simply any means whatsoever. What is said is that the outcomes for personal finances and the economy as a whole of working or not working should, within reasonable boundaries, coincide.

Finally, retirement due to disability should be mentioned in conjunction with a discussion of the effects the pension system has on the labour supply. The loss of production in Sweden resulting from long-term sick leave and the disability pension is very large. The causes are many and complicated: health problems, social problems, poor work environment, etc.

Transferring responsibility for the cost of disability pensions from the pension insurance system to, for example, the sickness insurance system and health services could provide greater incentives for rehabilitation and contribute to eliminating the causes of long-term sick leave and retirement due to disability. This would also influence the labour supply in a way that is positive, not simply from the perspective of the economy as a whole, but also from a more humanist point of view.

3.2.5 Effects on saving

The terms of reference state that one important basic premise for the pension reform process is the need for a higher long-term saving.

In the pension system, saving has two separate aims, which can to some extent be analysed independently of each other. The first concerns the need to have a buffer within the pension system that ensures pensions can be paid even if deposits into the system and the return on capital fall below outgoing payments for a period of time. The other is the more general need for saving in the economy as a whole and the desirability of the pension system making a contribution towards meeting this need.

Then, when it comes to the potential to actually achieve the desired saving, there are barely any fundamental or technical difficulties standing in the way of arranging the buffer funding that the pension system itself requires. However, influencing the total amount of saving in the economy as a whole to the desired extent using measures within the scope of the pension system is not so obviously simple. The difficulty lies in the fact that the control that exists over saving in other forms and in other parts of the economy is not present within the pension system. This saving can be influenced by specifically the measures implemented within the pension system and, to a greater or lesser degree, neutralise the increase in saving in the pensions sector.

In the absence of a national or collective pension system, security in old age is naturally one of the strongest motivations for individual people to save. When a pension system of the current redistributive type is introduced, it is clearly the case that the need to save for old age decreases. This has a negative effect on household saving. The effect is counteracted somewhat by the fact that

pensioners, who obtain higher incomes through the pension system, increase their saving – i.e. mainly by being able to reduce their use of capital they have already saved. However, over the course of a relatively long transitional period, it is probable that the net effect on household saving will become negative.

In the long term, those who were working and reduced their saving when the pension system was introduced will, as pensioners, not have any savings capital to utilise in addition to their pension. The pension system's influence on total household saving then entirely or partly ceases.

When the ATP system was introduced, there was an awareness of the transitional risk of a decline in household saving. This was one of the reasons why the AP fund was established. Saving there would contribute to maintaining saving at a sufficient level for the economy as a whole.

The AP fund also contributed to public saving while the ATP system was in its build-up phase. However, the AP fund's buffer function can come into conflict with its saving function. In future, if the AP fund is used as a buffer to such an extent that its real value decreases (or the fund is simply emptied), there is a negative impact on saving in society. If in real terms the AP fund decreases in times when there is a need, from the perspective of the economy as a whole, for high or even increased saving, which is the case over the coming decade or so, it is therefore important that saving in other forms takes place.

Household saving in Sweden decreased as a result of the introduction of the ATP system. In academic circles, there is some debate as to how large this effect actually was. However, simple observations indicate a strong effect of this type in the 1960s, culminating around the middle of the 1970s.

The decline in total personal saving became more limited because companies' self-financed investments were high as a result of factors such as high profits in this period. Saving in the AP fund also contributed to there being no notable deficits in the balance of payments over the course of this period. It can generally be noted that it is variations in the national budget balance that have been responsible for the bulk of the variations in total saving in Sweden over the past 40 years.

In recent decades, net saving in Sweden has fallen in relation to the OECD average. From having been in line with or above the level of the rest of the OECD at the beginning of the 1960s, saving in Sweden in the 1970s and 1980s has been below or substantially below the OECD level. This is shown in Table 8.

Table 8 Total net saving rate for all OECD countries and Sweden. Net saving expressed as a percentage of national disposable income and reported as four-yearly averages

	OECD	Sweden
1963–66	15.44	19.28
1967–70	15.80	18.02
1971–74	16.03	15.26
1975–78	12.57	10.69
1979–82	10.81	5.22
1983–86	9.00	6.34
1987–90	–	7.54

Source: Berg. Sparande och investeringar i svensk ekonomi [Saving and Investments in the Swedish Economy] SOU 1990:78

A premium reserve system would not have entailed the problem of such transitionally weakened household saving as arose in the 1960s and 1970s. The price that would have been paid for this benefit to the economy as a whole is that it would have taken a very long time before it would have been possible to begin paying out the pensions concerned.

From the perspective of the economy as a whole, the purpose of saving is that it is to be used to finance the economy's investments. Investments in real capital have a key role in economic development. Investments of a certain size are required if the economy is to grow at a desirable rate. Looked at the other way round, economic growth is perhaps the most important incentive for businesses to invest in real capital.

Investments are financed through saving that is achieved partly by the investors themselves, especially by commercial businesses, partly by others, e.g. the households that have savings that exceed their own real investments.

The question of how great the need for saving will be within the pension system in a long-term perspective is complicated. In this context, significant problematic aspects are:

1. The future development of real investments in the domestic economy. The investments are currently too low to achieve a desirable rate of economic growth.
2. Foreign borrowing in the future. To what extent (if at all) is foreign borrowing, synonymous with a balance of payments deficit, possible and justifiable, and how much of the investments remain to be financed through domestic saving?
3. The outlook on national budgetary policy. For example, is it desirable and possible for central government to indirectly contribute to financing future investments through budget surpluses, i.e. paying off the national debt?
4. Household saving in the future. How large will households' contribution to financing investments through financial saving be under the current legislative and regulatory system?

A more in-depth discussion of these issues is outside of the scope of this account, but will be conducted as we continue this work. However, it is already clear that because of demographic situation, the financing of pensioners' consumption will require substantial financial resources just

after the turn of the millennium. The financing of the commercial sector's investments that must take place at the same time may make periodic foreign net borrowing desirable or necessary. By definition this involves a deficit in the balance of payments. Even if the international capital markets offer opportunities to cover balance of payments deficits, it appears important in this long-range perspective that saving in the Swedish economy is higher over the course of the next two decades than it is at present. This could result in balance of payments surpluses that balance the deficits that will potentially be necessary later on. The pension system should as far as possible contribute to such a development. It is desirable that the future demographic strains not be completely passed on to future generations. The large groups who will be retiring a short time into the 2000s should contribute to coping with the increased pension payments they will be causing by saving more in the period up to that point.

3.3 Implementation of a reform

Given the problems the current pension system is beset with, it must be reformed. It is important that the system is structured in a way that is able to cope with future challenges, i.e. that it is perceived as reasonable by workers and pensioners, that it is stable and also flexible in the event of altered circumstances and that it contributes to promoting economic growth in Sweden. For the future, the pension system should thus be based on principles partly different to those forming the basis of the current basic pension and ATP systems. For example, new rules for earning pension entitlement should be introduced.

One essential basic premise for this reform is that decisions on the pension system must be long-term. It must be possible for the rules that are laid down to remain unchanged for a very long time and should preferably be uniformly applicable under variable economic conditions. The pension entitlement that is earned is built up over several decades and also remains in place for many years after the pension starts being paid. Those who are retired have, as is the case for workers who do not have many years remaining until their retirement, limited real opportunity to influence their financial situation if the set of rules were to be changed from time to time. It is therefore essential that the pension system has a design that results in workers and pensioners trusting that promises made can be kept and that they can predict what they can expect in terms of their future income.

In the light of this, it is essential that all changes to the national pension system be tested in a long-range perspective and they must be implemented in a manner that gives the greatest possible consideration to those who have already retired or will be doing so in the near future.

At the same time, it is vital to decide on a reform and implement this now. Given how the demographic factors and economic growth are expected to develop, the pension system's finances look relatively healthy in the period up to just after the turn of the millennium, but after this they start to gradually deteriorate. If a reform of the pension system is decided on now rather than in a decade or so, there is much greater room for manoeuvre in terms of measures focusing on consolidation and as regards the question of the feasibility of having generous transitional rules, etc. The chances of achieving a soft transition from the current rules to an altered set of rules are greater the earlier a decision is made.

Given the stated basic premise, that changes can only be made in the longer term, a reformed pension system will not affect those who have already retired or will be retiring in the years ahead.

The reformed system will therefore have a view to those who have grown up and are spending their working lives under a more contemporary pattern of work and family life and income. As stated in the previous section, in these generations, both men and women will have engaged in paid work and earned pension entitlements to a greater extent than was the case for older people today.

4 BASIC PRINCIPLES

4.1 Introduction

The previous section highlighted the problems associated with the current pension system from a variety of angles. The discussion has led to the conclusion that it is now time to implement a fundamental reform of pensions.

As stated in the preceding discussion and by the working group's terms of reference, a large number of circumstances should be taken into account when undertaking this reform. It is important that the pension system be given a design that allows it to be perceived as reasonable by both pensioners and workers, that it becomes significantly easier than at present for the individual to overview and that the link between earned income and earned pension entitlement is substantially strengthened. In addition, it is important that the system becomes more flexible in relation to developments in the economy as a whole than is the case under the current rules, that the pension system contributes to an increased labour supply, that the tax portion of pension contributions is reduced and that the pension system contributes, if possible, to an increase in total saving in the economy in the decades ahead.

A reform of the pension system is an issue that contains two problems. The first concerns designing an altered set of rules that remain applicable far into the future. When this has been done, the work moves on to designing transitional solutions that not only lead to the desired changes having an impact as soon as possible, but also fulfil, as far as is possible, the desire for pension entitlements that have already been earned to remain in place.

The following presents certain principles that should be fundamental to the design of a reformed pension system. Section 5 then contains an outline showing how such a system might look and an attempt is made in Section 6 to highlight certain effects of a pension system that is structured in accordance with this outline. Finally, Section 7 contains a discussion about and outline of various conceivable transitional solutions.

4.2 General principles

It is vital that the pension system retains its essential function of ensuring that the entire population have income security in their old age and that such security is also ensured in the event of chronic illness and disability.

The implications of this include that a main principle of the national pension system should still be that pensions are related to earnings during working life and not simply be paid at a certain unit level to ensure only basic support.

At the same time, it is vital that the basic security principle is maintained and thus that good basic security continues to be provided for people who, for various reasons, have not undertaken paid work and have thereby not acquired entitlement to any – or have earned entitlement to only a limited – earnings-related pension.

The details of how the element of basic security in the pension system should be designed must be considered further in the work ahead. This should also give consideration to the feasibility of ameliorating the marginal effects arising for pensioners with limited past earnings and moderate ATP pensions under the current set of rules as a consequence of the tax deduction for pension supplements and the special basic deduction and because of the means testing of housing supplements. A balance must be struck here between, on the one hand, the desire to provide good basic security within a reasonable financial framework and, on the other hand, the desire to provide all pensioners with some form of real financial return from the earnings-related pension they have earned and thus mitigate the current marginal effects.

It can be noted here that, alongside the working group's work, a broad survey is being conducted of the living conditions of current pensioners. This survey will provide data to use as a basis for measures aimed at improving the situation of those pensioners who are worst off.

One important principle for the considerations is that the financing requirements on the national pension system and its real financial outcome for individuals should be better adapted to Sweden's economic growth than is currently the case. Improved flexibility in response to the development of the economy as a whole is required.

A design like this creates the conditions for a robust and stable pension system that can remain unaltered throughout the demographically unfavourable period in the 2000s. At the same time, it makes it more likely that pension payments to the current and next generation of pensioners can be secured in the meantime.

One further basic premise should be that a stronger direct link should be established between what is personally financially beneficial and what is desirable from the perspective of the economy as a whole. The pension system should thus have a design that contributes to a situation in which people's decisions and actions are consistent with what is desirable for the economy as a whole.

As is the case up to now, pension entitlement should be calculated on the basis of earnings from paid work in the form of employment or commercial activity. Earned income should be placed on a par with those social security benefits that take the place of earned income, e.g. sickness benefit, parental benefit, unemployment support and educational grants. Unlike the current situation, pension contributions should be imposed on these benefits in the same way as earned income.

4.3 Constituent parts of the pension system

The national pension system currently has three main functions.

The first is that it ensures individuals have a certain standard of income and basic security in old age. This encompasses partly income transfers from the working years to old age and partly a risk insurance policy for people who live longer than the population average.

Secondly, the national pension system aims to provide insurance against permanent impairment of work capacity. This aim is met through the disability pension. The disability pension has more in common with sickness insurance than with old-age pension as it is the impairment of work capacity that is decisive in terms of entitlement to benefits. Accordingly, the entitlement to disability pension is based on medical criteria.

Thirdly, the national pension system contains rules that, under certain circumstances, provide surviving relatives of an insured person with entitlement to a certain guaranteed income and basic financial security. In this case, the pension system is acting as a pure risk insurance policy.

It is generally only the old-age pension that is covered in the account that follows. The design of the disability and survivor's pension system may be considered in more detail at a later stage.

4.4 Compulsory or voluntary?

One fundamental question is whether the old-age pension is, as has hitherto been the case, to be based on compulsion or whether its future design is to incorporate larger or smaller elements of volition.

The issue of compulsion was discussed in detail when the ATP system was introduced, just over thirty years ago. At that time, there were two main arguments put forward in favour of a compulsory pension system. The pension terms were worse for manual workers than for salaried employees, who had collectively agreed pensions, and it was not thought possible to achieve full coverage for manual workers in a voluntary way. Furthermore, pensions regulated through collective agreements were believed to have a significant disadvantage as it was feared these would bind employees too tightly to individual employers or industries. Significant losses in terms of pension benefits could therefore arise when changing job, which would impair mobility on the labour market.

There are also other reasons for a compulsory pension system.

The main argument normally put forward for a compulsory system is the problem of freeloaders, i.e. that those who through foolishness or a conscious choice decide not to take out any insurance can still count on being provided for in their old age. In a civilised society, no one is left unsupported. However, this argument is only sustainable as far as it applies to a pension that provides a basic level of support. The problem of freeloaders does not really provide any grounds for a compulsory earnings-related pension.

Another reason for compulsion, that applies to the extent the pension system is designed on the basis of the principle of redistribution, is that an old-age pension system that is not based on complete funding can be managed in an insurance market only if it is compulsory (or encompasses a large body of policy-holders for which one insurance company has a monopoly).

Further reasons for compulsion are rooted in redistribution policy. If we want to have a pension system in which the qualification rules differ from what is strictly actuarial (i.e. purely insurance-based), central government must regulate the conditions. For example, it would be difficult to have rules such as the 15-year and 30-year rules in the current ATP system or rules on the non-contribution crediting of pension entitlement for childcare within the scope of a voluntary and privately administered pension system. It can also be noted here that higher contributions are charged in the private pension insurance market for women than for men for the same promised annual pension. To the extent that a pension system is given such elements of redistribution policy, a system of this kind must encompass everyone and be compulsory.

Another argument usually put forward by national economists in favour of compulsion has to do with people's "short-sightedness", i.e. a tendency to take out an insurance policy corresponding to

the standard current at any given time and thus without taking into account the fact that the general income standard of society can be assumed to rise until the time they retire. Given a free choice, people will thus often insure themselves at far too low a level of pension, i.e. they underinsure themselves.

Discussions of compulsion or volition have sometimes also pointed to the administrative advantages that are considered to be associated with a compulsory system under one and the same administration. Reference has thereby been made to the administrative economies of scale that can be gained, i.e. that administration becomes significantly cheaper in a pension system that encompasses everyone and is not burdened with any marketing costs.

Furthermore, support for compulsion has been drawn from the method of indexing earned pension entitlement and outgoing pension. An individual insurance company is not able to give guarantees that the value of pensions is secured in relation to inflation or wage development. If one wants to retain a pension system that secures the value of pensions through linkage to a base amount, it is therefore necessary for this to be under the administration of central government.

Perhaps the most essential argument finally for designing the pension system to be compulsory under central government administration is that the current national pension system is compulsory. The pension promises made under the current system must also continue to be kept. For this reason, it is not possible from a certain point in time to replace the current system with an entirely voluntary system. Such a system would in that case have to be built up alongside our existing national pension system, something that would be very costly for the gainfully employed since they would then have to pay contributions to both the current system and the new voluntary system.

The conclusion from the foregoing is that an earnings-related national pension system should continue to be given a general design and be compulsory for all those who live and work in Sweden.

4.5 A flexible pension system

A pension system must be able to subsist for a very long time. This means that the system should be designed in such a way that it almost automatically allows itself to adapt to the requirements and problems of new times.

The pension system should thus be designed in such a way that it can be applied essentially unchanged even in the event of foreseeable changes such as greater lifetime earnings, increasing lifespan, significantly more mobile working and professional patterns and a far greater degree of variation in people's lifestyles compared to now.

As stated previously, it is also essential that the pension system be robust and stable. It should thus be designed to be flexible in response to the development of the economy and so that it can be applied without changes when economic growth varies.

4.6 Pension determined by total lifetime earnings

One important basic premise is to increase the direct link between contributions and benefits. The link between the pensions paid out from the national pension system and the contributions paid into the system, as well as the earnings forming the basis for the contributions charged, should be strengthened significantly.

This should be brought about in such a way that the size of pensions relates to total lifetime earnings and not to the earnings of only a limited number of years. To achieve this, no promises should be made regarding a certain level of pension in relation to final salary or to earnings in particular years, but the size of the pension should mainly be dependent on the contributions paid in throughout the entire working life.

One effect of this basic premise is that there are in principle “straight pipes” between, on the one hand, paid contributions (and pensionable income) and, on the other hand, the pension benefits to which an individual is entitled. Every krona of income will, in principle, affect the size of the future pension. Earnings early in life will be assigned relatively greater weight for the future pension than is the case with today’s rules. The pension system will not, as now, be a defined-benefit system but rather a defined-contribution system. A further consequence of the basic premise stated is that the tax portion of pension contributions will go down significantly in the long term (cf. Section 6). This will probably give rise to positive effects on the supply of labour.

One consequence of the basic premise set is that the reformed pension system is to have no limitations on the benefit side corresponding to the ATP system’s 15-year and 30-year rules.

A pension system that is based on the lifetime earnings principle does not automatically provide a pension that stands in relation to the income standard that the individual has specifically at the time of retirement. It is therefore important for there to be opportunities to remain continuously informed about the coming level of old-age pension and to plan pension coverage. Individuals must be continuously informed of the pension entitlement they acquire from year to year and of the size of the old-age pension generated by pension provisions. Under these conditions, they can, where appropriate, voluntarily supplement their insurance cover to give a higher level of old-age pension. A more insurance-based pension system with good continuous information would not be less easy to predict and overview than the current set of rules. On the contrary, a reformed pension system with annual information would probably better able to meet such demands on the opportunity to gauge the future pension standard.

With a system in which all earnings in all years will be of significance to the old-age pension, it is hardly possible to maintain today’s regime with the price indexation of earned pension entitlement. Rising real wages could in that case cause the value of contributions paid early in life to decrease significantly in relative terms. Income in the years immediately prior to retirement could then weigh more than twice as much as income at the beginning of professional life. A regime with price indexation would thereby be in conflict with a basic premise of the reform: to provide a reasonable benefit in terms of pension to those commencing gainful employment early and to let all earnings weigh equally greatly in the calculation of pensions. An additional cause contributing to the present instability in the pension system and to the poor flexibility of response to the development of the economy is precisely the fact that earned pension entitlements are price-indexed.

In order for a reformed pension system to provide a reasonably good adjustment, yield, with reference to the general development in standard that will in all probability take place, earned pension entitlement (or rather the pension provisions made for the insured person) should therefore be revalued upwards according to an index that follows the development of wages – and thereby the basis on which contributions to the pension system are charged – or economic growth. In the long term, these metrics should be developed broadly in parallel. However, it is essential to choose

an equitable metric that reflects the workers' income and ability to pay. This metric must also be able to be discerned from existing statistics within a reasonable time and be fairly indisputable. Therefore, special considerations are necessary regarding which index metric should be chosen and how this shall be technically designed, among other things with respect to the effects of any future cuts in working hours. Possible alternatives are the development of average pensionable income, of GDP or of GDP per capita or per hour worked, etc.

A necessary departure from a pure insurance principle in a national pension system is that pensions – unlike private pension insurance policies – shall continue to be earned and paid on the same conditions and at the same amounts to women and men. This means that the national pension system must contain a significant element of systematic redistribution from men as a group to women as a group. Women have a considerably longer lifespan on average than men: the difference is currently approximately 6 years counted from birth and approximately 4 years counted from the age of 65. The effect of this is that women on average receive a total pension that is approximately 25 per cent higher than that received by men on average, and this on the basis of an identical size of contributions during their lives. If the pension system were to have a completely insurance-based (actuarial) design, taking into account the gender differences in average lifespan, women would be paid an annual pension that was 25-30 per cent lower than men's for exactly the same size of annual contribution. The equalisation that thus takes place between men and women should, as hitherto, take place through a redistribution within the scope of the pension system.

As with the current rules, a general set of rules that relates pensions to total lifetime earnings might also give reason to have an upper limit - a ceiling - regarding which earnings are considered pensionable. This ceiling can, as today, be set at what corresponds to 7.5 base amounts. For the future, this ceiling can be revalued upwards only at the pace of changes to the base amount, i.e. be price-indexed as with the current rules. Another possibility is for the ceiling to be gradually revalued upwards in pace with economic growth in society, i.e. wage-indexed in one form or another.

For earnings above the fixed or wage-indexed ceiling, contributions can either be charged as they are now or the charge on such portions of earnings can also be abolished. The former case entails a redistributive departure from a pure insurance principle, which means that the contribution for that portion is to be regarded as a tax.

Regarding these questions of the contribution base and of the indexation of the ceiling on the benefit side, there are currently differences of opinion among members of the working group.

A further basic premise for a reformed pension system should be that all those who have been gainfully employed here in Sweden during the active part of their lives should obtain some real financial return from the pension contributions they have paid, at least for earnings exceeding the current basic pension level. This should also apply to those who have only had limited earnings or have had earnings for only a limited period. The marginal effects for those with an earnings-related pension just over the basic pension level should thus be mitigated.

4.7 Flexible retirement age

Another essential basic premise is that the pension system and related rules be characterised by high flexibility with regard to the transition from gainful employment to old-age pension and that

considerable freedom of choice be granted to insured persons in this regard. The framework of the system should thus allow great opportunities for individuals to choose between various pension solutions.

In this regard, a more insurance-based pension system provides greater opportunities for freedom of choice and flexibility. For example, the retirement age does not need to be fixed, but insured persons can be given opportunities, within relatively broad limits, to themselves choose their retirement date, entirely or partly. There is scope for prioritising between, on the one hand, a higher retirement age and a higher pension and, on the other hand, a lower pension at a lower age. Opportunities will also arise to receive a partial pension in combination with part-time work without special examination and without requirements for impaired work capacity.

The pension system should thus be flexible and result in significant freedom for persons aged 60–70 to choose between withdrawing old-age pension and continuing gainful employment. Also after the age of 70, there should be the opportunity to defer the withdrawal of old-age pension with an insurance-based increase. As has hitherto been the case, 65 years should be the technical starting point for the pension system's rules as the national retirement age. This starting point is of significance with regard to withdrawing guarantee pension, transition from disability pension to old-age pension and the end point for the indexation of earned pension entitlement, etc.

In recent decades the average remaining lifespan of a 65-year-old has, as previously described, increased by just over two and a half years. At the same time, the retirement age has been reduced by two years, as of 1976. This means that over the course of a few decades the average time as an old-age pensioner has risen by more than four and a half years, which corresponds to over 30 per cent. Population forecasts indicate that life expectancy in the decades ahead will increase by approximately another a year and a half. This suggests that, if the current set of rules were to remain unaltered, we should now discuss an increase in the national retirement age in order to bring about some measure of adaptation to demographic changes and avoid raised pension contributions or reduced pension benefits.

However, if the national pension system is reformed in accordance with the guidelines stated here and if its future design offers high flexibility as regards retirement date and the end of gainful employment, this will give rise to the significant advantage of a *less pronounced need to consider raising the national retirement age* than if the current set of rules were to remain unaltered. It namely appears to be highly likely that a reformed pension system would give rise to dynamic effects and have a positive effect on people's labour supply. This would also be the case for people who have reached the age of 65. A pension system that has a variable retirement age from 60 and that provides opportunities to continue working up to the age of 70 can yield the psychological advantage of people in general no longer seeing the age of 65 as a point at which they must then leave working life, i.e. this point in time is "played down".

At the same time, it is from both humanist and economic points of view very important to continue the fight against ill health and to bring about a significant reduction of long-term sick leave and retirement due to disability, so that the average actual retirement age goes up.

4.8 Certain redistributive elements

A pure lifetime earnings principle cannot be maintained in full. For reasons including those of redistribution policy, it is vital that the pension system's rules still contain some non-insurance-based elements that entail some measure of redistribution between different groups of insured persons. Such deviations from the lifetime earnings principle should, however, be exposed and their costs be reported separately.

The by far most important exception to the insurance principle derives from the need to ensure that everyone has a good basic security in their old age and in the event of chronic illness and disability, etc. There must also continue to be a counterpart to the current basic pension, with a guaranteed level of pension for all who have lived in Sweden for a longer period.

In the current set of rules, the basic pension, which can be said to constitute a pension coverage for earnings below 1 base amount, provides a compensation of 96 per cent of the base amount for single people and 78.5 per cent thereof for each of two married pensioners, while the compensation rate for the ATP pension, which provides income protection for earnings above 1 base amount, is 60 per cent. The compensation for the first base amount of a year's income is thus higher than the compensation for the income above this. As presented in the previous section, this means that people with lower incomes during life obtain a higher total actual compensation rate in terms of pension than people in higher income brackets. There might be reason for a reformed pension system to also attempt to bring about some counterpart to this. If such a design were to be introduced, it would entail a departure from the lifetime earnings principle.

Another exception to a pure lifetime earnings principle that is justified is that the pension system should accommodate special rules to benefit people who entirely or partly refrain from gainful employment in order to take *care of minor children*. In a pension system based on solidarity between the generations, it is vital to ensure some pension entitlements for those who perform the great and important work of nurturing the children who will one day pay for the pensions of current workers. This can be done by crediting these persons, for a number of years while their children are small, with a pension entitlement without contributions, with tax funding, at a certain amount or up to a certain level of income, provided that they do not achieve the corresponding level of income through gainful employment.

A counterpart to this crediting of pension entitlement could also be considered to benefit *those undergoing basic training for national military service*, if developments move towards only a small portion of each cohort completing such service in the future.

It is also necessary in the future to provide risk protection in the form of *a disability and survivor's pension system*. An income protection should thus be provided for people who in their working lives have been prevented from having gainful employment on account of illness or disability. A certain measure of survivor's protection also appears to be justified. However, the costs of disability pensions should be clearly distinguished from the costs of old-age pensions. Special consideration can therefore be given to removing disability pension from the pension system and instead letting it constitute an independent insurance branch or possibly placing it under sickness insurance.

4.9 Financing

As stated above, one important basic premise for a reformed pension system is that this has a more insurance-based design than at present. In terms of financing, an insurance-based system can be built up as a redistributive system, as a funded system (premium reserve system) or as a combination of a redistributive and a premium reserve system.

With a redistributive system, the pension payments in a given year are financed with the contributions paid during that same year by contemporary workers. Some measure of funding is, however, required to give the system a buffer against demographic variations and over economic cycles. Even if the pension system is in principle designed as an insurance-based system, its financing can be given the form of a redistributive system. It can then be characterised as a simulated premium reserve system, i.e. each insured person gradually builds up a pension entitlement, which does not however have any corresponding provision (funding) of this pension capital in reality.

A premium reserve system is based on the fact that the pension contributions paid from year to year are actually funded individually for each individual insured person until the capital is utilised to pay the pension of the insured person. The pension paid thereby corresponds to this pension capital and to the return that this generates and has generated.

The ATP system today is structured as a redistributive system. Transitioning from a pension system based on the principle of redistribution to one based *in its entirety* on the premium reserve technique is an alternative that can hardly be of relevance now. Such a transition would namely result in a very heavy burden on the transitional generation that would be forced to pay double contributions: both for contemporary pensioners and for their own future pension.

It has also been asserted that a fund structure of the size that would result if the *entire* national pension system was remodelled into a premium reserve system (in a fully functional stage corresponding to an estimated more than SEK 5 000 billion, i.e. between 3 and 4 times today's GDP) would lead to an excessively institutionalised ownership. This disadvantage, however, would to some extent be mitigated by greater placements on the increasingly internationalised capital market. Also of significance is the fact that all pension systems, both premium reserve systems and redistributive systems, in order to make good on promises made are always ultimately dependent on the development of the economy as a whole and on the production that is created by contemporary workers. Pensions are always in some sense financed by the working generation, and it is that generation which determines how the resources that are created and that are available for consumption shall be distributed between different groups.

Therefore, in the current situation, the choice is between a system based exclusively on the principle of redistribution and one that constitutes a combination between a redistributive and a premium reserve system.

A pension system with elements of premium reserves has certain advantages. Through this, household saving can increase. The system also provides some equalisation of risk. The incomes of future pensioners will namely be derived from two sources, whose returns are generated in different ways. In the redistributive system, the return is dependent on real economic growth, and in the premium reserve portion it depends on the return on capital. In the very long term, it can be

expected that these will coincide. In the shorter term, however, they can differ greatly (as is the case at present).

A mixed system can also have certain disadvantages. One is that its transitional phase requires higher contributions than a pure redistributive system (see below). Another is that it might be perceived as more difficult to overview and might give rise to greater disparities between different pensioners since return on capital tends to vary more than economic growth.

The working group's terms of reference have indicated the need for a higher long-term saving in society. One opportunity to use the pension system to promote public saving might be to build this up as a mixed system with premium reserves as mentioned above. However, the general discussion has also indicated other methods for using the pension system to bring about greater funding under public or private administration.

All such elements whose sole aim is to increase saving are actually of no direct significance to the pension system. They instead have more general economic purposes and can thus indirectly also be of great importance to the future of the pension system. However, increased funding within the framework of the pension system has direct consequences for the contributions charged since, during the time the saving is built up, higher contributions to the pension system must be charged than are necessary for financing contemporary pension payments.

One opportunity to use the pension system to increase saving that has been advocated by some is to have a greater element of buffer funding within the framework of a continued redistributive system. Building up a bigger buffer fund in this way has been considered to be justified in the next decade or so in order to better withstand the strains to be expected a short time into the 2000s. This opportunity, however, has been rejected by others due to the fact that it would entail an increase in collective capital formation.

Another opportunity is, as stated above, for parts of the national pension system to be designed as a premium reserve system, i.e. with a funded pension saving in insurance-based forms. One alternative in that case is to design the premium reserve system vertically. This means that a certain portion of the paid contributions goes to the redistributive system, and the remainder becomes a provision for a premium reserve. In that case, different distributions between the two systems might be relevant. For example, in an initial stage, 10-15 per cent of the total old-age pension contribution can be allocated to the premium reserve system and the remainder utilised for the redistributive system. Another alternative put forward – but which has been subjected to criticism in the public debate due to the far-reaching compulsion that this would entail – is to establish a compulsory premium reserve system horizontally, i.e. having it focus on portions of earnings that, for example, exceed the current ATP ceiling of 7.5 base amounts but that do not reach a certain higher ceiling.

The discussion on the opportunities to increase public saving should also consider what role the AP fund is to play in the future. Among the questions, partly treated above, that may be discussed in this regard are the extent to which the AP fund's money should be utilised for pension payments, how this money is to be managed in the future, which placement rules should apply to the AP fund and how large buffer funds will be required from an insurance point of view in the altered pension system. Of importance to these considerations is naturally the AP fund's role as regards saving in society.

It is usually asserted that the problem of the different sizes of the generations – the closest being the “age hump” which begins after the year 2010 – can be eliminated if the pension system were to be designed as a premium reserve system. Every generation would, so to speak, pay for its own pensions. However, the de facto achievement of this result is only possible under certain conditions at the overarching economic level.

If, for the sake of argument, we exclude the foreign economy to start with, it is always from the production results of future workers that tomorrow’s pensions must be taken. This is true regardless of how much, and in which forms, today’s working generation saves. Exactly how the production results are distributed between workers and pensioners will naturally depend on the “redistribution key” that is used – this can be individual insurance saving under certain conditions or this can be the rules of our current ATP system.

Today’s workers can, to a certain extent, make it easier for the future working generation to work up their parents’ pensions by using their saving for productive investments that provide a return in the very long term. The need to make such investments will then become less in the future, which alleviates the burden of future pension payments. On the other hand, a significant portion of the investments in society has a much shorter lifespan. One problem is also actually executing the desirable investments. Simply providing savings capital is not enough, but investors must have financial incentives for making them (unless they are made under public administration following political decisions).

If our reasoning now takes into account the foreign sector of the economy, the opportunities for a successful equalisation of the dependency burden between the generations significantly increase. If today’s workers save more, i.e. refrain from consumption, imports will be lower and balance of payments thereby better, provided that exports are maintained. By definition, a surplus in the balance of payments means that the country lends money abroad, i.e. that saving is used in foreign investment projects. In the future, the return on these placements is brought home and loaned capital recalled. This means that a deficit in the balance of payments then arises. The country utilises an “over-consumption”, justified by the extreme size of the pensioner generation. An intertemporal equalisation of generations has taken place.

It is clear from the reasoning that it is not enough to establish pension funds in order to achieve the desired result. Saving becomes fictitious unless an economic policy is pursued at an overarching level that actually results in the necessary balance of payments surpluses. For example, central government may not use budget deficits to compensate for the fall in consumption and other domestic demand. However, if we can achieve a balance of payments surplus, it is from the current point of view not so important *how* this has been done. An organised saving in (private or collective) pension funds can, however, facilitate performance. This might be particularly true if the pension rules themselves are designed so that the contributions to the system are perceived as insurance premiums and not as tax. This can make it easier for workers to endure the immediate consumption decrease that is the mirror image of the increased saving.

5 SKETCH FOR THE DESIGN OF A REFORMED PENSION SYSTEM

5.1 General

The current basic and supplementary pension systems are reformed according to the principles stated in the previous section.

The national pension system is set up as an earnings-related, contribution-financed pension with a guaranteed basic level (guarantee pension) and with special rules on pension entitlement for childcare. Pensions are paid on the same conditions and at the same amounts to men and women.

In the first instance, pension is payable as old-age pension. In addition, survivor's pension can be paid under special conditions. Disability pension is also paid, but the transfer of this pension form to a special insurance branch should be considered. Alongside the pension system are disability allowance and care allowance.

Retirement is compulsory, in principle covering all those who live or work in Sweden.

Pensionable income is earnings throughout working life that amount to a certain maximum level per annum, known as the ceiling. How this ceiling is to be determined must be considered further in the work ahead (cf. below).

The size of pensions is dependent on the pensionable income during working life, on the percentage set for the old-age pension contribution and on Sweden's development in standard during this period (or, expressed in another way, on the contributions paid during that period, indexed to wage development). This means that no guarantees are given regarding a certain level of pension in relation to final salary or to earnings in a particular year or selection of years. The pension system will thereby not be a defined-benefit system but a defined-contribution system.

The compensation level offered by the pension system therefore also - in addition to earnings during working life - becomes dependent on the contribution level, since there is to be a clear link between contribution and old-age pension benefit. The higher the percentage set for the contribution, the higher the pension that will be generated by each krona of income.

As developed above, the pension system is financed either as a redistributive system, i.e. outgoing pensions are paid for with simultaneously incoming contributions, with a certain measure of buffer funding, or also as a combination of a redistributive and a premium reserve system. Given that the working group has not yet finished processing the issue, it must be considered in more detail in the work ahead.

5.2 Financing

With a pure redistributive system, pensions are financed so that outgoing pensions are paid using the contributions simultaneously made by the active population and using the return and the principal from a certain measure of funding that is implemented in order to cover demographic changes. In addition, there should be some funding in order to provide a buffer against changes in the development of the contribution base in relation to the development of the pension payments,

which follows price changes (see below). Besides this, central government grants are payable for financing the pension entitlement that is credited for childcare and for what is used to provide insured persons who have a low earnings-related pension with a supplement up to the guarantee pension level. The costs of pension administration are covered by the contributions that are paid.

To the extent that parts of the pension system are built up as a premium reserve system, the money funded for this and the return on that money are used to pay for the pension. Given this money's stronger character of being individual credit, it could be appropriate to give individuals opportunities to dispose over it according to their own wishes more flexibly than the rest of the pension. This money could, for example, be used for early retirement, for enhanced survivor's protection, for a temporary increase of the old-age pension or the like.

Contributions are paid into the pension system not only for earned income, but also by the distributing bodies for sickness benefits, parental benefits, unemployment support and other social security benefits, etc. that take the place of earned income. This means that the expenditure for these other social security branches increases and that the contributions for these have to be increased, by a total of around one percentage point of the contribution base. At the same time, however, the pension contributions can be kept correspondingly lower. For disability pensioners, tax revenue is also used to pay contributions into the pension system for old-age pension on the basis of an assumed, credited income (see below).

For income from employment, contributions are paid by the employers, and for income from commercial activity by the insured persons themselves.

Contributions for old-age pension are charged either on income to the extent that it is pensionable, i.e. only up to a certain ceiling (cf. below), or also, as hitherto, on the entire income without a ceiling. As mentioned in Section 4.6, there are currently different views represented among members of the working group.

As regards the elements of redistribution policy in the pension system, such as pension entitlement for childcare and a supplement up to the guarantee pension level, and regarding disability pension, these are in principle financed using general tax revenue.

5.3 Size of the contribution

At present, there is a charge of 7.45 per cent for the basic pension contribution and of 13 per cent for the contribution to the current supplementary pension, i.e. a total of 20.45 per cent of the contribution base. This base corresponds to paid salary and to other income received without any ceiling. No contributions are charged on social security benefits that take the place of earned income.

However, these contribution charges are today insufficient to match payments of the basic and supplementary pension. As reported in a previous section, other tax revenue is also used for basic pension payments, and a certain part of the ATP pensions is paid for by the return on the AP fund. In 1991, SEK 26.5 billion of the expenditure for basic pension (incl. municipal housing supplement) and SEK 5.4 billion of the expenditure for ATP were paid for using money other than contribution revenue. If the basic and supplementary pensions were to be entirely paid for by the contributions

being received, the total rate of contributions in 1991 would *have needed to amount to 25.3 per cent of the contribution base*.

However, even with contributions of that magnitude it is certain that current pension payments will be able to be financed in the future. How high a contribution the current pension system would give rise to in the future depends on how high economic growth is. If this were to be as high as 2 per cent per annum, this would in the long term require a contribution of about 26 per cent, i.e. only a minor increase in relation to the financing requirement today. But if economic growth were to stop at 1 per cent per annum, this would require a total contribution to the basic and supplementary pension system of approximately 35 per cent, i.e. an increase of approximately 10 percentage points on what would be needed to be charged at present. As stated above, it is hardly realistic to presuppose that there is scope for such sharp rises in contributions, which of course means a marked increase in tax burden and a heavy redistribution from workers to pensioners. The expedient that would have to be resorted to would instead be reduced pension levels, possibly in combination with other rule changes in a cost-cutting direction.

The data given refers to a set of rules with an index-linked ATP ceiling in order to make comparisons with a reformed set of rules meaningful. To this end, the figures mentioned should also be recalculated to what would be required if contributions were to be charged only on salary portions up to the ATP ceiling and taking into account the fact that various social security benefits are made pensionable. The latter two conditions, however, have effects in different directions and can be typically said to cancel each other out.

The pension contribution in a *reformed pension system* shall constitute a certain set percentage. How high this contribution shall be depends on the pension level to be achieved.

An example of the contribution required solely for old-age pension is a person working for 40 years with an income that increases every year on a par with society's general increase in real wages. Provided that real economic growth, and hence also the development of real wages, is 2 per cent per annum over the retirement period, it is necessary to charge a contribution of approximately 13 per cent in order to attain a compensation rate corresponding to 40 per cent of final salary. In this example, each year worked would thus generate an annual pension of 1 per cent of annual income. Correspondingly, it is necessary to charge, respectively, a contribution of approximately 16 or 19 per cent in order to achieve a compensation rate of 50 or 60 per cent of final salary. In the latter cases, each year worked would generate an annual pension of 1.25 or 1.5 per cent of annual income.

In addition to this, all the options have a cost for the pension entitlement for childcare of no more than roughly one per cent of the contribution base.

In addition to the contribution charged for earnings-related old-age pension, there is, both with the reformed and with the current set of rules, a need for contributions for disability pension, for survivor's pensions, etc. and for supplements up to the guarantee and basic pension levels. According to the calculations made regarding the pension system's future costs, the need for contributions for these parts of the system are estimated at a total of approximately 8 per cent of the contribution base.

This means that the total contribution charged for a reformed pension system would, at the levels of compensation just described for a person with an even income across 40 years of gainful employment:

for a compensation level of 40 per cent be around 22 per cent of the contribution base

for a compensation level of 50 per cent be around 25 per cent of the contribution base

for a compensation level of 60 per cent be around 28 per cent of the contribution base.

As stated above, today's pension system would require contributions totalling approximately 26 per cent of the contribution base even now and also in the longer term, in a situation with an annual economic growth of 2 per cent. Were growth to be lower, which is not an unlikely development, significantly higher contributions to the current pension system would need to be charged. Details about this have been presented above and in Section 3. However, in a reformed pension system as outlined here, no corresponding need for higher contributions would - at the fully functional stage - arise. A reformed pension system would be financially stable in a completely different way than the set of rules currently applicable, and not at all in the same way dependent on general economic development.

The data just given regarding the required contribution for old-age pension at different levels of compensation refers to a situation with the average remaining lifespan that people have today. If this life expectancy were to rise in the future, there arises a need for higher contributions in order to achieve the same level of compensation or for changes to the rules on the benefit side.

5.4 Pensionable income and earning period

The entitlement to pension is related to the work earnings that insured persons have had during their working life.

Pension entitlement can be earned from the age of 16, and there is no upper age limit. Thus pension entitlement can also be acquired after the age of 65 through continued work, indefinitely.

The insured person's income from gainful employment in the form of employment or commercial activity is pensionable. To some extent, the insured person can also be credited with pension entitlement for childcare and possibly also for national military service training. There is no counterpart to this as regards, e.g. time given to the care of closely related persons or to higher studies.

Earned income is divided into income from employment and income from other gainful employment. What is thus pensionable for employees and contractors is salary and other compensation in money and other taxable benefits.

Among the income placed on a par with employment earnings are sickness benefit, parental benefits, care allowance, unemployment support, educational grants, adult education grants, etc., daily allowance for those undergoing refresher training for national military service, educational grants for doctoral students, annuity from occupational injury insurance, certain grants to writers and artists as well as compensation for the care of closely related persons. For disability pensioners, contributions are paid on the basis of a credited imagined income (see below). The contributions are paid by the body paying the compensation, i.e. from various central government grants.

The pensionable income corresponds in principle to the entire total of income from employment and income from other gainful employment up to a certain ceiling. In principle, pension entitlement should be credited from the first krona of each year's income, and there should in principle be no lower limit for calculating pensionable income. For administrative reasons, however, consideration could be given to a certain, lower limit in order to avoid the unnecessary reporting of very small incomes.

The ceiling constitutes 7.5 base amounts, i.e. pension entitlement is earned only for incomes below this amount (SEK 252 700 in 1992). Given that the members have asserted different opinions about the future indexation of the ceiling, consideration will have to be given to which of two different alternatives is to be selected. One is for the ceiling to remain fixed at this level, measured at fixed prices (price base amounts). The second is for the ceiling to be revalued successively upwards in relation to, e.g. the change in the average pensionable income of all insured persons (i.e. set at 7.5 wage base amounts).

Incomes above the ceiling provide no pension coverage within the national system, but this must be resolved by means of occupational pensions regulated through collective agreements and by means of private, voluntary pension insurance policies.

As regards *pension entitlement for childcare*, one of several different options can be considered. Such pension entitlement can be credited for each year at a set amount, e.g. 1 or 1.5 base amounts, which is the same for all those eligible and thus independent of earned income (a "cork model"). Another possibility is for those taking care of a minor child to be credited with pensionable income at a certain guaranteed level, corresponding to a certain proportion of a set income, from which deductions are made with reference to the employment income, etc. of those eligible during the years in question (a "supplement model").

A prerequisite for having periods of care credited as pensionable should be that the insured person has actually taken care of at least one minor child. The right to obtain pension entitlement for childcare should in the first instance accrue to the child's mother or, if he is the sole custodian, the child's father. However, if the parents have joint custody of the child, there should be the opportunity for the mother to voluntarily transfer this right to the father.

Regardless of whether a cork model or a supplement model is selected, the question arises of whether pension entitlement should be able to be credited at a relatively high amount for a limited number of years or at a lower amount for a greater number of years.

With a supplement model, the outcome of these solutions is different for insured persons in different groups. A lower amount for a longer period would entail an advantage for people who completely refrain from gainful employment to care for children or who because of this pursue such employment to only a rather limited extent. In contrast, a higher amount for a shorter period would mean that no benefit of the guarantee rule would be able to also accrue to people who combine caring for small children with full-time or high part-time employment with not excessively low incomes, e.g. single custodians.

If the supplement model is selected, another question that arises is how the guaranteed level is to be established. This can be related to the insured person's own earned income in the years before

the birth of the child and constitute a certain portion of this. Another possibility is to relate the guaranteed level to the average income of all insured persons during the year in question. The level could in this case potentially correspond to, e.g. 70, 75, 80 or 100 per cent of this (in 1992, corresponding to approximately SEK 112 000, 120 000 128 000 and 160 000, respectively).

For further discussion, we can here present *four different options for a solution*.

The first option is a pure *cork model*, entailing that all those eligible are credited, e.g. 1.5 base amounts (in 1992 corresponding to SEK 50 000) for every year that they have taken care of at least one child under the age of three during the greater part of the year.

The second option is a *supplement model*, entailing that pensionable income is guaranteed at a level corresponding to 75 per cent of the average income of all insured persons (SEK 120 000 in 1992) for every year in which the insured person has taken care of at least one child under the age of six, though with pension entitlement being credited for no longer than twelve years in total.

A third option is also a *supplement model*, entailing that pension entitlement is guaranteed (i.e. like option 2 with deductions for earned income, etc.) at a level corresponding to 100 per cent of the average income of all insured persons (SEK 160 000 in 1992) for a maximum of three years for each child and that this entitlement may be utilised not longer than until the child turns eight. Pension entitlement is thus credited for the three of the eight years yielding the most favourable outcome for the insured person.

A fourth option constitutes a *combination of a cork and a supplement model*. This credits pension entitlement at a guaranteed level of, e.g. 75 per cent of the average income of all insured persons (SEK 120 000 in 1992) for as long as the insured person takes care of a child under the age of six. Deductions are made against earned income krona for krona. However, a certain amount, e.g. corresponding to 1 base amount (SEK 33 700 in 1992), is made free from deductions, and at least this amount is always credited to the person who has cared for the child.

The outcome for different groups of insured persons is naturally of significance when considering the various options. Of course, the costs of the various options also play an important role. However, no more detailed calculations regarding this have as yet been able to be made. Neither have the members of the working group taken even a preliminary position in favour of one or the other option.

5.5 Sharing of pension entitlement

The work ahead must consider whether rules should be introduced in the pension system that give spouses freedom of choice to share earned pension entitlement equally between themselves year by year. A system that allows the voluntary equal sharing of pension entitlement between spouses should therefore be considered.

The conditions for a regime of this kind are significantly greater if the pension system is designed more according to insurance-based principles than is the case with the current rules. Whether or not such a regime should be introduced depends to a large extent on an evaluation of the arguments of principle that can be made for and against. Different members have put forward different views on this issue.

For a regime to share pension entitlement, it is usually argued in the first instance that such a regime can be seen as following through on the principle in matrimonial law that the spouses shall during the subsistence of marriage live at the same economic standard and that it can be said to be in line with the rules of the Marriage Code on property division after divorce and death. Further argued for a system of this kind is the desire to create a protection primarily for women against the negative economic consequences that might otherwise arise in the event of divorce or death after a long marriage. Reference is also made to the idea that a system for sharing pension entitlement would increase freedom of choice for spouses to themselves plan their pension terms.

Against a regime for spouses to share earned pension entitlement within the national pension system, the otherwise embraced principle is asserted that people should be treated as independent individuals in an economic respect and themselves earn their pension entitlement. A system with the sharing of pension entitlement is considered a less appropriate method for addressing the problem that some women have lower incomes and pensions. A regime of sharing pension entitlement could also generate negative incentives in terms of women's labour supply. Besides this, a system of the kind discussed could not become relevant to the women who would probably benefit from it most since it could hardly be given retroactive effect and thereby apply in favour of women who have had the employment patterns of an older period.

Also of importance to taking a position on this issue is the cost aspect, since a regime of sharing pension entitlement leads to increased costs for the pension system as a result of women's longer average lifespan.

If a regime of sharing pension entitlement were to be found justified, it could be built up as follows, for example. The opportunity for sharing is available only to married people and requires the spouses to agree in advance that the regime is to apply to them. This choice can be made in connection with entering into marriage, but also in the subsequent period. However, sharing only takes place for the period after such an agreement has been entered. Each spouse has the opportunity at any time to withdraw consent to sharing, taking effect for the subsequent period. If an agreement to share pension entitlement has been entered and registered with, e.g. the social insurance agency, continuous sharing year by year takes place for the period after the entering of the agreement. This sharing means that the pension entitlement earned by one spouse is added together with the other spouse's acquired pension entitlement and that each spouse is then credited with half of the total as pension entitlement for that year. To the extent that either of the spouses has been credited pension entitlement for childcare, sharing takes place only after this has been credited. Once the sharing for a year is completed, it is irrevocable and thus cannot be reversed with reference to later circumstances. For years when either of the spouses has received old-age pension during the greater part of the year, sharing cannot take place.

5.6 Indexation of earned pension entitlement

For each year, the pension contribution paid in and any contributions on the part of central government are booked in an account with the insured person's name. The balance in this account is adjusted each year in relation to the change in a certain income index, which follows, for example, the change in the average pensionable income of all insured persons. Use of this income index is made for all years up to and including the year before the insured person turns 65, regardless of the date from which old-age pension is withdrawn.

For years before a reformed pension system enters into force, income is indexed on the basis of, for example, an index series reflecting the changes in the average pensionable income for men (to eliminate the effects of variations in part-time work), but cleared of changes that do not reflect wage development, e.g. regarding which benefits are pensionable.

Every year, the insured person receives an account statement of how much has been allocated on the insured person's income for the purposes of old-age pension and how much indexation the contributions paid in various years have undergone. The account statement also contains information on the size of old-age pension that the insured person has earned at any given time. The account statement should also say how large a pension will be paid at the ages of 60, 65 and 70, provided that the insured person continues in gainful employment until such time with an unchanged annual income.

5.7 Old-age pension

Old-age pension can, according to the insured person's own choice, be withdrawn in full or in part at any time from the age of 60. There is no limitation regarding how long an insured can defer the withdrawal of old-age pension. The technical starting point for the pension system's rules (regarding the withdrawal of guarantee pension, the transition from disability to old-age pension, etc.) still has 65 years as the national retirement age.

The size of the old-age pension is insurance-based, taking into account factors including average remaining lifespan, the total of the contributions paid for the individual and a certain discount rate. This means that the pension capital upon withdrawal from, e.g. the age of 65 is divided by a certain number and that the amount thus calculated constitutes the annual pension, which is of course paid throughout the actual remaining lifespan even if this exceeds the established divisor. Upon withdrawal before or after the age of 65, the annual old-age pension is, on an insurance basis, correspondingly smaller or greater. This decrease or increase naturally relates solely to that portion of the pension that is withdrawn or left unwithdrawn. In the event of continued gainful employment after the withdrawal of full or partial pension, an annual recalculation of the pension is made with reference to the further pension entitlement earned in a year.

Upon withdrawal from the age of 65, with the current average remaining lifespan and with a pension system designed according to the outline in this memorandum, the number with which the pension capital is divided can be roughly estimated to be about 14. If life expectancy rises in the future, the consequence is that this number will be greater. In order to achieve the same annual level of compensation, this results in a decrease in the annual pension for new pensioners or an increase in contributions to the pension system.

If any pension at all is to be payable, it is necessary for contributions of a certain minimum size to have been paid every year for at least three years (or for contributions of a certain minimum total amount to have been paid).

At present, the Employment Protection Act (LAS) entitles workers to continue working with the same employment protection until no longer than the age of 67. However, this rule is dispositive in that collective agreements between the social partners can determine otherwise. At present, virtually all workers are covered by such collective agreements, generally obligating them to retire no later than

the age of 65. These agreements have not been amended due to the change to 67 years recently implemented in LAS.

Employees should now be given a real opportunity to continue working even after the age of 65 if they wish to do so. Legislation that may not be waived through agreement should therefore be used to introduce a fundamental right to remain in work until the age of 70. This means that it will not be possible to use collective agreements to decide on an obligation to retire at an earlier age on grounds other than those applicable to younger employees. However, some specific occupational categories need the opportunity to make exceptions for reasons including safety.

5.8 Disability pension

Disability pension is payable to those who are under 65 and do not draw old-age pension and have permanently impaired work capacity for medical reasons. When a disability pensioner reaches the age of 65, disability pension is replaced with old-age pension. The size of the disability pension is graded according to the impairment of the insured person's work capacity.

The size of full disability pension corresponds in principle to the old-age pension to which the insured person would become eligible if he had begun to draw such pension from the month in which entitlement to old-age pension ensues. This means that the person becoming a disability pensioner while still having some connection to working life must be credited with a certain income for each year in the period between the pension contingency and the reaching of a certain age. The work ahead must consider how this credited income is to be determined.

Quite a lot of other questions concerning the design of the disability pension must also be considered in more detail than has been possible so far.

The income credited to disability pensioners for various years after the pension contingency forms the basis for the payment of contributions into the pension system using general tax revenue and thus becomes relevant to the calculation of old-age pension.

From the age of 65, old-age pension is paid calculated on the basis of the contributions paid using tax revenue and of the contributions paid before the disability pension contingency.

For those who, before the time of becoming a disability pensioner, had not had the opportunity to acquire work earnings – on account of illness, etc. or for other reasons (e.g. studies) not had time – disability pension needs are satisfied through the guarantee pension (see below).

The disability pension is placed administratively outside the pension system. Benefits for those concerned are paid as part of a newly established insurance branch or possibly sickness insurance. The contributions to the old-age pension that are charged in accordance with the aforementioned are also paid from here.

5.9 Basic security

In order to ensure a good basic security for those who have not had earnings or have had low earnings, there will – in the future when the changed set of rules becomes significant to old-age pensioners – be a guarantee pension, which is paid to people who have turned 65 and to disability pensioners. This pension is paid to people who have lived a certain minimum period in Sweden and

it is calculated in relation to the period of residence here. The basic pension can be provided within the framework of the national pension system or through an independent pension scheme.

Among other things, the work ahead must consider how the basic pension shall be designed in more detail, which levels there shall be for the benefits and how the deduction between the guarantee pension and the earnings-dependent pension – and against possible other forms of earnings – shall be structured.

As stated in Section 4, there might be reason to consider giving a reformed pension system a counterpart to the current situation whereby the actual level of compensation is higher for people with lower past earnings than people in higher income brackets, as a result of the [current] basic pension's relatively greater weight for the former category. This could, for example, be achieved by always exposing a certain amount of the guarantee pension when making deductions against the earnings-related pension and by thus ensuring this amount for all pensioners who meet certain conditions.

The right to draw guarantee pension exists from the age of 65.

As of a particular date for future pensioners, this basic pension replaces the current basic pension system and other benefits for basic pensioners. Among other things, this means that in principle the same tax rules as for others should apply to pensioners. The work ahead must consider the extent to which housing support shall also be combined with the guarantee pension.

The question of the level of pensions for the pensioners with the lowest pension today does not fall within the scope of the working group's assignment to consider the long-term design of the pension system.

5.10 Value protection

The value of outgoing pensions is secured so that they follow the cost trend by each year being revalued upwards in relation to the change in the consumer price index. Some form of flexibility indexation can also come into consideration, i.e. that full price indexation is only done provided that real economic growth in society has amounted to a certain set level for one or a number of years. Correspondingly, in years when increases in real wages have exceeded a certain set level, there could be indexation beyond that deriving from the price change.

From a stability perspective, it would be natural for outgoing pensions, like earned pension entitlements, also to be related to income development in society rather than to price changes. However, no decisive disadvantage would be likely to accompany the option that has been selected here. It would be reasonable to assume that we in Sweden will have at least some real growth in the long term. (Were this not to be the case, the pension system and most other things in society must under any circumstances be reconsidered from their foundations.) For this reason, a price indexation, at a given pension level, is less costly than a wage indexation. And a flexibility indexation, as outlined here, eliminates the problems that could otherwise arise if economic growth were to be temporarily negative for a few years. A system with price indexation is what has been advocated by pensioner's organisations, for example. The effect of this is a pension that gradually decreases in relation to workers' incomes over the retirement period. Given that consumption needs can be

lower with increasing age, it can be assumed that this is seen as a reasonable redistribution of the earned pension over time.

6 CONSEQUENCES FOR INDIVIDUALS

6.1 Fundamental aspects

A reformed pension system designed as outlined in the previous section has a direct link between paid contributions and the size of the old-age pension paid out. Every contribution payment into the pension system is of importance to the size of the final pension. As previously stated, this reduces the *proportion of the pension contribution that can be considered equivalent to tax*. How great a part of today's pensions can be considered to be financed with taxes is difficult to determine exactly. The inquiry on reformed income taxation (SOU 1989:33) assumed that half of the ATP contribution is tax, which is an internationally common standard. Economist Mats Persson (in *Ekonomisk Debatt* No. 3 1991) has calculated that 75 per cent of the ATP contribution is to be considered tax, which would mean that the combined tax is as high as approximately 22 per cent of total wages. The reformed system is estimated to lower the tax portion to approximately 10 per cent, i.e. by perhaps as much as 12 percentage points. This corresponds to a reduction of the tax burden by just over 5 percentage points calculated on GDP. Given the need for long periods of transition to a changed system, this reduction does not immediately ensue in its entirety, even if the greatest effect arises directly as soon as new qualification rules begin to be applied for larger groups of insured persons. The immediate effect depends on which age categories would initially be concerned and how quickly this would take place. The transitional rules are discussed in the following (Section 7).

A simple example can illustrate *the effect of the stronger direct link between lifetime earnings and the size of the pension*. An example could be two people that make equally large contribution payments to the system each year. The pension contribution corresponds to a certain percentage of their salary. One of the people is in gainful employment for 45 years, the other for 30 years. In today's system, they obtain equally large pensions: they have equally large annual pensionable income, and payments that are made for a greater number of years than 30 generate no further pension entitlement. However, the alternative system takes all contribution payments into account. The person who has worked for 45 years has paid in a total of 50 per cent more contributions to the system than the person who has worked for 30 years. He or she would then also receive 50 per cent more in old-age pension.

Similarly, those who work part-time for a period of their lives receive their pension proportionately reduced in relation to those working full-time, while under current rules, only 15 years' full-time work is needed to avoid such a reduction.

Another difference between today's set of rules and that outlined here is the indexation of earned pension entitlement. Under the current rules for ATP, earned entitlements are revalued upwards in line with prices. In the set of rules outlined, revaluation during the earning period would instead be in line with wage development, i.e. in the event of a general real wage growth of, e.g. 2 per cent per annum, the contribution payments that have been made to the system will "generate interest" in real terms at a rate of 2 per cent per annum. A real revaluation of earned pension entitlements will mean that entitlements earned early in life will retain their value in relation to generally growing real incomes and thereby be of greater significance to the size of the final pension.

What *compensation level a reformed system would provide* in different situations of course greatly depends on the size of the pension contribution. With a pension contribution of, e.g. 17 per cent and a general real wage growth of 2 per cent per annum and with a retirement age of 65, those commencing gainful employment at the age of 20 and who have an even wage development can expect an old-age pension corresponding to 60 per cent of final salary. For an individual commencing gainful employment at the age of 25, the compensation rate will be 53 per cent. If the individual does not commence gainful employment until the age of 35, the compensation rate is instead calculated to be 39 per cent.

A comparison can be made with what today's set of rules would provide in corresponding cases. With a continuously rising real income, the 15 best income years will coincide with the final 15 working years. The ATP pension would thus in principle be based on the individual's income 7–8 years before the time of retirement, i.e. at about the age of 57. If the salary at 57 years of age is 5 base amounts, the final salary, at 2 per cent real growth per annum, is 5.8 base amounts, corresponding to SEK 195 000 in 1992. Provided that the individual has at least 30 working years, the compensation rate in the current system, with regard to the total of basic pension and ATP, is 58 per cent. A reformed system, however, has future pensioners in view. After a long period with real wage growth of 2 per cent per annum, the general level of income in society has grown, and (ignoring the current ATP ceiling's limiting effect on the size of the pension), the compensation level with regard to basic pension and ATP will be lower and be closer to around 55 per cent of final salary. The reason for this is that the weight of the basic pension portion of the total pension successively decreases.

Relatively speaking, the outlined system will be more favourable compared with today's set of rules, the longer the period of gainful employment is. This is a consequence of the outlined system strengthening the link between contributions and benefits. Individuals thus have greater opportunities to themselves influence the size of their final pension. Every extra amount of work in a year, such as full-time instead of part-time work, helps to increase the pension. With today's rules, this is only the case if the working year in question is among the 15 best income years. Likewise, an extra working year generates a higher pension. In the current set of rules, working years beyond the requisite 30 years provide no further addition to the pension.

A person who chooses to wait a few years before withdrawing pension will naturally obtain a higher annual pension amount since the retirement period will cover fewer years. Unlike the current set of rules, a reformed system will also make work earnings after the age of 65 pensionable. Among other things, this means that those commencing regular gainful employment first at the age of 20-25 years have the opportunity through work after the age of 65 to acquire entitlement to a pension corresponding to that of those commencing work earlier in life. By continuing to work for a few more years after the age of 65, those commencing gainful employment at the age of 25 can thus increase their old-age pension by approximately 12 per cent per annum. If they retire at the age of 70, their old-age pension will be about 60 per cent higher than if they had retired at the age of 65.

The data presented above refers to an old-age pension based on contributions being charged at 17 per cent of income. Naturally, workers can choose to be charged higher or lower contributions. A higher rate of contributions increases the compensation rate for the old-age pension proportionately.

The currently applicable 15-year rule in the ATP system entails, inter alia, a special protection for those with a long education and for parents who for a period entirely or partly refrain from gainful employment in order to care for children when they are small. Parents of young children also have the opportunity to be credited with “childcare years”. In the system outlined here, a rule on care years like the current one is inadequate since *the size of income* for every year is significant. The system should therefore, as presupposed in the outline above, be supplemented with a rule that gives parents of young children the right to have their care work credited as pension entitlement at a certain level of income. Women or men who stay at home on a full-time or part time basis to take care of small children are thereby ensured a continued pension coverage during that time period.

6.2 Some sample calculations

Some sample calculations below compare the outcome in the current pension system and in a reformed system as outlined in Section 5 above. The examples concern 13 individuals with different assumed income profiles during their lives. The results are presented in Table 9 below.

In the reformed system, calculations are made assuming a future rate of contributions at a constant 17 per cent. As previously stated, it is a defined-contribution system, with benefits being set according to factors including the economic growth (and thereby indexation) that might take place. In contrast to this, ATP is a defined-benefit system. Where pension rules are unchanged, the contribution charged is formally determined by economic growth. In the current system, an unchanged contribution charge is consistent with unchanged pension rules only if growth is approximately 2 per cent per annum.

Provided that there is cost neutrality at the total level, an adequate comparison between the two systems is therefore only possible with this growth, i.e. 2 per cent per annum, being the technical calculation assumption. In the event of a *de facto* lower growth, the compensation rates in the reformed system will in most cases be lower than what the calculations in the examples indicate. In contrast, these are often higher in the current system, which is not consistent with an assumption of a constant contribution charge, however. The comparison will then not be meaningful. As developed in a previous section, it should be underlined that, in the current set of rules, the compensation level would have to be greatly reduced in the case of an unchanged contribution charge if real growth is permanently low. If we postulate the necessary adjustment of the ATP system’s benefit rules if growth is low, the relationships between the current and the reformed systems’ compensation rates would probably be the same at various growth rates.

Calculation method

The following conditions form the basis for calculating the size of the pension in a reformed system. The pension contribution, which of course is of significance to the compensation that the system will provide, has been set at 17 per cent of salary. The contribution amounts earned over the years are revalued upwards in line with wage development. The outgoing pension is price-indexed. The individual’s earned pension entitlements shall thus be paid at an annual pension amount, an annuity, which is unchanged in terms of fixed prices. The calculation of this annual pension amount has applied a discount rate corresponding to the size of economic growth. A long period of real wage growth will cause the final salaries of many people to exceed the current ATP ceiling of 7.5 base

amounts. In the calculations, however, no consideration has been given to the ceiling, but the pension has been calculated on the entire income in both systems.

The size of the pension is expressed as a percentage of final salary. This percentage is here called the *system's compensation rate*.

The reformed system guarantees those who entirely or partly refrain from gainful employment in order to take care of small children a certain minimum pensionable income. In the examples, such care years have been calculated according to the following two alternatives. In the first alternative, the guaranteed pensionable income is 75 per cent of the average income of all insured persons and can be credited until the youngest child turns six, though for no longer than twelve years in total. In the second alternative, the guaranteed pensionable income is 100 per cent of the average income and can be credited for a maximum of three years for each child as long as the child is under the age of eight. In the sample calculations here, the two alternatives yield largely the same results. Table 9 has therefore only reported one value.

The effect of a system with the sharing of pension entitlement between spouses has not been considered in these sample calculations. The sharing of pension entitlement would be particularly favourable to those married women who for extended periods entirely or partly refrain from gainful employment, at the same time as the men married to them would have a lower pension in the reformed system.

The individuals' income profiles

For 13 persons, whose lifetime income profiles are described below, the size of pension has thus been calculated according to the current rules and according to a reformed set of rules. Some of the persons in the examples work full-time all their lives, others enter paid employment later or entirely or partly refrain from gainful employment for a period. With one exception, the persons work up to and including the age of 64 and retire at the age of 65.

The persons' lifetime income profiles are as follows.

Person 1 has a wage profile comparable to that of an industrial worker or salaried official at the low or intermediate level. He commences gainful employment at the age of 16. He has a somewhat lower wage during the first five working years but subsequently has an income corresponding to an average level with an even wage development corresponding to society's general increase in real wages.

Person 2 has the same wage profile as Person 1 but commences gainful employment first at the age of 19.

Person 3 is identical to Person 2 except for having two care years during his life.

Person 4 is also similar to Person 2 but is at home full-time between the ages of 25 and 30 and then works 50 per cent for ten years in order to take care of two children.

Person 5 commences gainful employment at the age of 19. Like Persons 1 and 2, he has a wage corresponding to an average level, but has a somewhat faster wage development than those

persons between the ages of 20 and 40, i.e. a certain career effect. On the other hand, he has a somewhat weaker wage development than the average in the final 15 working years.

Person 6 has occasional earnings between the ages of 16 and 20. He subsequently commences more regular gainful employment. His income is initially under the average wage but, like Person 5, he has a somewhat faster wage development than the general until the age of 30. He is subsequently at home 50 per cent for fifteen years to take care of three children. From the age of 45, he returns to full-time work.

Person 7 is similar to an academic in a career profession. He does not commence gainful employment to any greater extent until the age of 25. Before that, he only has temporary jobs (holiday jobs) with an annual income just below 1 base amount. He has an income above the average level and a career effect during the first 20 years. Subsequently, his salary is raised only in line with society's general increase in wages.

Person 8 has the same wage profile as Person 7. From the age of 35, he works abroad for five years (thereby earning foreign pension in that period) and therefore has no pensionable income during this period.

Person 9 also has the same wage profile as Person 7 but works 50 per cent between the ages of 35 and 40 to take care of children.

Person 10 is the only one of the persons who continues to work after the age of 65. He works until his old-age pension at the age of 68. His wage profile is the same as for Person 7.

Person 11, with the same wage profile as Person 1, commences gainful employment first at the age of 35 and then only at 25 per cent. He might previously have worked at home without children, studied or lived abroad. From the age of 50, he works full-time. He thus obtains 30 working years and the 15 "best" years with a full-time salary. This person represents an employment pattern that is to a particularly high degree favoured with the current design of the pension system in relation to the contributions paid during life.

Person 12 has the same employment pattern as Person 11. Before the age of 35, he has been at home and taken care of children and for this may credit six care years during this period.

Person 13, unlike the other persons, has no real wage growth at all during his life. He commences gainful employment at the age of 19 with what then corresponds to an average wage. His wage is thus unchanged in fixed monetary value until his retirement at the age of 65.

Result in the event of 2 per cent real growth per annum

The result of the calculations is presented in Table 9.

Table 9 Old-age pension as a percentage of final salary in the current and in a reformed set of rules under the conditions described in the text. 2 per cent real growth per annum

Person	Current system	Reformed system
1	56 %	63 %
2	56 %	60 %
3	56 %	60 %
4	56 %	52 %
5	57 %	60 %
6	56 %	55 %
7	54 %	46 %
8	54 %	41 %
9	54 %	44 %
10	64 %	59 %
11	56 %	25 %
12	56 %	33 %
13	69 %	96 %

Note The numbers for compensation rate in relation to final salary are influenced by the persons' wage career. In relation to average lifetime earnings, the relationships between the persons' compensation rates would be different.

For the persons in the examples, the 15 best income years coincide with the final 15 working years. That *the compensation rate in the current system* differs somewhat between the persons is partly due to the size of the basic pension in relation to final salary and partly to income development in the final 15 years not being the same in the different cases. This is especially noticeable for Person 13. He has no real wage growth during his life, which is a reason why the compensation rate in relation to final salary is high (in both systems). Besides this, in the current system, the weight of the basic pension portion is particularly heavy in his case. The current system also provides Person 10 with a much higher level of compensation than the others, which in his case is due to his having deferred the withdrawal of old-age pension until the age of 68.

The compensation rate in the reformed system is higher than in the current system for Persons 1, 2, 3 and 5. They have all worked for a long time, from the age of 16 or 19. Persons 4 and 6 have also commenced gainful employment early but have then been entirely or partly at home to take care of children. The calculation of care years in the reformed system provides them, respectively, with a somewhat lower or a largely the same compensation rate in the reformed set of rules than in the current system.

With shorter periods of gainful employment, Persons 7, 8 and 9 have a lower pension in the reformed system. The level of compensation in the reformed system is also influenced by the distribution of income during life. Persons 7-9 have an income that rises faster during the first part of their gainful employment. With a more even distribution of lifetime earnings, i.e. with a larger portion of income earlier in life, the indexation of pension entitlements, the yield, would have been higher. At the same time, final salary would have become lower (if total lifetime earnings are the same), which would have further raised the level of compensation expressed as a proportion of final salary.

Person 10, who has the same wage profile as Person 7, works until he is 68 and subsequently withdraws his old-age pension. The reformed system allows him to also credit the working years after the age of 65 in terms of pension. Also in this case, compensation in the reformed system is somewhat lower than in the current set of rules. However, if he had worked for a few more years, he would have been able to achieve the same level of compensation.

Under current rules, Person 11 has a pension just as great as Person 1 but has been in gainful employment to a far lesser extent. In the reformed system, where the link between contributions and benefits is significantly stronger, he therefore has a considerably lower pension. Person 12 has the same employment pattern as Person 11 but can be credited with some care years and therefore has a somewhat higher pension. Finally, the reformed system provides Person 13 with a pension that almost corresponds to the annual income he has had during his life. Person 13 has been in gainful employment for a long time with unchanged wages in fixed monetary value. In contrast, the contributions that he has paid into the pension system have been revalued upwards in line with economic growth, in this case by 2 per cent per annum.

Result in the event of 1 per cent real growth per annum

Table 9 has assumed real growth (and thereby the discount rate) to be 2 per cent per annum. If we instead assume a real wage growth of 1 per cent per annum, the compensation level in the reformed system is lower than in the 2 per cent alternative.

In contrast, under the current set of rules, the compensation rate is higher at 1 per cent than at 2 per cent real growth. Pension costs thus become relatively higher in the event of 1 per cent growth. The consequence is then that the contribution charged must be raised or the pension amounts reduced (or that income and expenditure be aligned in some other way). If the contribution percentage is to be the same as in the 2 per cent alternative and other conditions unchanged, a real growth of 1 per cent requires a long-term reduction of pensions (calculated on the total of the basic and supplementary pensions) by up to 20 per cent.

If, in the current set of rules, the levels of benefits are reduced to the necessary degree if growth is low, the relationships between the current and the reformed systems' compensation rates would probably be the same at various growth rates. In the light of this, Table 10 presents a comparison between the two sets of rules only for Persons 1 and 7.

Table 10 Old-age pension as a percentage of final salary in the current set of rules after reduction of the pension and in a reformed system under the conditions described in the text. 1 per cent and 2 per cent real growth per annum

	Current system	Reformed system
Person 1		
1 %	52 %	59 %
2 %	56 %	63 %
Person 7		
1 %	49 %	42 %
2 %	54 %	46 %

7 TRANSITIONAL RULES

7.1 Fundamental viewpoints

As stated previously, it is vital to achieve a soft transition from current to altered rules for the pension system and special transitional solutions are necessary for large groups in society. And those who are then still of working age should be given opportunities to adapt to the new conditions and have a real scope to influence their situation.

This means that a reformed pension system will only gain a more significant impact on pensioners and on pension payments in the longer term. Even if pension entitlement already begins to be earned under the altered rules in a year or so, the pension entitlements acquired during the initial years and decades will only see any greater realisation in the form of pension payments many years after the new rules have entered into force.

This also means that the cost trend for the pension system will be largely determined by the existing set of rules even long after the new rules begin to be applied. It is therefore necessary to balance the contributions charged for the reformed pension system so that the contributions received cover the pension payments occasioned by the current basic pension and ATP systems during the long transitional period until the majority of pensioners has moved to the altered set of rules.

What has now been stated is of importance to the considerations of how quickly new rules should begin to apply and for how large groups of today's workers should to a greater or lesser extent be affected by the reformed set of rules. This becomes a question of striking a balance between the desire not to change the conditions for those already covered by current rules and the desire to as soon as possible bring about the stability in the pension system that creates a long-term financial security for pensioners and workers.

At the same time, it is essential that the new set of rules already now enter into force. Since the contributions that are paid in on an earnings basis are attributable to this system, the consequence is that the tax portion of pension contributions sees a sharp reduction immediately. Also in general can positive economic consequences ensue immediately, e.g. as regards stimulating an increased labour supply.

7.2 Alternative transitional solutions

The new set of rules should thus begin to be applied from a given year as soon as is technically possible, but should be furnished with far-reaching transitional provisions. For those who already have pension entitlement upon its entry into force, the current rules should continue to apply. The existing set of rules should also remain valid for non-pensioners who are 60 or older upon entry into force.

With these basic premises, it is only in regard to non-pensioners who are younger than 60 upon entry into force that there is reason to discuss alternative transitional solutions. As regards this group, there are several different possibilities that could be considered as a transitional solution.

One option is to allow the existing rules to continue to apply fully for all those who have reached a certain age, e.g. 35 or 40, upon entry into force and that the altered set of rules be given full application for all those who are younger at that time. A variation of this solution is to combine it with certain changes to the current rules as regards this intermediate group, i.e. in the example, those aged between 35 or 40 and 59 years.

Another option is for all those aged 59 or younger to be transferred in principle to the altered set of rules. An attempt is made to bring about a reasonable estimate of the value of the pension entitlement that they have earned until entry into force according to the existing rules. This value is transferred to the reformed system and also forms the basis for pension entitlement under the rules for this.

A third option is for those who have reached a certain age, e.g. 35 or 40, but are younger than 60 to be given the right to choose between the existing and the altered set of rules. This right to choose may be exercised either in connection with entry into force or also first in their transition to old-age pension.

However, a fourth option would probably be a more appropriate solution. This entails full application of the new set of rules to those who are, e.g. 40 or younger upon entry into force. Regarding those who are, e.g. aged 41-59 upon entry into force, both the new and the old sets of rules apply according to a sliding scale. For example, as regards those who are then 59, 1/20 of their pension is calculated according to the new system and 19/20 according to the older system, as regards those who are 58, 2/20 is calculated according to the new system and 18/20 according to the old system, etc. until those who are 41, where 19/20 is calculated according to the new system and 1/20 according to the older system. An age limit other than 40, e.g. 35 – and consequently another fraction, 25ths – can also be considered. However, the lower the age limit set, the slower the impact of the new set of rules will be.

This solution requires special rules for calculating the value of pension entitlement in the reformed system - and also for crediting pension entitlement for childcare - for the time before its entry into force. As regards income from the year 1960, actual earnings in the years from 1960 until the year before entry into force (such as they are reflected in the register of earned ATP points with the supplement of 1 base amount) can form the basis and be revalued upwards according to a real wage index (cf. above). Income under 1 base amount, which has not been reflected in any earned pension points, is not made pensionable. The income of each year thus indexed is multiplied by the contribution percentage applicable within the new system, the product of which constitutes the pension entitlement for that year. This is index-linked for the subsequent years in accordance with the general rule.

Earnings before 1960 can in principle be treated correspondingly. Here, the basis is formed by the tax assessment for central government income tax. The consideration of such earnings might require application and investigation by insured persons themselves, which means that no systematic review of old tax rolls is made under the administration of central government. Earnings below an imagined,

calculated base amount for each year prior to the year 1960 are not taken into account. Another possibility is the application of some form of standard calculation as regards earnings prior to the year 1960.

A transitional solution according to the basic premises mentioned could be combined with a threshold rule guaranteeing a pension that corresponds to at least what has been earned up to entry into force. For all those who are younger than 60, a calculation could be made of the old-age pension that would be payable from the ATP system according to existing rules on the basis of previous years' earnings, i.e. with application of the 15-year and 30-year rules for the time before entry into force. This pension would be calculated at a certain proportion of the base amount and thus have its value secured. This amount would constitute a guaranteed level of the future old-age pension that would be the minimum permitted.

To the extent a part of the pension system is designed as a premium reserve system, this part can in principle focus solely on earnings from the year of entry into force. There will thus have to be a successive accommodation in such a part of the pension system, and this can only be fully functional after a very long transitional period. At the same time, special transitional solutions are needed with reference to the fact that a certain portion of the contributions paid from entry into force are utilised for the premium reserve system, but outgoing pensions from the ATP system shall for a very long time ahead be financed in principle with simultaneously incoming contributions according to the principle of the redistributive system.

As regards disability pension contingencies occurring after entry into force, transitional rules corresponding to those for old-age pension are applied. Decisive for the extent to which the existing or the reformed pension system is to be applied thus depends on which point in time the insured person was born. As regards survivor's pension, special considerations about transitional rules are needed once a position has been taken on its future design.

7.3 A sample calculation

Different options for the design of the transition have been discussed above. One option described is for the change to be fully implemented when those who, at the time transition commences, are 40 or younger retire with old-age pension. With that option, those aged 41-59 would be covered by *transitional rules* with the following meaning. Those who are 59 upon entry into force would receive an old-age pension corresponding to 1/20 of their pension according to the reformed set of rules and 19/20 of their pension according to current rules. For a 58-year-old, the respective distribution would be 2/20 and 18/20, etc.

As examples of the outcome of transitional rules designed according to such an option, Table 11 shows the size of the pension during the transitional period for Persons 1 and 7 in the previous examples in Section 6.2, assuming that they are aged 55 or 45 upon entry into force. For the 55-year-old, the size of the old-age pension would correspond to 5/20 of his pension calculated according to the reformed set of rules and 15/20 of his pension calculated according to current rules. For the 45-year-old, the distribution would be the reverse: 15/20 according to the reformed set of rules and 5/20 according to the current set of rules.

Table 11 Old-age pension as a percentage of final salary in the current and in the reformed systems during the transition to a reformed system. 2 per cent real growth. (The income profiles for Persons 1 and 7 in the table have been described in Section 6.2)

	Person 1	Person 7
Current system	56 %	54 %
Reformed system	63 %	46 %
Transitional rules		
Age upon entry into force		
55 years	58 %	52 %
45 years	61 %	48 %